



### 16.6.2 Direct impacts to planted trees

Construction of the CSELR proposal would require the removal of up to approximately 160 planted trees within the Kensington/Kingsford Precinct, or approximately 73 per cent of trees within the tree study area. These would include all of the trees within the Anzac Parade median, a large number of mature trees at the proposed UNSW Anzac Parade stop, the Kaffir-plum and four semi-mature Queensland Kauri trees within Tay Reserve, as well as the large mature Hills Weeping Fig at the Nine Ways intersection. The majority of impacted trees are located within the footpath of Anzac Parade and at the Kingsford stop.

As discussed in Chapter 8, the following assumptions were made regarding which trees would require removal to facilitate the construction and operation of the CSELR proposal:

- *Encroachment into the tree protection zone* — Any incursion of the CSELR construction footprint (including any kerb realignments and service relocations) greater than 10–20 per cent of the edge of a tree's canopy would most likely require the removal of the tree, subject to arborist advice.
- *Encroachment into the structural root zone* — Any incursion of the CSELR construction footprint (including any kerb realignments) into the structural root zone of a tree would likely compromise the tree's structural stability and would likely require the removal of the tree.
- *Tree canopy height* — Trees with canopies that considerably encroach within one metre, or overhang, any light rail infrastructure, including overhead wiring and support systems, traffic signals and sight lines or the LRVs themselves were assumed to require removal, subject to arborist advice. While it is noted that some trees could be adequately trimmed to provide the required clearances for the operation of the CSELR proposal (and thus avoid the need to completely remove the tree), the impact that such trimming would have on the viability of the tree is currently unknown and would need to be determined by an arborist during detailed design.

The trees within the Anzac Parade median, Tay Reserve (comprising the Kaffir-plum and four semi-mature Queensland Kauri trees) and the large mature Hills Weeping Fig at the Nine Ways intersection would generally be impacted by the CSELR alignment and/or road intersection works. Trees located along footpaths adjacent to Anzac Parade would be impacted by proposed kerb realignment works, which would generally be required to accommodate the proposed CSELR stops.

Mature trees at the proposed UNSW Anzac Parade stop would be directly impacted by the proposed UNSW stop and associated construction footprint. Potential impacts to the significant trees at UNSW would be reviewed by a suitably qualified arborist during detailed design. This review could include root zone mapping of potentially impacted trees to determine the likely extent of their tree roots adjacent to and beneath the road surface. The construction compound boundary would be rationalised to reduce impacts to mature trees within the UNSW site that would not already be impacted by the proposed permanent works (i.e. the UNSW Anzac Parade stop).

Trees located within the Anzac Parade median, south of the Nine Ways intersection, would be impacted by the proposed Kingsford stop layout, CSELR alignment and proposed road intersection works.

### 16.6.3 Mitigation measures

Overarching environmental management measures that would be adopted for the CSELR proposal to minimise direct impacts on planted trees are described in section 12.6.3. The following additional management and mitigation measures would be implemented to further minimise impacts on planted trees within the Kensington/Kingsford Precinct:

- Opportunities to minimise the impact on significant trees at UNSW would be further investigated during detailed design.
- Potential impacts to the significant trees at UNSW would be reviewed by a suitably qualified arborist during detailed design. This review could include root zone mapping of potentially impacted trees to determine the likely extent of their tree roots adjacent to and beneath the road surface. Where the viability of any tree is identified as being significantly at risk, opportunities to minimise impacts to the tree would be further investigated. Where impacts to a tree cannot be feasibly avoided, the tree would be offset on a one to one basis. Options available for offsetting any directly impacted trees would be determined in consultation with UNSW.

- The construction compound boundary would be rationalised to reduce impacts to mature trees within the UNSW site that would not already be impacted by the proposed permanent works (i.e. the UNSW Anzac Parade stop). Exclusion fencing would be established around the drip lines of each tree to be retained to minimise the risk of impact to the viability of the trees. Where impact to the drip line area cannot be avoided (due to space constraints), opportunities to raise construction facilities (e.g. demountable) above the ground level would be investigated so as to avoid impacting on the underlying tree roots, in accordance with AS 4970 *Protection of Trees on Development Sites*.

Where the loss of trees is unable to be mitigated through the above measures, Transport for NSW would replace trees removed as a result of the CSELR, in accordance with the Transport for NSW 'Vegetation Offset Guide' (2013d), which includes a principle of replacing 'the amenity/visual landscape value of vegetation removed' even if the vegetation may not have significant ecological value. Trees would be replaced at a ratio of between 2:1 and 8:1, depending on the size of the tree to be removed. Selection of tree species, size and planting locations would be undertaken in close consultation with Randwick City Council and UNSW. The CSELR Landscape Strategy (Appendix F) recommends the following tree species are used for replacement planting in the Kensington/Kingsford Precinct:

- Fig species and *Lophostemon confertus* (Brush Box) are proposed along the footpaths along Anzac Parade, where space allows.
- At the Kingsford stop, *Livistona australis* (Cabbage Tree Palm) trees are likely to be planted at one end of the island platform, in the centre of Anzac Parade, serving as a highly visual wayfinding marker for the stop. Grass and sedge plantings are also likely to be provided at both ends of the island platform.
- As the existing trees at the UNSW stop are within the UNSW campus and not on public land, further design and consultation with UNSW is required to ensure replacement planting is aligned with the UNSW master plans as well as analysing spatial requirements for replacement trees.

## 16.7 Visual and landscape character

The following section provides a summary of the potential local visual and landscape impacts of the proposal within the Kensington/Kingsford Precinct, based on Technical Paper 10 — *Visual and Landscape Assessment* contained in Volume 5 of this EIS.

### 16.7.1 Existing landscape character and visual conditions

The wide arterial road corridor of Anzac Parade dominates the landscape character of the Kensington/Kingsford Precinct. The character of Anzac Parade experienced in the Moore Park and Randwick precincts is lessened somewhat south of the Alison Road intersection as the mature boulevard of Fig trees makes way for a less consistent, variable street tree pattern. In Kensington the built form quality becomes a mix of remnant character buildings, multi-storey residential complexes and commercial premises including warehousing and service stations. However, northward views from the intersection with Abbotford Street, offer views to the CBD skyline and glimpses of Moore Park.

At Kingsford, the scale and character of the landscape becomes more coherent. A central grassed median emerges with groups of formal street trees creating some visual relief from the six lane road corridor. This median also includes banners and decorative fencing to guide pedestrians to signalised pedestrian crossings. The shopping precinct creates a consistent built edge defining the streetscape, and includes interesting corner buildings, and varied two-storey shopfronts with awning covered footpaths.

At the Nine Ways intersection a large roundabout includes a collection of banners, lawn and shrub planting. A mature copse of trees is located in the median on Anzac Parade, opposite the roundabout, creating a leafy backdrop to views in this vicinity. Beyond the intersection, the median of Anzac Parade widens out considerably and includes a mix of car parks, lawn areas, and mature trees.



### 16.7.2 Visual sensitivity

The Kensington/Kingsford Precinct is influenced by the busy Anzac Parade, and key precincts including the Royal Randwick racecourse, and the UNSW at Kensington. A summary of visual sensitivity for the main viewing areas across the study area is provided below:

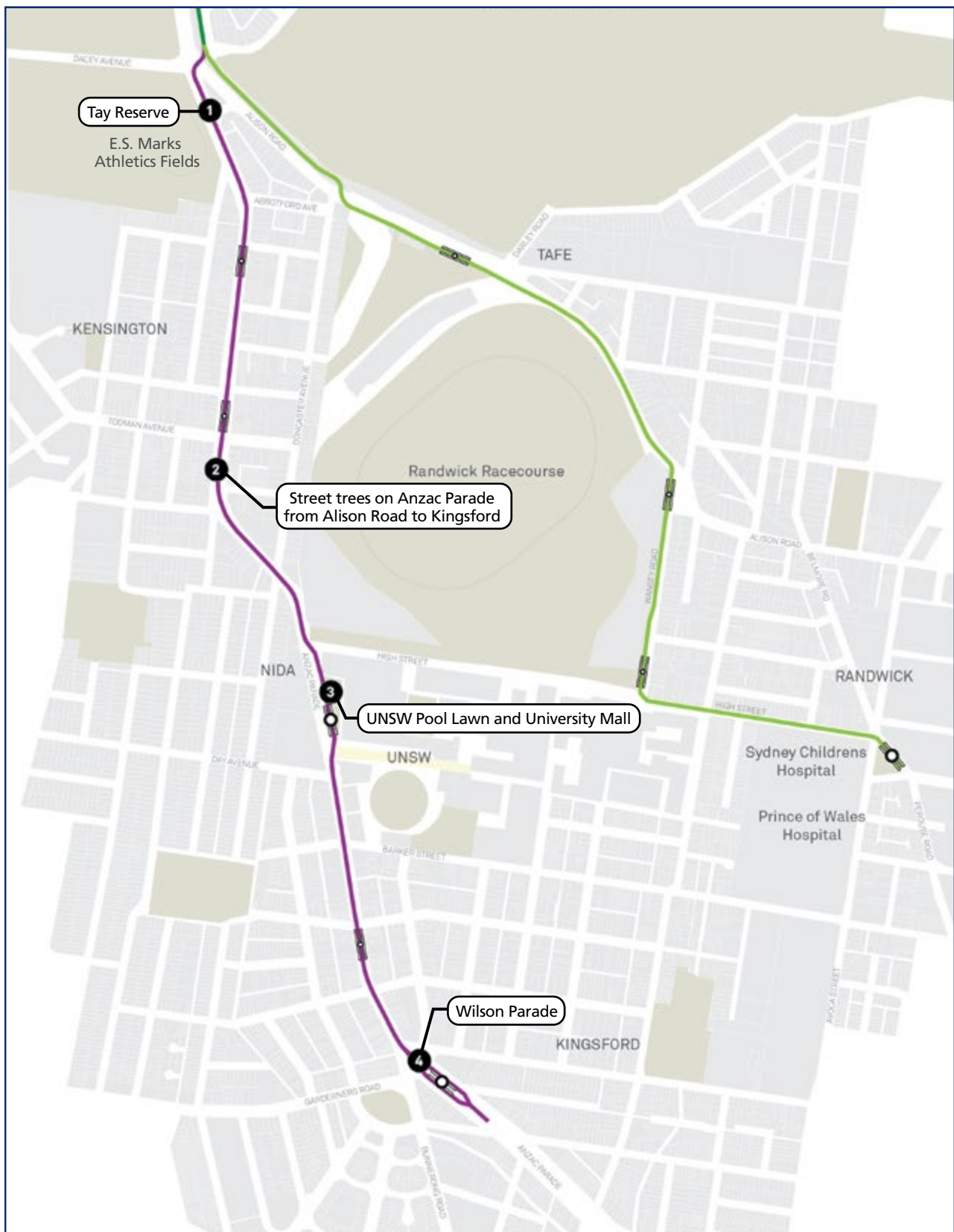
- Tay Reserve is a small park located at the south-east corner of the Anzac Parade/Gardeners Road intersection, and includes a number of mature trees. This reserve provides a local visual resource to the community and is therefore considered to be of local sensitivity.
- Anzac Parade is a main route from the South East suburbs of Sydney into the CBD. The landscape and visual amenity of this major roadway are considered to be of regional sensitivity.
- UNSW Kensington Campus, including the Pool Lawn and University Mall, is a clearly defined precinct characterised by mature trees and green lawns, pedestrian plazas, and modern institutional buildings. The landscape and visual amenity of this area is considered to be of regional sensitivity as this precinct is a feature of the locality.
- The Kingsford Nine Ways intersection, including Wilson Place to the south-east, is a major intersection in Kingsford and includes a number of mature trees. This intersection is an important route and decision making location for movement through the area and connection to South Coogee and Maroubra. The landscape and visual amenity of this area is considered to be of local sensitivity.

These sensitivity levels have been applied throughout the visual impact assessment for the Kensington/Kingsford Precinct.

### 16.7.3 Landscape character areas

The landscape character areas assessed within the Kensington/Kingsford Precinct are shown on Figure 16.20. The impact of the CSELR proposal on these landscape character areas is summarised in section 16.7.5 and section 16.7.6.

Figure 16.20 Kensington/Kingsford Precinct – Key landscape character areas

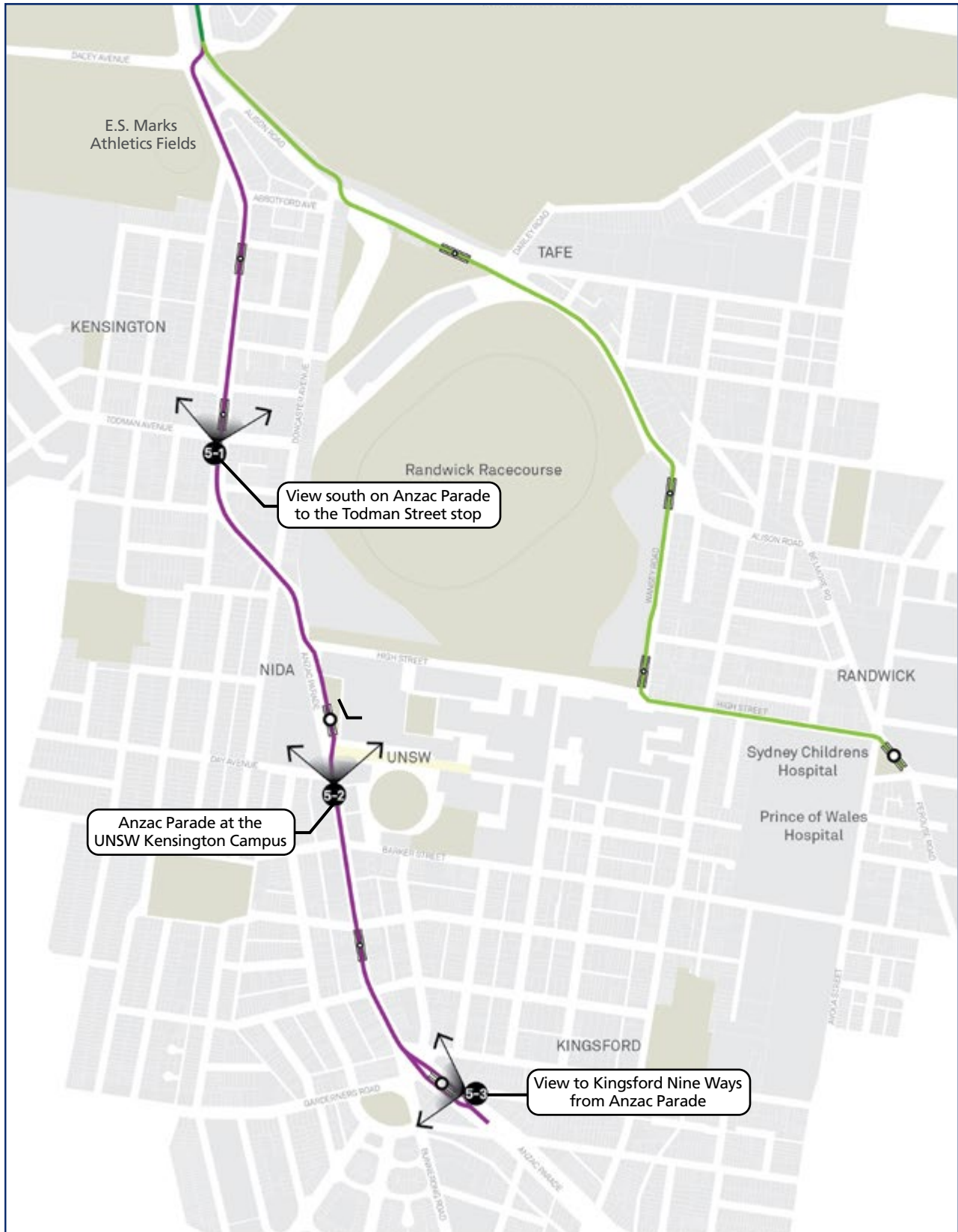




### 16.7.4 Representative viewpoints

The viewpoints selected as representative of the range of views to the CSELR proposal within the Kensington/Kingsford Precinct are shown in Figure 16.21. The impact of the proposal on these viewpoints is summarised in section 16.7.5 and section 16.7.6.

Figure 16.21 Kensington/Kingsford Precinct – Key viewpoints



### 16.7.5 Impacts during operation

The key visual impacts during operation of the CSELR within the Kensington/Kingsford Precinct would generally include the proposed stops and light rail infrastructure design, including:

- introduction of light rail tracks within the road surface along the length of the CSELR alignment
- overhead wiring along the length of the CSELR alignment
- removal of street trees along Anzac Parade
- changes to the visual landscape character of the Nine-Ways intersection due to the removal of the dominant Fig tree this location.

#### Assessment of landscape impacts (daytime)

Minor to moderate landscape impacts are predicted during operation of the CSELR proposal within the Kensington/Kingsford Precinct due to the loss of some trees and open spaces. However, as a substantial part of the alignment within this precinct would be within the existing median of Anzac Parade, these impacts would be minimised.

A summary of the potential landscape impacts of the CSELR proposal in the Kensington/Kingsford Precinct during operation is provided in Table 16.19.

Table 16.19 Kensington/Kingsford Precinct – Assessment of landscape impacts (operation)

| LANDSCAPE CHARACTER<br>(REFER FIGURE 16.20)                   | POTENTIAL<br>IMPACT               | ASSESSMENT OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Tay Reserve                                                | Minor adverse landscape impact    | <ul style="list-style-type: none"> <li>• During operation of the proposal, trees would be replaced in accordance with the Transport for NSW 'Vegetation Offset Guide' (2013d). These trees would be of a smaller size and maturity.</li> <li>• The size of the park would be reduced overall, and the amenity it provides to the area somewhat diminished.</li> </ul>                                                                                                                          |
| 2. Street trees on Anzac Parade from Alison Road to Kingsford | Moderate adverse landscape impact | <ul style="list-style-type: none"> <li>• During operation of the proposal these trees would be replaced on Anzac Parade in the vicinity of where they were removed. These trees would be of a smaller size and in a varied pattern as space allows.</li> </ul>                                                                                                                                                                                                                                 |
| 3. UNSW Pool Lawn and University Mall                         | Moderate adverse landscape impact | <ul style="list-style-type: none"> <li>• Footpath continuity would be established and this edge of the campus would be activated by the light rail stop. Trees would be replaced in adjacent areas, but would be of smaller size and maturity.</li> <li>• The roadway would be broadened; however, the introduction of light rail is compatible with the surrounding urban landscape and the preferred location for transport stops.</li> </ul>                                                |
| 4. Nine Ways intersection (including Wilson Place)            | Minor adverse landscape impact    | <ul style="list-style-type: none"> <li>• The function of the public realm in this area would be maintained and improved during operation of the proposal.</li> <li>• Footpath continuity would be improved and the Kingsford stop and bus interchange would be connected to the main street by more direct pedestrian routes.</li> <li>• There would be a considerable change in the quality of vegetation as mature specimens are replaced by new planting areas and street trees.</li> </ul> |

Source: Based on Technical Paper 10 – Visual and Landscape Assessment, Volume 5

#### Assessment of representative viewpoints (daytime)

The CSELR proposal would introduce a series of new infrastructure elements to the Kensington/Kingsford Precinct including catenary structures, overhead wires and LRVs. These elements, combined with the removal of some trees along Anzac Parade which have some visual prominence within the Kensington/Kingsford Precinct, would impact on some of the existing views within this area.

A summary of the potential daytime impacts of the CSELR proposal on representative viewpoints during operation is provided in Table 16.20.



Table 16.20 Kensington/Kingsford Precinct – Assessment of representative viewpoints (operation)

| VIEWPOINT<br>(REFER FIGURE 16.21)                               | POTENTIAL<br>IMPACT            | ASSESSMENT OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| View south on Anzac Parade to the Todman Avenue stop (View 5-1) | Moderate adverse visual impact | <ul style="list-style-type: none"> <li>In this view the traffic would be maintained and the centre median would be removed to accommodate the light rail corridor. The catenary structures and wires would be seen across the view, following the line of the roadway, and adding visual clutter to the view.</li> <li>As a part of the proposal, the existing street trees would have been removed and replaced by some trees where space permits. These trees, however, would be less mature and located to the edge of the road corridor.</li> <li>LRVs would be seen moving through this view, and stationary at the stop, with a visual envelope extending for up to 45 metres. As the planted median would be replaced with light rail tracks, there would be a noticeable reduction in the amenity of this view.</li> </ul>                                                                                                                                                                                                                     |
| Anzac Parade, at the UNSW Kensington Campus (View 5-2)          | Moderate adverse visual impact | <ul style="list-style-type: none"> <li>In this location, the light rail corridor would divert from the centre of the road, crossing the view to connect with the University Mall on the eastern side of the road at the UNSW stop with platforms and shelters (refer Figure 16.22). The light rail would be set within a trafficable pavement and there would be little room for additional street trees.</li> <li>The viewpoint towards the UNSW would be affected through the removal of a number of existing trees along Anzac Parade. These trees currently provide screening of some of the lower campus buildings, which would be visible in this viewpoint during operation (refer to Figure 16.22).</li> <li>The catenary structures and wires would be seen crossing the view and veering away from the roadway. These structures would add clutter to the view, particularly when seen against the sky.</li> <li>The LRVs would be seen moving through this view, and would have a visual envelope extending for up to 45 metres.</li> </ul> |
| View to Kingsford nine ways from Anzac Parade (View 5-3)        | Moderate adverse visual impact | <ul style="list-style-type: none"> <li>This view would change considerably during early works construction. As the car parking area is removed, the mature trees which characterise this area would be removed in the middle ground of the view (refer Figure 16.23).</li> <li>Reconstruction of the Nine Ways intersection to a signalised configuration would be seen in the background of the view.</li> <li>It is not expected that views to or from Dacey Gardens Park would be affected within this viewpoint.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Source: Based on Technical Paper 10 – Visual and Landscape Assessment, Volume 5

### Assessment of night-time visual impacts

The CSELR proposal would introduce lit LRVs to an area that is currently occupied by a highly trafficked roadway. LRVs would be seen moving along Anzac Parade at regular intervals with headlights which are generally the same size, breadth and brightness as standard car headlights. The LRVs would also include lit carriages. The stops proposed at Carlton Street, Todman Avenue, the UNSW Kensington Campus, Strachan Street and Kingsford would also be brightly lit to ensure community safety.

During operation, there would be lighting at each of the light rail stops, including the bus interchange at Kingsford on Anzac Parade. The LRVs would typically run centrally along the Anzac Parade, following the current road alignment, and then turn at the reconstructed Nine Ways intersection. At the UNSW Anzac Parade stop, the LRVs would manoeuvre across to the eastern side of Anzac Parade to access the stop, creating an opportunity for direct light spill into the University plaza areas and buildings. As there is already a considerable volume of traffic headlights moving along this alignment, there would generally not be any additional light spill on adjacent properties.

The LRV headlights would be consistent with the existing headlights from traffic and there would be no noticeable adverse effect. It is possible that there would be some additional skyglow (the illumination of the night sky or parts of it, typically as a result of artificial light) visible above the proposal alignment. It is considered that these elements would create a noticeable reduction in the amenity of the area which is of medium to high district brightness. This would result in a negligible to minor adverse visual impact.

Figure 16.22 Indicative view looking north along Anzac Parade towards the UNSW Anzac Parade stop



Figure 16.23 Indicative view looking north along Anzac Parade towards the Kingsford stop





### 16.7.6 Impacts during construction

Construction of the proposal in the Kensington/Kingsford Precinct would require works including utility relocations, intersection modifications, track slab construction and other systems works (installation of wiring etc.). As part of the works, some sections of streets and footpaths would be closed to pedestrians and general traffic (refer to section 16.3). Civil and systems works would include construction of the track slab and rail installation. Track construction would occur in linear sections between intersecting streets, with the intersections constructed separately during weekends or week nights.

Each section would be established as a site with traffic lanes diverted, temporary hoardings and barriers. During this time, construction equipment such as slip track machinery, cherry pickers, mobile cranes and trucks would be seen within the precinct. A series of construction compounds would also be located within the Kensington/Kingsford Precinct including within UNSW, and the proposed Kingsford stop area. Further detail regarding the proposed construction of the CSELR proposal is provided in Chapter 6.

#### Assessment of landscape impacts (daytime)

High adverse landscape impacts within the Kensington/Kingsford Precinct would arise during construction from the loss of street trees on Anzac Parade and mature Fig trees marking the entrance of the UNSW.

A summary of the potential landscape impacts of the CSELR proposal in the precinct during construction is provided in Table 16.21.

Table 16.21 Kensington/Kingsford Precinct – Assessment of landscape impacts (construction)

| LANDSCAPE CHARACTER (REFER FIGURE 16.20)                      | POTENTIAL IMPACT                  | ASSESSMENT OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Tay Reserve                                                | Moderate adverse landscape impact | <ul style="list-style-type: none"> <li>There would be direct visual impacts on Tay Reserve. A number of mature trees, which provide visual relief at this busy intersection, would be removed and the size of the park would be reduced substantially as construction occurs on this small reserve.</li> <li>This would displace users of the reserve and its function as an open space would be further degraded.</li> </ul>                                                                                                                                                                                                                                                                                                                      |
| 2. Street trees on Anzac Parade from Alison Road to Kingsford | High adverse landscape impact     | <ul style="list-style-type: none"> <li>There would be considerable direct impacts on the trees which provide visual relief to this road dominated corridor. In order to construct the proposal, a number of trees of varying species, age and quality would be removed.</li> <li>In particular, the areas of Kensington and the UNSW would experience the greatest change in character due to this loss.</li> </ul>                                                                                                                                                                                                                                                                                                                                |
| 3. UNSW Pool Lawn and University Mall                         | High adverse landscape impact     | <ul style="list-style-type: none"> <li>A worksite would be required along the eastern side of Anzac Parade, adjacent to the University Mall. The worksite would be enclosed by hoarding, and cover approximately 6,000 square metres in area and approximately 200 metres in length.</li> <li>It is likely that the flow of pedestrian movement across Anzac Parade would be diverted around the site, so that some visual connectivity and legibility in this precinct may be impacted.</li> <li>A number of mature trees and the continuous hedge, which defines this edge, would also be removed.</li> </ul>                                                                                                                                    |
| 4. Nine Ways intersection (including Wilson Place)            | Minor adverse landscape impact    | <ul style="list-style-type: none"> <li>The roundabout at the Nine Ways intersection would be removed and a temporary intersection established.</li> <li>Two worksites would be located in this location including a large site utilising the centre of Anzac Parade between the Nine Ways intersection and Sturt Street, and another worksite that would utilise the site between Anzac Parade and Rainbow Street. Construction would require the removal of much of the vegetation on these sites and at the current intersection including a number of mature Figs and Eucalypts.</li> <li>There would be minimal impacts on pedestrian movement across the intersection and sites as there are currently few opportunities to cross.</li> </ul> |

Source: Based on Technical Paper 10 – Visual and Landscape Assessment, Volume 5

### Assessment of representative viewpoints (daytime)

During construction, the CSELR proposal would generally result in a moderate to high adverse impact to existing viewpoints within the Kensington/Kingsford Precinct. This would result from impacts including removal of existing trees, the creation of worksites surrounded by hoardings, the channelling views along streets and footpaths (which would block existing views), and the general movement of plant and equipment (which would intermittently impact existing views).

A summary of the potential daytime impacts of the CSELR proposal on viewpoints in the precinct during construction is provided in Table 16.22.

Table 16.22 Kensington/Kingsford Precinct – Assessment of representative viewpoints (construction)

| VIEWPOINT<br>(REFER FIGURE 16.21)                               | POTENTIAL<br>IMPACT            | ASSESSMENT OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| View south on Anzac Parade to the Todman Avenue stop (View 5-1) | High adverse visual impact     | <ul style="list-style-type: none"> <li>This view would change as the street trees are removed along the length of the central median to accommodate the site works.</li> <li>The view would be focused on the worksite which would be established down the centre of the road, and extend progressively along the length of the road.</li> </ul>                                                                                                             |
| Anzac Parade, at the UNSW Kensington Campus (View 5-2)          | High adverse visual impact     | <ul style="list-style-type: none"> <li>This view would change considerably during early works, as utilities relocation, minor road adjustments, vegetation and public realm demolition works are undertaken.</li> <li>The construction site would be established, accommodating a large site adjacent to Anzac Parade and on the university campus.</li> </ul>                                                                                               |
| View to Kingsford Nine Ways from Anzac Parade (View 5-3)        | Moderate adverse visual impact | <ul style="list-style-type: none"> <li>This view would change considerably during early works construction, as the car parking area is removed and the mature trees which characterise this area are removed in the middle ground of the view.</li> <li>Reconstruction of the Nine Ways intersection to a signalised configuration would be seen in the background of the view. Following this, a number of large worksites would be established.</li> </ul> |

Source: Based on Technical Paper 10 – Visual and Landscape Assessment, Volume 5

### Assessment of night-time visual impacts

During construction there may be times when there would be 24-hour use of the construction sites. At these times the site would include brightly lit areas to provide a safe work environment for construction activities. Headlights from construction related traffic would also be visible, including trucks accessing the site. It is expected that lighting on the site would be brighter than the current traffic and street lighting; however any additional skyglow would be managed by cut-off light fittings and directed lights for the construction tasks.

Views to the construction works would be largely unfiltered by vegetation and in close proximity to commercial and residential properties and UNSW buildings. There may be some direct light spill onto the campus; however, it is expected that this spill would be minimised by cut-off light fittings and directed lights for the construction tasks. This additional light would have a visual effect but is generally considered to be compatible with the existing night scene.

## 16.7.7 Management and mitigation

A series of mitigation measures have been designed to mitigate the potential visual and amenity impacts of the CSELR proposal during construction and operation. Mitigation measures for the Kensington/Kingsford Precinct are presented in Table 16.23 and Table 16.24.

General visual mitigation measures for the whole of the CSELR proposal are also provided in section 12.7.7 of this EIS.



Table 16.23 Kensington/Kingsford Precinct – Visual and landscape mitigation measures (operation)

| MITIGATION MEASURES                                                                                                                                                                                     | APPLICABLE LOCATIONS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <ul style="list-style-type: none"> <li>Where possible consolidate site equipment and facilities within one location to minimise the intervention into the UNSW campus grounds.</li> </ul>               | UNSW Kensington      |
| <ul style="list-style-type: none"> <li>Maintain access or provide alternative pedestrian access to all existing UNSW campus facilities.</li> </ul>                                                      | UNSW Kensington      |
| <ul style="list-style-type: none"> <li>Use hoarding treatment (colours and or materials) that complement the UNSW surroundings.</li> </ul>                                                              | UNSW Kensington      |
| <ul style="list-style-type: none"> <li>Detailed design would investigate opportunities for an artistic approach to treatment of the site hoarding and enclosure, in collaboration with UNSW.</li> </ul> | UNSW Kensington      |

Source: Based on Technical Paper 7 – Visual and Landscape Assessment, Volume 5

Table 16.24 Kensington/Kingsford Precinct – Visual and landscape mitigation measures (construction)

| MITIGATION MEASURES                                                                                                                                                                                                                                                                                                                                                               | APPLICABLE LOCATIONS                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Provide a boulevard of street trees along Anzac Parade to improve streetscape and extend the ceremonial avenue of street trees.</li> </ul>                                                                                                                                                                                                 | Street trees on Anzac Parade from Alison Road to Kingsford                                                        |
| <ul style="list-style-type: none"> <li>Detailed design would investigate opportunities to incorporate the substation into urban development or utilise landscape/art to maintain the street edge and reduce visual impact of the substation structure at the Abbotford Street intersection, in consultation with Randwick City Council.</li> </ul>                                | Dacey Avenue substation                                                                                           |
| <ul style="list-style-type: none"> <li>Detailed design would investigate opportunities for siting semi mature Fig trees within the UNSW grounds (in the vicinity of the proposed stop) to recreate the perimeter planting along the Anzac Parade frontage and reinforce campus thresholds in consultation with UNSW.</li> </ul>                                                   | UNSW Kensington                                                                                                   |
| <ul style="list-style-type: none"> <li>Detailed design would investigate opportunities to incorporate the substation into other uses such as seating and shade structures or built development, to reduce its visual prominence, in consultation with Randwick City Council.</li> </ul>                                                                                           | Kingsford/Anzac Parade substation                                                                                 |
| <ul style="list-style-type: none"> <li>Where possible any areas of direct light intrusion (glare and spill) from LRV headlights would be identified and managed.</li> </ul>                                                                                                                                                                                                       | All                                                                                                               |
| <ul style="list-style-type: none"> <li>At stops and stabling areas, cut off and directed light fittings (or similar techniques) would be used to minimise glare and light spill onto private property.</li> </ul>                                                                                                                                                                 | Carlton Street stop, Todman Avenue stop, UNSW Kensington Campus stop, Strachan Street stop, Kingsford interchange |
| <ul style="list-style-type: none"> <li>Ongoing consultation with Randwick City Council and other relevant stakeholders would continue to be undertaken throughout the detailed design phase to identify opportunities for revitalisation of existing public spaces and the public domain and to determine the most appropriate form or revitalisation for these areas.</li> </ul> | All public open spaces                                                                                            |

Source: Based on Technical Paper 10 – Visual and Landscape Assessment, Volume 5

## 16.8 Built and non-Indigenous heritage values

A detailed historic heritage impact assessment for the CSELR proposal was undertaken by Godden Mackay Logan. A comprehensive technical report is available as Technical Paper 5 – *Heritage Impact Assessment* in Volume 4. A summary of the assessment is provided in the following sections.

## 16.8.1 Existing conditions

### Heritage context and significance

Anzac Parade forms the main corridor of the suburbs of Kensington and Kingsford, with the road continuing south through these suburbs and beyond. Once the road enters Kensington (south of Alison Road) it takes on a different character from Moore Park to the north, with the parkland character giving way to streetscapes characterised by late 19<sup>th</sup> Century and 20<sup>th</sup> Century commercial and residential development. The streetscape character is diverse with turn of the century single-storey bungalows and cottages, interwar flats of two storeys, high-rise flats dating from the 1960s to present, and a mix of commercial and public buildings, including corner hotels (such as the Doncaster) and a Masonic hall.

Tay Reserve, located at the intersection of Anzac Parade and Alison Road, was formerly the site of the Randwick Toll Bar Cottage, demolished c1909. The reserve contains a number of significant trees that are linked to the site's former use. The reserve is listed as a heritage item on the Randwick LEP 2012, being open space that makes a positive contribution to the aesthetics of this heavily urbanised area.

The UNSW is a 20<sup>th</sup> Century development along Anzac Parade. Located on the site since 1949, the university does not have any heritage listed buildings in the vicinity of Anzac Parade. It does, however, feature significant trees recorded in Randwick City Councils (2007) *Register of Significant Trees*, including a collection of Moreton Bay and Port Jackson Figs that date from the site's use as a racecourse, predating the university. The UNSW High Street 'Old Tote' precinct, including the White House, the Old Tote building and the associated collection of Figs, have historical significance as surviving evidence of the use of the university site as Kensington Racecourse from 1893 to 1941.

Further discussion on the heritage context and significance of the Kensington/Kingsford Precinct is provided in Technical Paper 5.

### Listed heritage items

A total of five heritage listed items were identified within, or immediately adjacent to, the proposed CSELR corridor within the Kensington/Kingsford Precinct; however, only three of these items would have the potential to be directly affected by the CSELR proposal. A summary of the heritage-listed items within or immediately adjacent to the proposed CSELR corridor is provided in Table 16.25, while the locations of these items are shown in Figure 16.24a and Figure 16.24b.

There are no items listed on the State Heritage Register (SHR) that would be directly affected by the CSELR proposal within the Kensington/Kingsford Precinct.



Figure 16.24a Kensington/Kingsford Precinct – Existing built and non-Indigenous heritage items

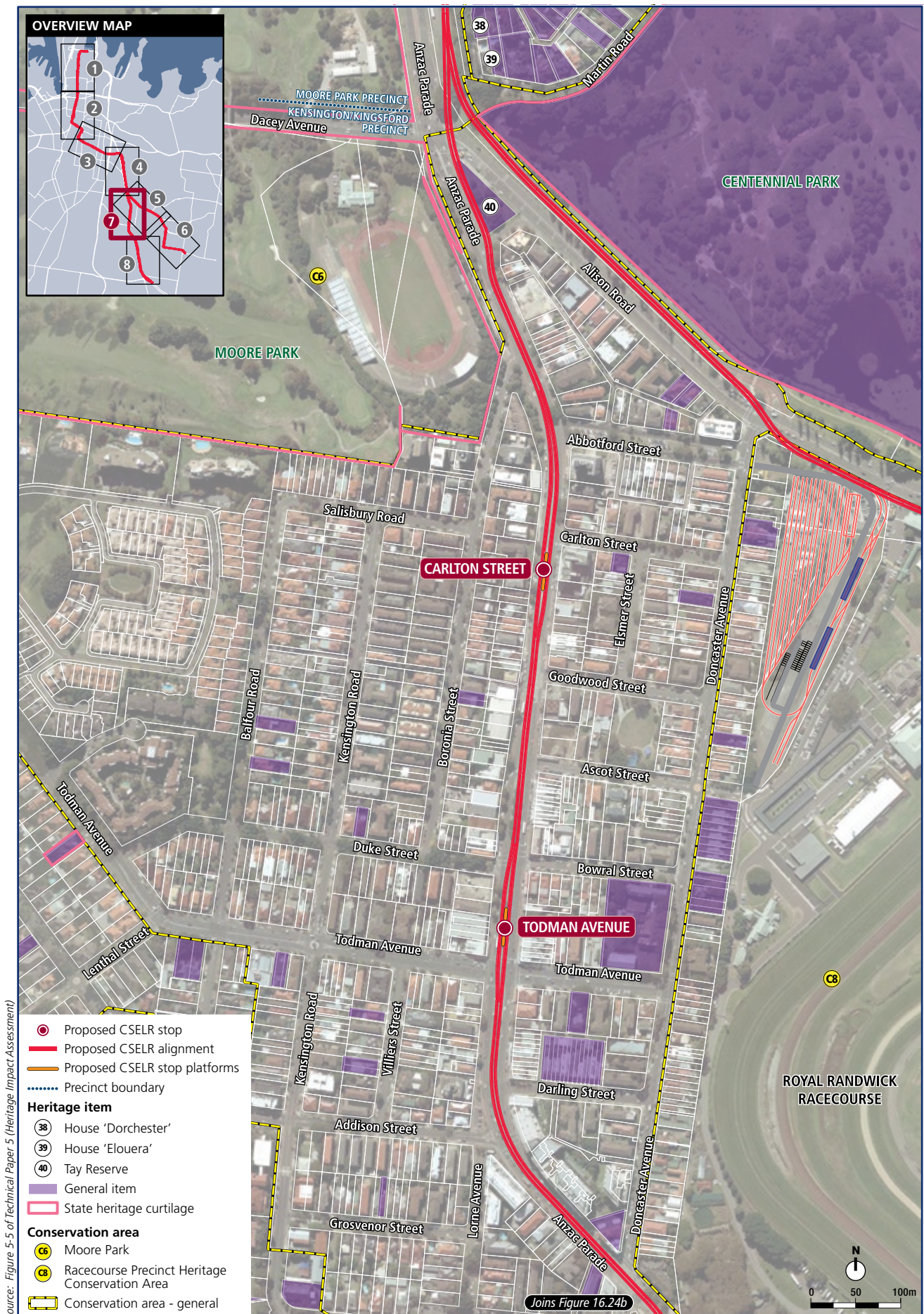
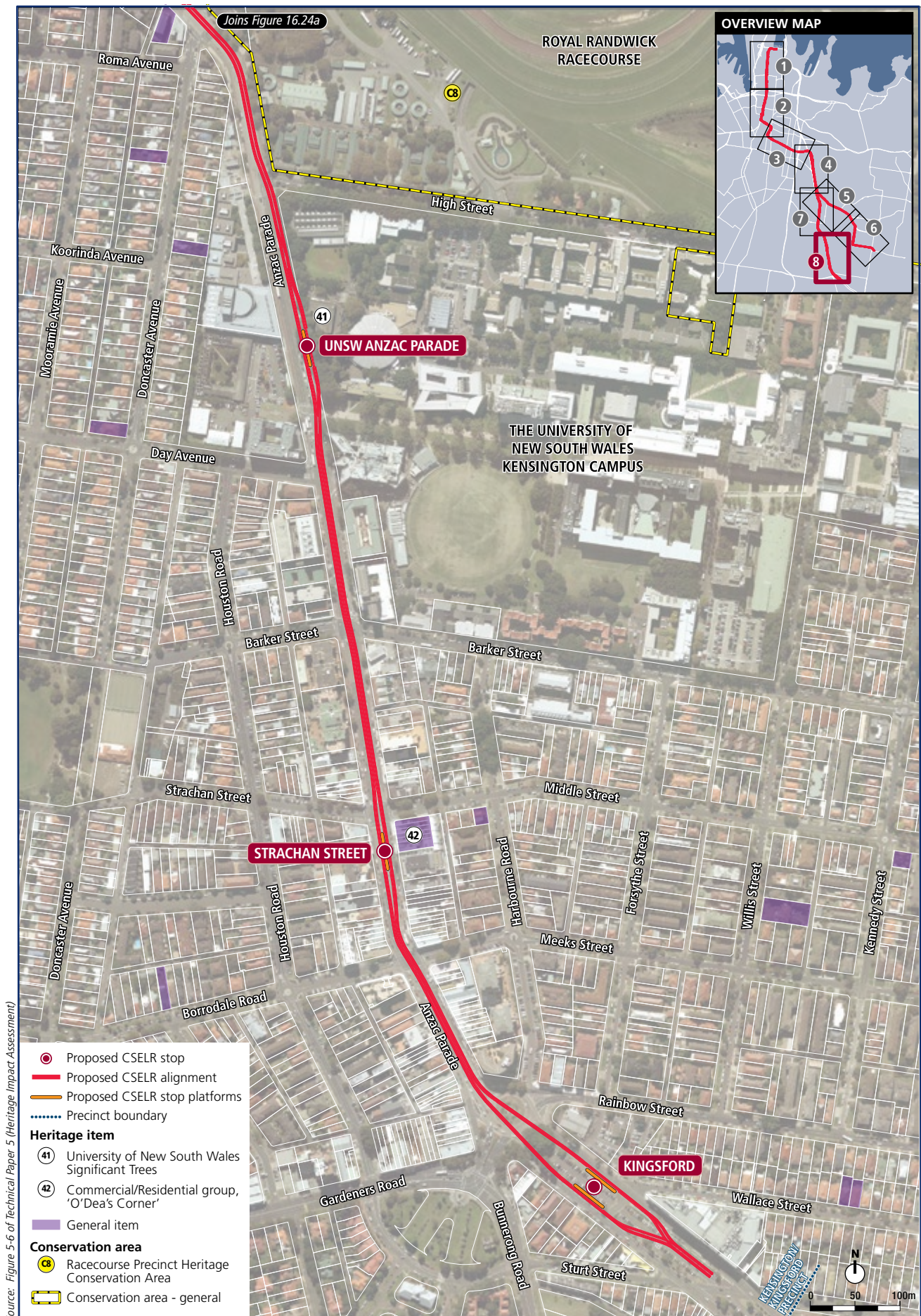


Figure 16.24b Kensington/Kingsford Precinct – Existing built and non-Indigenous heritage items



Source: Figure 5-6 of Technical Paper 5 (Heritage Impact Assessment)



Table 16.25 Summary of historic heritage-listed items within or immediately adjacent to the proposed CSELR corridor – Kensington/Kingsford Precinct

| ITEM                                            | LISTING <sup>1</sup> | LEVEL OF SIGNIFICANCE | POTENTIAL TO BE DIRECTLY IMPACTED? |
|-------------------------------------------------|----------------------|-----------------------|------------------------------------|
| Tay Reserve                                     | RLEP 2012            | Local                 | Yes                                |
| Doncaster Hotel                                 | RLEP 2012            | Local                 | No                                 |
| Masonic Temple                                  | RLEP 2012            | Local                 | No                                 |
| University of New South Wales Significant Trees | RCCRST 2008          | Local                 | Yes                                |
| Commercial/Residential group, 'O'Dea's Corner'  | RLEP 2012            | Local                 | Yes                                |

Source: Adapted from Table 5.9 of Technical Paper 5 – Heritage Impact Assessment, Volume 4.

Note 1: RLEP 2012 = Randwick Local Environmental Plan 2012; RCCRST 2008 = Randwick City Council Register of Significant Trees 2008

### Heritage conservation areas

There are no heritage conservation areas that would be either traversed, or located immediately adjacent to, the proposed CSELR corridor within the Kensington/Kingsford Precinct.

### Areas of potential archaeological significance

As discussed in section 12.8.1, three archaeological zones have been developed to respond to known or potential archaeological significance along the proposed CSELR alignment. These zones comprise:

- Zone 1: State significant archaeological resource — known or potential
- Zone 2: Locally significant archaeological resource — known or potential
- Zone 3: No archaeological resource present.

The potential archaeological significance of the proposed CSELR corridor within the Kensington/Kingsford Precinct is shown in Figures 16.25a and b and described in section 4.6 of Technical Paper 5. The CSELR corridor has been divided into a number of discrete Historical Archaeological Management Units (HAMUs). Each unit has been allocated according to the nature of the potential archaeological resource in an area. These units have then been allocated a particular archaeology zoning based on the significance of the potential archaeology. This zoning would allow the varying nature and significance of the archaeological resource to be managed pragmatically and consistently throughout the course of the CSELR proposal.

As shown in Figure 16.25a and Figure 16.25b, the following four HAMUs were defined in the Kensington/Kingsford Precinct for the CSELR:

- Tay Reserve
- Anzac Parade — Kensington
- UNSW
- Anzac Parade — Kingsford.

All of the above HAMUs were defined as having the potential to contain local significant archaeology and are discussed in Table 16.26. The Tay Reserve HAMU was generally defined as having the potential to contain locally significant archaeology; however, archaeological remains associated with the toll house may be of State significance (depending on the nature and extent of the evidence).

The Anzac Parade — Kensington HAMU was generally defined as having the potential to contain locally significant archaeology. However, in the unlikely event that the following items were identified, they may be assessed as being of State significance (depending on the nature and intactness of the archaeology):

- archaeological evidence associated with unrecorded activities of early land grants

- wool washing activities
- unexpected archaeological evidence associated with the early phases of use of Royal Randwick racecourse.

The UNSW and Anzac Parade — Kingsford HAMUs were generally defined as having the potential to contain locally significant archaeology. However, in the unlikely event that archaeological evidence associated with unrecorded activities of early land grants, wool washing activities or Kensington Racecourse was identified, it may be assessed as being of State significance (depending on the nature and intactness of the archaeology).

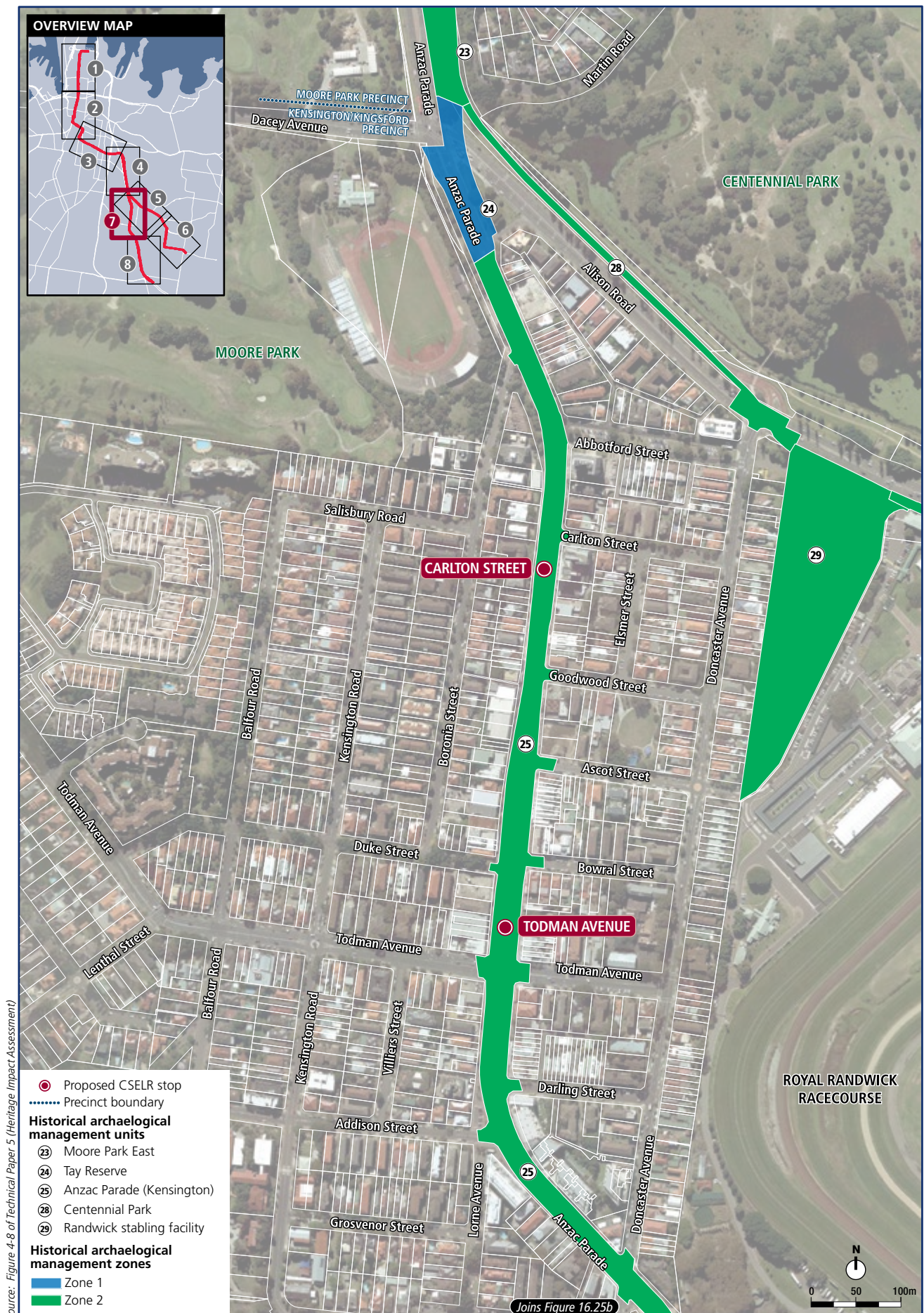
Table 16.26 Description of HAMUs in the Kensington/Kingsford Precinct

| HAMU                      | LISTING                                                                                                                                   | DESCRIPTION OF HAMU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tay Reserve               | No listings specifically reference significance of the potential historical archaeological resource within the Tay Reserve HAMU           | <p>There is moderate-high potential for historical archaeological remains to be present, which may be associated with the following:</p> <ul style="list-style-type: none"> <li>• metal tracks and wooden sleepers with the tram line</li> <li>• evidence of early alignment of Alison Road and/or Anzac Parade, including the remains of sandstone kerbs, drains, early road surfaces and structural remains indicating the alignment of the street.</li> </ul> <p>There is low moderate potential for historical archaeological remains to be present, which may be associated with the following:</p> <ul style="list-style-type: none"> <li>• structural remains of the toll house building, likely to be positioned beneath the current intersection of Alison Road and Anzac Parade</li> <li>• structural remains of the actual toll gate over Alison Road and Anzac Parade</li> <li>• early boundaries of the reserve (prior to the widening of Anzac Parade) such as postholes.</li> </ul> <p>Some sites or features may be previously disturbed by the installation of services, construction of roadways and paths, and landscape modification.</p> |
| Anzac Parade (Kensington) | No listings specifically reference significance of the potential historical archaeological resource within Anzac Parade (Kensington) HAMU | <p>There is low-moderate potential for historical archaeological remains to be present, which may be associated with the following:</p> <ul style="list-style-type: none"> <li>• early alignment of Anzac Parade, including the remains of sandstone kerbs, drains, early road surfaces and structural remains indicating the alignment of the street</li> <li>• evidence of 19<sup>th</sup> and early 20<sup>th</sup> Century services, such as drains, sewerage, eater and gas services constructed of stone, brick, ceramic, metal or wood</li> <li>• evidence of activities or elements associated with the use of the Royal Randwick racecourse on its south-western boundary.</li> </ul> <p>Some sites or features may be previously disturbed by the installation of services, construction of roadways and paths, and landscape modification.</p>                                                                                                                                                                                                                                                                                                     |
| UNSW                      | No listings specifically reference significance of the potential historical archaeological resource within the University of NSW HAMU     | <p>There is high and known potential for historical archaeological remains to be present, which may be associated with the following:</p> <ul style="list-style-type: none"> <li>• evidence of activities or elements associated with the use of the former Kensington Racecourse on its western boundary such as evidence of dirt race track, post holes of timber fencing</li> <li>• early alignment of Anzac Parade, including the remains of sandstone kerbs, drains, early road surfaces and structural remains indicating the alignment of the street</li> <li>• evidence of 19<sup>th</sup> and early 20<sup>th</sup> Century services, such as drains, sewerage, eater and gas services constructed of stone, brick, ceramic, metal or wood.</li> </ul> <p>Some sites or features may be previously disturbed by the installation of services, construction of roadways and paths, and landscape modification.</p>                                                                                                                                                                                                                                    |
| Anzac Parade (Kingsford)  | No listings specifically reference significance of the potential historical archaeological resource within Anzac Parade (Kingsford)       | <p>There is low-moderate potential for historical remains to be present including:</p> <ul style="list-style-type: none"> <li>• early alignment of Anzac Parade, including the remains of sandstone kerbs, drains, early road surfaces and structural remains indicating the alignment of the street</li> <li>• evidence of 19<sup>th</sup> and early 20<sup>th</sup> Century services, such as drains, sewerage, eater and gas services constructed of stone, brick, ceramic, metal or wood.</li> </ul> <p>There is low-nil potential for historical remains to be present associated with the following:</p> <ul style="list-style-type: none"> <li>• evidence of early land grants or wool washing industries evidence of early land clearing; activities such as artefact scatters or rubbish pits. Any archaeological evidence, if found is likely to be ephemeral in nature and its location not possible to predict.</li> </ul>                                                                                                                                                                                                                        |

Source: Section 4.6 of Technical Paper 5- Heritage Impact Assessment, Volume 4



Figure 16.25a Historical archaeological management units – Kensington/Kingsford Precinct



Source: Figure 4-8 of Technical Paper 5 (Heritage Impact Assessment)

Figure 16.25b Historical archaeological management units – Kensington/Kingsford Precinct





## 16.8.2 Impacts on heritage listed items

As outlined in section 16.8.1, the CSELR proposal has the potential to directly affect three heritage listed items within the Kensington/Kingsford (as indicated in Table 16.25). Heritage impact assessments for each individual heritage item are provided in section 5.6.2 of Technical Paper 5 and summarised in Table 16.27.

In summary, there is the potential for the catenary wires, supporting poles and general infrastructure required for the CSELR to result in an additional adverse visual impact on the streetscape of Anzac Parade and two individual heritage items: the Doncaster Hotel and the Masonic Temple, which are both located at the corner of Anzac Parade and Doncaster Avenue. These potential impacts would result from the cumulative impact of additional infrastructure creating additional visual clutter within the streetscape in the public domain, as well as the removal of a significant number of median strip plantings along Anzac Parade that contribute to the streetscape.

The CSELR alignment along Anzac Parade would also necessitate the removal of at least two cast iron sewer vents located in the median strip of Anzac Parade at the intersections of Todman Avenue and Bowral Street. The vents, which are not identified as heritage items, may have historic significance relating to the development of the suburb, and possibly also aesthetic significance.

No listed heritage items, trees or landscape elements would be impacted by the proposed Kingsford stop and interchange; although a large (unlisted) Hill's Fig is proposed to be removed, along with a number of established plantings, including large palm trees. A small reserve, Wilson Place, located at the south-east corner of the Anzac Parade/Gardeners Road intersection would be substantially altered. These landscape items, while not identified as having heritage significance (although Wilson Place is may have social value for the local community), do contribute to the streetscape and their loss may have an adverse impact on the Anzac Parade streetscape.

Environmental management measures that Transport for NSW proposes to implement to manage the potential heritage impacts of the CSELR proposal in the Kensington/Kingsford Precinct are described in section 16.8.4.

Table 16.27 Summary of impacts on heritage listed items – Kensington/Kingsford Precinct

| HERITAGE ITEM                                   | IMPACT ON THE HERITAGE ITEM DUE TO THE CSELR PROPOSAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tay Reserve                                     | The CSELR proposal would remove a significant portion of the north-eastern edge of Tay Reserve along with the removal of a number of established trees and landscape items. The park is significant as an open space that includes the site of the Old Toll Bar that was removed c1909. A substantial reduction of the park landscape and removal of established trees would be a major adverse heritage impact.                                                                                                                                                                                                                                                                                |
| University of New South Wales Significant Trees | The trees along the western Anzac Parade boundary of UNSW, near the main entrance, are listed on the Randwick City Councils (2007) <i>Register of Significant Trees</i> . Construction of the CSELR along Anzac Parade and the proposed side stop within the boundary of UNSW would necessitate the removal of a number of these trees. The trees are identified as a significant group of plantings, and are individual mature plantings with historic significance. Removal of the identified trees and extensive pruning would have a major adverse impact on the group and result in the loss of individual elements that demonstrate the pre-UNSW Kensington Racecourse phase of the site. |
| Commercial/Residential group, 'O'Dea's Corner'  | The Strachan Street stop is proposed to be located immediately adjacent to the Commercial/Residential group, formerly known as 'O'Dea's Corner'. The proposed central platform stop would have a minor adverse impact on the setting and appreciation of the lower level of the building in views from the south along Anzac Parade.                                                                                                                                                                                                                                                                                                                                                            |

### 16.8.3 Impacts on areas of potential archaeological significance

Direct impacts to areas of potential archaeological significance would generally be associated with the construction of the CSELR causing disturbance to, or loss of, archaeological resources.

Potential impacts during the construction phase of the proposal could arise from:

- soil compaction associated with the installation of demountable sheds, establishment of construction compounds/work areas, material laydown and/or movement of heavy vehicles
- construction of the CSELR track slab
- installation of catenary support poles
- construction of the light rail stops and associated infrastructure (such as stop shelters)
- installation of the proposed Dacey Avenue, Royal Randwick racecourse and Anzac Parade substations
- regrading of the ground to achieve final track and stop levels
- service/utility relocations
- tree removal
- footpath reconstruction and landscaping.

Descriptions of each HAMU and the potential impacts to them as a result of the proposal are summarised in Table 16.28 below for the Kensington/Kingsford Precinct.

Table 16.28 Heritage impact assessment of HAMUs in the Kensington/Kingsford Precinct

| HAMU                      | HERITAGE IMPACT ASSESSMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tay Reserve               | <p>Construction of the CSELR track slab would involve excavation below the current ground surface. These works are likely to have a moderate adverse impact on the potential historical resource.</p> <p>Other ground disturbance activities within the Tay Reserve HAMU (service relocation) would be likely to have a minor to moderate adverse impact on the potential historical archaeological resource, depending on the extent and nature of the proposed works.</p> <p>Use of Tay Reserve HAMU as a construction zone — where it would not involve the removal of the existing ground surface and/or excavation — is unlikely to have an impact on the historical archaeological resource.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Anzac Parade (Kensington) | <p>Construction of the CSELR track slab would involve excavation below the current ground surface. These works are likely to have a moderate adverse impact on the potential historical resource. Excavation for the stop shelter and associated infrastructure would involve deeper excavation than for the CSELR track in other parts of this HAMU.</p> <p>The installation of the Dacey Avenue and Royal Randwick Racecourse substations would involve ground disturbance works, including excavation for the substation and associated services. These works would have moderate adverse impacts on the historical archaeological resource, depending on the extent and nature of the proposed works.</p> <p>Other ground disturbance activities within the Anzac Parade (Kensington) HAMU (i.e. service relocation, tree removal) would be likely to have localised impacts on the historical archaeological resource. These works are likely to have a minor to moderate adverse impact on the potential historical archaeological resource, depending on the extent and nature of the proposed works.</p> <p>Use of Anzac Parade (Kensington) HAMU as a construction zone — where it would not involve the removal of the existing ground surface and/or excavation — is unlikely to have an impact on the historical archaeological resource.</p> |
| UNSW                      | <p>Construction of the CSELR track slab would involve excavation below the current ground surface. These works are likely to have a moderate adverse impact on the potential historical resource. Excavation for the stop shelter and associated infrastructure would involve deeper excavation than for the CSELR track in other parts of this HAMU.</p> <p>Other ground disturbance activities within the UNSW HAMU (i.e. service relocation, tree removal) would be likely to have localised impacts on the historical archaeological resource. These works are likely to have a minor adverse impact on the potential historical archaeological resource, depending on the extent and nature of the proposed works.</p> <p>Use of UNSW HAMU as a construction zone — where it would not involve the removal of the existing ground surface and/or excavation — is unlikely to have an impact on the historical archaeological resource.</p>                                                                                                                                                                                                                                                                                                                                                                                                           |



Table 16.28 cont.

| HAMU                     | HERITAGE IMPACT ASSESSMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Anzac Parade (Kingsford) | <p>Construction of the CSELR track slab would involve excavation below the current ground surface. These works are likely to have a moderate adverse impact on the potential historical resource.</p> <p>The installation of the Anzac Parade substation would involve ground disturbance works including excavation for the substation and associated services. These works would have a moderate adverse impact on the potential historical archaeological resource depending on the extent and nature of the proposed works.</p> <p>Other ground disturbance activities within the Anzac Parade (Kingsford) HAMU (service relocation) would be likely to have a minor to moderate adverse impact on the potential historical archaeological resource, depending on the extent and nature of the proposed works.</p> <p>Use of Anzac Parade (Kingsford) HAMU as a construction zone — where it would not involve the removal of the existing ground surface and/or excavation — is unlikely to have an impact on the historical archaeological resource.</p> |

Source: Section 4.6 in Technical Paper 5- Heritage Impact Assessment, Volume 4

## 16.8.4 Management and mitigation

### Impacts on built and landscape heritage

Overarching environmental management measures that would be adopted for the CSELR proposal to manage potential impacts on built and landscape heritage items and heritage conservation areas are described in section 12.8.4. The following additional management and mitigation measures would be implemented to further minimise impacts on listed heritage items within the Kensington/Kingsford Precinct:

- Tay Reserve:
  - Detailed design of the CSELR proposal would minimise the area of Tay Reserve to be removed for the cross-over at Anzac Parade.
  - A photographic archival recording of Tay Reserve would be undertaken prior to works commencing.
- University of New South Wales Significant Trees:
  - Where significant trees must be removed, suitable replacements would be made, where possible.
  - A photographic archival recording of the significant trees would be undertaken prior to works commencing.

### Impacts on areas of potential archaeological significance

Overarching environmental management measures that would be adopted for the CSELR proposal to manage potential impacts on areas of potential archaeological significance are described in section 12.8.4. As outlined in section 12.8.4, archaeological resources within the proposed CSELR corridor would be managed in accordance with their significance.

Mitigation measures, as outlined for Zone 2 in section 12.8.4, would be implemented for all of the HAMUs within the Kensington/Kingsford Precinct.

Some HAMUs would require additional specific mitigation and management strategies be implemented, which would be tailored to address the anticipated nature of archaeological resource in that area. Additional mitigation measures that would apply to HAMUs within the Kensington/Kingsford Precinct comprise the following:

- Tay Reserve HAMU:
  - Works in this HAMU are likely to require some open area excavation and archival recording during site works, as well as post-excavation analysis and reporting. The nature and intactness of the archaeological resource may warrant interpretation.

- Anzac Parade (Kensington) HAMU:
  - Works in this HAMU (particularly in the location of the proposed substations) are likely to require some open area excavation and archival recording during site works, as well as post-excavation analysis and reporting. The nature and intactness of the archaeological resource may warrant interpretation.
- UNSW HAMU:
  - Works in this HAMU are likely to require some open area excavation (particularly in the area of the UNSW Anzac Parade stop) and archival recording during site works, as well as post-excavation analysis and reporting. The nature and intactness of the archaeological resource may warrant interpretation.

### Heritage Interpretation Strategy

A Heritage Interpretation Strategy (HIS) has been developed for the CSELR proposal and is included as Technical Paper 6. The HIS outlines how the history, significant heritage places and stories associated with each of the precincts through which the CSELR travels may be interpreted.

For the Kensington/Kingsford precinct the key places of interest are:

- Tay Reserve site of the former 1840s toll house
- UNSW
- NIDA.

The following opportunities for interpretation have been identified:

- application of interpretive signage/or evocative historical imagery at select light rail stops
- development of an online exhibition, or digital publication outlining the history and significance of the precincts and places along the CSELR
- 'Walk the Line' — a self-guided tour along the CSELR alignment that could be downloaded from a website, developed as an app, or printed as a brochure or booklet.

Heritage interpretation measures would be developed during detailed design in consultation with Randwick City Council.

### Effectiveness of the mitigation measures

As discussed in section 12.8.4, the effectiveness of the built and non-Indigenous heritage management and mitigation measures proposed in this EIS has been ranked in section 6.2 of Technical Paper 5.

The effectiveness of the mitigation measures proposed for historical archaeology is identified against each of the specific HAMUs in Table 6.1 of Technical Paper 5, whereas the effectiveness of the mitigation measures proposed for built and landscape heritage are identified against each heritage item/conservation area in Table 6.4 of Technical Paper 5.

A summary of the general effectiveness of each form of mitigation for built and landscape heritage is provided in Table 12.47.

## 16.9 Socio-economic characteristics

The following section provides a summary of the potential local social and economic impacts of the proposal within the Kensington/Kingsford Precinct, based on Technical Paper 3 — *Social Impact Assessment* and Technical Paper 4 — *Economic Impact Assessment* in Volume 3.

### 16.9.1 Existing conditions

Census statistics for the Kensington/Kingsford Statistical Area (Level 2), using sources such as the Australian Bureau of Statistics (ABS) (2011) and Bureau of Transport Statistics (BTS) (2011 and 2012) data, were taken to be representative of the Randwick Precinct. Statistics for Daceyville were also considered given the proximity of this area to the Kingsford stop.

According to the ABS, the Kensington/Kingsford Precinct contained 26,877 persons and 10,609 private dwellings as of 2011. The BTS data for the Kensington/Kingsford Precinct notes that the area contained 9,863 jobs as of 2011 (BTS 2011).



The BTS forecasts that the Kensington/Kingsford Precinct's resident population would increase from 26,877 (ABS 2011) persons as of 2011 to 35,789 persons in 2046, representing an increase of 8,912 or approximately 33 per cent. BTS employment projections forecast that the Kensington/Kingsford Precinct would experience an increase of 6,385 jobs (approximately 65 per cent) between 2011 and 2046, increasing from 9,863 jobs to 16,248 jobs (BTS 2011 and BTS 2012). The Kensington/Kingsford Precinct contains a major educational institution, UNSW. As such, the employment sectors of education and training are projected to experience the greatest proportional growth, increasing by approximately 5,000 jobs (approximately 90 per cent).

The key features of the local demographic, employment and travel profiles are listed below:

- The median population age in the Kensington/Kingsford Precinct is 28, whereas in Daceyville it is 56.
- Like the City Centre Precinct, less than half of Kensington/Kingsford Precinct residents were born in Australia.
- Less than half of the Kensington/Kingsford Precinct (approximately 49.4 per cent) speak only English at home. Mandarin, Greek, and Cantonese are the most common other languages spoken.
- Apart from the City Centre Precinct, the Kensington/Kingsford Precinct had the highest percentage of arrivals from overseas in the period between 2006 and 2011 (approximately 25.3 per cent).
- Healthcare, education, and scientific/technical professions were the three most common industries in which Kensington/Kingsford Precinct residents worked, which is similar to the Randwick Precinct. Accommodation/food services and retail were also common, similar to the City Centre Precinct.
- Just over half (approximately 55.9 per cent) of Kensington/Kingsford Precinct dwellings comprise a couple with children, nearly identical to that of Randwick (approximately 55.4 per cent). Statistics for home ownership are similar as well, with approximately half of dwellings owned outright or with a mortgage, and the other half rented.
- The Kensington/Kingsford Precinct has the highest percentage of three-person households (approximately 18.8 per cent) and of households with four or more individuals (23.3 per cent). These high percentages are likely a combination of family homes and homes shared by students attending the UNSW.
- Median weekly rental payments for the Kensington/Kingsford Precinct are \$435, similar to other CSELR precincts with the exclusion of the City Centre Precinct (with a median of \$600).
- Access to motor vehicles in the Kensington/Kingsford Precinct are similar to Randwick, with one out of four households having access to no vehicle and nearly half having access to one vehicle.
- Commuting statistics for the Kensington/Kingsford Precinct are also similar to those in Randwick, with nearly half of Kensington/Kingsford residents using a car, and just over another third using public transport. Similarly to the Randwick Precinct, the Kensington/Kingsford Precinct is only served by buses, so nearly all (approximately 94.9 per cent) of residents using public transport use a bus at some point in their journey.

Although Daceyville is not included in the area of the Kensington/Kingsford CSELR precinct, its summary profile was considered and combined with those of Kensington and Kingsford. Given its composition as nearly entirely public housing, Daceyville residents generally have lower incomes and/or special needs that require a range of government services. Like the Northcott Estate in Surry Hills, the residents are generally older and the suburb ranks as one of the more socio-economic disadvantaged areas along the CSELR route.

A full profile of the Kensington/Kingsford Precinct, broken down by topic and compared with each of the other CSELR precincts, is provided in Appendix 8.1 of Technical Paper 3 – *Social Impact Assessment*.

### 16.9.2 Impacts during operation

The potential social and economic impacts during CSELR operations are summarised below for the Kensington/Kingsford Precincts and described further in Technical Paper 3 – *Social Impact Assessment* and Technical Paper 4 – *Economic Impact Assessment*.

## Social impacts

All of the public transport currently serving Kensington/Kingsford is bus-based, and buses are an intrusive feature affecting the amenity of the Anzac Parade corridor. Light rail would improve the amenity of the area by reducing bus congestion and providing a more reliable and comfortable public transport mode to the precinct. Considerable activation and business development opportunities exist along the corridor, especially around the proposed stops. Staff and students attending the UNSW lower campus would benefit from improved transport links to Central Railway Station, which would substantially reduce, if not eliminate, the need for numerous express buses currently in operation. However, some public parking within the median to the south of the Nine Ways intersection would be lost as a result of the Kingsford stop.

The key social impacts of the CSELR proposal in the precinct during operation are summarised in Table 16.29. This table provides a summary and rating of the key potential social impacts both before and after implementation of proposed mitigation measures. These mitigation measures are presented in section 16.9.4.

Table 16.29 Kensington/Kingsford Precinct – Key social impacts during operation

| POTENTIAL IMPACT                               | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IMPACT RATING (POST MITIGATION) |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Local amenity, character, environment          | <p>Significantly Positive</p> <ul style="list-style-type: none"> <li>Benefits would occur around the retail centres of Kensington and Kingsford, as well as the UNSW.</li> <li>Though the Kingsford stop and interchange would be a major change to the local character of the area, this is anticipated to provide amenity benefits. Buses currently dominate Anzac Parade, so the reduction in bus noise and congestion, combined with urban activation work around planned stops, would significantly improve local amenity.</li> </ul>                                                                                                                                                                                                           | Significantly Positive          |
| Visual impact                                  | <p>Slightly Negative</p> <ul style="list-style-type: none"> <li>Occupation of the light rail in the median of Anzac Parade would reduce visual amenity where it replaces trees or other significant vegetation.</li> <li>Where light rail displaces buses or traffic from the median, there may be a slight improvement in visual amenity.</li> <li>A number of trees and hedges that define the edge of the UNSW along Anzac Parade would be removed, resulting in a substantial impact (refer to section 16.7).</li> <li>Existing planting and banners in the Nine Ways roundabout would be removed, and large Figs and Eucalypt trees along the alignment would be lost.</li> <li>Views would be opened up across and to Anzac Parade.</li> </ul> | Neutral                         |
| Changes to access and local traffic conditions | <p>Slightly Positive</p> <ul style="list-style-type: none"> <li>Existing traffic lanes would generally be maintained, with buses occasionally sharing space with LRVs. One of the major changes would be reduction in the number of buses using Anzac Parade, which would ease traffic conditions. Over the medium term, people would adjust to new traffic conditions, such as the consolidation of right-turns and the presence of LRVs.</li> <li>Operation of the light rail would reduce parking supply, although capacity exists within the broader precinct. The loss of parking would be realised upon construction and continue through operation.</li> </ul>                                                                                | Slightly Positive               |
| Changes to local community services            | <p>Significantly Positive</p> <ul style="list-style-type: none"> <li>Many students and staff of the UNSW currently catch special express buses from Central to the university. Light rail would provide a better transfer point at Central and a more comfortable and reliable service.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Significantly Positive          |



Table 16.29 cont.

| POTENTIAL IMPACT                                          | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                         | IMPACT RATING (POST MITIGATION) |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Access to and use of public spaces and urban connectivity | Significantly Positive <ul style="list-style-type: none"> <li>Access to the Kensington/Kingsford Precinct, and especially the UNSW would be greatly enhanced.</li> <li>The Kensington and Kingsford town centres would benefit from greater accessibility and would have urban regeneration opportunities in conjunction with its designation as part of the Randwick UAP.</li> </ul>                                                         | Significantly Positive          |
| Noise and vibration                                       | Neutral <ul style="list-style-type: none"> <li>Minor exceedances of airborne operational noise trigger levels are predicted for some residential receivers in the Kensington/Kingsford Precinct.</li> <li>The high level of background traffic noise should mean that operational noise is generally not noticeable. A reduction in noise may result from decreased bus congestion more generally along the Anzac Parade corridor.</li> </ul> | Neutral                         |
| Property acquisition                                      | Neutral <ul style="list-style-type: none"> <li>A small area of the UNSW land adjacent to Anzac Parade is proposed to be acquired for part of the UNSW Anzac Parade stop.</li> <li>A section of the existing median south of Nine Ways would also be permanently acquired for the Kingsford stop.</li> </ul>                                                                                                                                   | Neutral                         |
| Safety and security                                       | Slightly Negative <ul style="list-style-type: none"> <li>The reconfigured Nine Ways intersection linking Anzac Parade with Gardeners Road would improve pedestrian and cyclist access and safety.</li> </ul>                                                                                                                                                                                                                                  | Neutral                         |
| Community and cultural issues                             | Moderately Negative <ul style="list-style-type: none"> <li>The relationship between the Kingsford stop and surrounding land uses would need careful consideration.</li> <li>Access planning for the Kingsford stop that includes Daceyville may help integrate this disadvantaged area with the surrounding community and help residents experience the benefit of the CSELR infrastructure.</li> </ul>                                       | Slightly Positive               |
| Health and wellbeing                                      | Moderately Positive <ul style="list-style-type: none"> <li>The CSELR would encourage more walking and cycling within the Kensington/Kingsford Precinct.</li> </ul>                                                                                                                                                                                                                                                                            | Moderately Positive             |
| Social sustainability and community functioning           | Moderately Positive <ul style="list-style-type: none"> <li>The CSELR would encourage better access to community services, the UNSW and employment opportunities.</li> </ul>                                                                                                                                                                                                                                                                   | Moderately Positive             |

Source: Based on Technical Paper 3 – Social Impact Assessment, Volume 3

### Economic impacts

The key economic impacts of the CSELR proposal during operation are summarised in Table 16.30. This table provides a summary and rating of the key potential economic impacts that may occur as a result of the proposal during operation. In addition, the table provides a rating of the potential impact after the proposed mitigation measures have been applied. These mitigation measures are presented in section 16.9.4.

Table 16.30 Kensington/Kingsford Precinct – Key economic impacts during operation

| POTENTIAL IMPACT                        | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IMPACT RATING (POST MITIGATION) |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Access to work, retail and leisure      | <p>Moderate Positive</p> <ul style="list-style-type: none"> <li>The CSELR proposal would provide improved accessibility via public transport and connectivity with other locations along the corridor to expand the trade area of local businesses and the attraction of visiting important regional services, employment and economic drivers such as the UNSW, NIDA, South Sydney Juniors Rugby League Club and Kingsford town centre.</li> <li>The Kingsford stop would act as important focal point that would be likely to have flow-on benefits to the retailers and services provided on Anzac Parade.</li> </ul>                                                                                                                                                                                                                                                               | Moderate Positive               |
| Loss of car parking                     | <p>Moderate Negative</p> <ul style="list-style-type: none"> <li>The proposal would result in the removal of car parking along Anzac Parade reducing the ability for customers and clients to park directly outside businesses (i.e. retailers, commercial and leisure premises).</li> <li>The proposal would also result in the removal of car parking to the south of the Nine Ways intersection (within the median) to accommodate the proposed Kingsford stop and interchange.</li> <li>The loss of parking would impact the desirability of visiting some businesses especially where alternative parking is not available in the same locality. Whilst some of the impact would be offset through improvements to customer access via light rail and improvements to amenity, the loss of parking could notably impact businesses reliant on customers parking nearby.</li> </ul> | Moderate Negative               |
| Impact to land values                   | <p>Slight to Moderate Positive</p> <ul style="list-style-type: none"> <li>Improved capacity and reliability of public transport would be likely to create positive flow-on benefits to landowners.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | None required                   |
| Amenity                                 | <p>Slight Positive</p> <ul style="list-style-type: none"> <li>Improvements to existing levels of amenity as a result of the reduction in traffic and appropriate landscaping would lead to the overall improvement of the environment to the benefit of the local business community and landowners.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Moderate Positive               |
| Access to loading docks/servicing areas | <p>Slight Negative</p> <ul style="list-style-type: none"> <li>The ability to access service and delivery areas along and adjacent to Anzac Parade would need to be addressed along with access implications for businesses that use connecting streets.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Neutral                         |

Source: Based on Technical Paper 4 – Economic Impact Assessment, Volume 3

### 16.9.3 Impacts during construction

Potential social and economic impacts during construction are summarised below for the precinct and described further in Technical Paper 3 – *Social Impact Assessment* and Technical Paper 4 – *Economic Impact Assessment*.

Negative impacts resulting from the construction of the CSELR proposal would occur, but are likely to be less significant than for other precincts given that much of the construction is likely to take place along the existing Anzac Parade median. Furthermore, noise is common along the Anzac Parade corridor given heavy traffic and bus use.

#### Social impacts

The key social impacts of the CSELR proposal in the precinct during construction are summarised in Table 16.31. This table provides a summary and rating of the key potential social impacts both before and after implementation of proposed mitigation measures. These mitigation measures are presented in section 16.9.4.



Table 16.31 Kensington/Kingsford Precinct – Key social impacts during construction

| POTENTIAL IMPACT                                          | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | IMPACT RATING (POST MITIGATION) |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Local amenity, character, environment                     | <p>Moderately Negative</p> <ul style="list-style-type: none"> <li>Changes to local amenity would occur during construction. However, compared to other precincts, the impacts would be less severe due to centre alignment of the light rail and the greater width of Anzac Parade.</li> <li>The main change in character would result from the construction of the Kingsford stop and modification of the Nine Ways intersection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Slightly Positive               |
| Visual impact                                             | <p>Slightly Negative</p> <ul style="list-style-type: none"> <li>The visual intrusion of construction activities along the whole alignment would result in some negative impacts.</li> <li>The loss of trees along the median of Anzac Parade would reduce the visual amenity of the area. Furthermore, a number of trees and hedges that define the edge of the UNSW along Anzac Parade would be removed.</li> <li>Visual impacts are further discussed in section 16.7.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Slightly Negative               |
| Changes to access and local traffic conditions            | <p>Moderately Negative</p> <ul style="list-style-type: none"> <li>Changes to access and local traffic conditions would impact on residents, students and businesses within the Kensington/Kingsford Precinct.</li> <li>Construction along Anzac Parade would maintain a minimum of two lanes of traffic in both directions during the daytime (currently three lanes each way). The reduced traffic flow and intersection impacts would require mitigation measures to prevent significant impact on traffic or bus services.</li> <li>The conversion of Nine Ways from a complex roundabout to a full signalised intersection and the construction of the Kingsford stop are likely to have the greatest impact on traffic and parking during construction.</li> <li>Two construction compounds are proposed within the vicinity of the Kingsford stop, both of which would significantly reduce available parking for nearby facilities such as the South Sydney Juniors Rugby League Club.</li> <li>Access and local traffic impacts are further discussed in section 16.3.</li> </ul> | Slightly Positive               |
| Changes to local community services                       | <p>Slightly Negative</p> <ul style="list-style-type: none"> <li>During construction, access to the UNSW from Anzac Parade may be constrained and alternative accesses may need to be considered.</li> <li>Maintaining access to community services will be especially important for disadvantaged residents along the route. Service providers should be informed of works and consulted as to access requirements to ensure continuity of service for those affected.</li> <li>Access and local traffic impacts are further discussed in section 16.3.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Slightly Negative               |
| Access to and use of public spaces and urban connectivity | <p>Moderately Negative</p> <ul style="list-style-type: none"> <li>Access around the Kingsford retail precinct and to the South Sydney Juniors Rugby League Club would be constrained during construction. There would also be some severance issues around the UNSW from Anzac Parade during construction of the light rail stop.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Slightly Negative               |
| Noise and vibration                                       | <p>Moderately Negative</p> <ul style="list-style-type: none"> <li>Noise would occur at periodic intervals during construction. Most of this area has high levels of background noise from traffic, so the impacts may be less than in other precincts.</li> <li>There are a number of residential flat buildings and student accommodation facilities fronting Anzac Parade that may be sensitive to noise. Noise and vibration impacts are further discussed in section 16.5.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Slightly Negative               |

Table 16.31 cont.

| POTENTIAL IMPACT                                | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | IMPACT RATING (POST MITIGATION) |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Property acquisition                            | Neutral <ul style="list-style-type: none"> <li>Construction compounds and worksites are proposed within Tay Reserve, the UNSW, at the intersection of Rainbow Street and Anzac Parade, and within the Anzac Parade median immediately south of the Nine Ways intersection. These sites would require temporary lease or acquisition for use as construction compounds and worksites (refer to Chapter 5 and Figure 16.10a and Figure 16.10b). This would impact the ongoing use of these sites during construction.</li> </ul> | Neutral                         |
| Safety and security                             | Moderately Negative <ul style="list-style-type: none"> <li>There may be a moderate risk of impact to the public from entry into construction sites within the Kensington/Kingsford Precinct.</li> <li>Road safety around the construction sites may be impacted due to the movement of construction vehicles between worksites, particularly around UNSW.</li> </ul>                                                                                                                                                           | Neutral                         |
| Community and cultural issues                   | Slightly Negative <ul style="list-style-type: none"> <li>The limited parking for the South Sydney Juniors Rugby Club during construction may affect the use of this facility by older patrons or patrons who utilise this parking to access the club.</li> </ul>                                                                                                                                                                                                                                                               | Neutral                         |
| Health and wellbeing                            | Moderately Negative <ul style="list-style-type: none"> <li>Construction works may result in potential health impacts due to noise and dust generation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                              | Neutral                         |
| Social sustainability and community functioning | Slightly Negative <ul style="list-style-type: none"> <li>The overall functioning of the local community may be impaired temporarily due to construction due to perceived barriers to movement within the precinct as a result of ongoing construction works.</li> </ul>                                                                                                                                                                                                                                                        | Neutral                         |

Source: Based on Technical Paper 3 – Social Impact Assessment, Volume 3

### Economic impacts

The key economic impacts of the CSELR proposal for the precinct during construction are summarised in Table 16.32. This table provides a summary and rating of the key potential economic impacts both before and after implementation of proposed mitigation measures. These mitigation measures are presented in section 16.9.4.

Table 16.32 Kensington/Kingsford Precinct – Key economic impacts during construction

| POTENTIAL IMPACT                               | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | IMPACT RATING (POST MITIGATION) |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Changes to access and local traffic conditions | Moderate Negative <ul style="list-style-type: none"> <li>Anzac Parade is a key arterial route for the South East. Accordingly, the CSELR proposal's construction works would retain a minimum of two traffic lanes along Anzac Parade in each direction. The retention of these lanes would result in the loss of current parking provisions along Anzac Parade.</li> <li>Flow-on delays from changes to access and traffic conditions may also impact overall commuting and travel times for the broader community, potentially impacting businesses outside the Randwick Precinct.</li> </ul> | Slight Negative                 |
| Amenity impacts (i.e. noise and vibration)     | Moderate Negative <ul style="list-style-type: none"> <li>Construction impacts such as noise and vibration (refer to section 16.5) may impact on businesses reliant on the amenity of outdoor areas (i.e. cafes with outdoor dining on Anzac Parade) surrounding the construction sites.</li> </ul>                                                                                                                                                                                                                                                                                              | Slight Negative                 |



Table 16.32 cont.

| POTENTIAL IMPACT                           | KEY EFFECTS OF IMPACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | IMPACT RATING (POST MITIGATION) |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Access to loading docks/servicing areas    | Slight Negative <ul style="list-style-type: none"> <li>Constraints to the frequency and ease of access for businesses that rely on services and refuse collection from Anzac Parade may occur during the construction period.</li> <li>The construction of the CSELR may also result in potential time delays and additional travel time for businesses that have used Anzac Parade as part of their travel route for deliveries and access (i.e. use Anzac Parade to access service and delivery docks in Harbourn and Houston roads).</li> </ul>                                                                                                                                  | Slight Negative                 |
| Loss of on street car parking              | Significant Negative <ul style="list-style-type: none"> <li>The CSELR proposal would result in the permanent removal of 125 car parking spaces in the Kensington/Kingsford Precinct.</li> <li>The loss of parking is likely to have an immediate direct impact to existing businesses and landowners as a result of lost convenience for passing trade and access, particularly where alternative parking is not available in the same locality.</li> <li>The proposal would also result in the loss of car parking south of the Gardeners Road roundabout affecting businesses such as South Sydney Juniors Rugby League Club, Crystal Car Wash and the Rotary Markets.</li> </ul> | Moderate Negative               |
| Passing trade and demand for services      | Slight Negative <ul style="list-style-type: none"> <li>Due to the amenity and access changes in the Kensington/Kingsford Precinct, businesses may experience a reduction in demand for trade and services. Other businesses may benefit (i.e. food retailers) as a result of an increase in demand due to construction workers.</li> </ul>                                                                                                                                                                                                                                                                                                                                          | Slight Negative                 |
| Perceived impact and business viability    | Slight Negative <ul style="list-style-type: none"> <li>Due to the anticipated adverse amenity and access constraints during the construction period, some businesses may choose to relocate from the area, not renew their lease, or not invest in the area.</li> <li>This may be a short-term impact (i.e. limited to the construction period), but would reduce the appeal of the area until the completion of the construction phase.</li> </ul>                                                                                                                                                                                                                                 | Slight Negative                 |
| Stimulation of redevelopment opportunities | Moderate Positive <ul style="list-style-type: none"> <li>A commitment to the proposal and the commencement of works, together with the UAP Program would create a positive catalyst for the redevelopment of some underutilised sites and locations in the Kensington/Kingsford Precinct.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                | Moderate Positive               |
| Access to work, retail and leisure         | Moderate Negative <ul style="list-style-type: none"> <li>Impacts to the perceived ease of getting to work or other land use activities could lead to the reduced attraction of working/visiting/operating facilities in the Kensington/Kingsford Precinct.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                               | Slight Negative                 |
| Visual impact                              | Slight Negative <ul style="list-style-type: none"> <li>The construction of the CSELR would impact on the visual amenity of Anzac Parade and affect businesses reliant on this characteristic (i.e. cafes).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Slight Negative                 |

Source: Based on Technical Paper 4 – Economic Impact Assessment, Volume 3

#### 16.9.4 Management and mitigation

A series of mitigation measures for the management of the social and economic impacts identified in section 16.9.2 and section 16.9.3 would be implemented as part of the CSELR proposal. These mitigation measures are summarised in Table 16.33.

Table 16.33 Social construction and operational mitigation measures

| POTENTIAL IMPACT                                          | POTENTIAL MITIGATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operation</b>                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Local amenity, character, environment                     | <ul style="list-style-type: none"> <li>Adverse local amenity and character impacts would be mitigated through urban design and/or public domain improvements. Urban design elements proposed for light rail stops would include the use of consistent materials, and new street tree plantings to side footpaths to unify the corridor. Public domain improvements could include the maximisation of open space (for example within High Cross Park) and the replanting of street trees where possible.</li> <li>Details of the mitigation of amenity impacts are provided in section 16.7.</li> </ul>                                                                                                                                                                                                                                |
| Visual impact                                             | <ul style="list-style-type: none"> <li>Where possible, public open spaces directly affected by the CSELR proposal would be reinstated as soon as possible.</li> <li>Visual amenity of the area around Kingsford stop may be improved with urban amenity improvements and new tree plantings where possible to soften the visual impact of new light rail infrastructure.</li> <li>Where possible, urban design measures, such as revegetation along the corridor, would be adopted to neutralise or enhance any impacts to the existing median strips and reinstate the visual amenity characteristic of Anzac Parade.</li> <li>Extensive treatment of visual impacts and mitigation measures is provided in section 16.7.</li> </ul>                                                                                                 |
| Changes to access and local traffic conditions            | <ul style="list-style-type: none"> <li>Where required and feasible, special arrangements for deliveries to businesses, residences and the UNSW directly fronting the CSELR alignment would be provided. This could include the provision of time-based loading zones on nearby streets.</li> <li>Details of the mitigation of local access and traffic impacts are provided in section 16.3.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Changes to local community services                       | <ul style="list-style-type: none"> <li>Access to local community services and open spaces would be maintained during operation of the CSELR proposal. Consultation with the operators of community services (including local childcare centres and places of worship) would be undertaken to minimise impacts to the access of these facilities.</li> <li>Details of the mitigation of access to these services are provided in section 16.3.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                              |
| Access to and use of public spaces and urban connectivity | <ul style="list-style-type: none"> <li>Light rail stops would incorporate a high quality urban design that would reflect the precinct in which they would be located to assist in minimising impacts to visual amenity resulting from the provision of the CSELR proposal.</li> <li>Transport for NSW would continue to work with stakeholders to identify potential opportunities to integrate CSELR public domain improvements with other city planning strategies to improve access to local community services and further enhance the public domain along the route.</li> <li>Where possible, public open spaces directly affected by the CSELR proposal would be reinstated as soon as possible.</li> <li>Details of the mitigation of access to public space and connectivity impacts are provided in section 16.7.</li> </ul> |
| Noise and vibration                                       | <ul style="list-style-type: none"> <li>Details of the mitigation of noise and vibration impacts are provided in section 16.5.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Safety and security                                       | <ul style="list-style-type: none"> <li>Where feasible, the CSELR would incorporate features to maintain the safety of passengers, CSELR employees and the general public. Stops would be designed to be safe and attractive places to wait for CSELR services and would (where feasible and appropriate) incorporate light-emitting diode (LED) lighting technology, emergency calling capabilities and closed circuit television (CCTV).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                  |
| Community and cultural issues                             | <ul style="list-style-type: none"> <li>A targeted communication strategy would be developed for UNSW staff and students to allow for a smooth transition to light rail operations.</li> <li>A targeted communication strategy would be developed to maintain access for businesses in the Kensington and Kingsford town centres.</li> <li>Informational material advertising the commencement of CSELR operations would be prepared in multiple languages widely spoken by the affected community.</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| Social sustainability and community functioning           | <ul style="list-style-type: none"> <li>The light rail and stops would be designed to promote interaction with, and facilitate access to/from, neighbouring areas.</li> <li>Light rail would assist in activating growth opportunities in accordance with the Randwick UAP.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



Table 16.33 cont.

| POTENTIAL IMPACT                                          | POTENTIAL MITIGATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Local amenity, character, environment                     | <ul style="list-style-type: none"> <li>A construction environmental management plan (CEMP) would be prepared by the contractor(s) and would specify further mitigation measures suitable for specific impacts.</li> <li>Further mitigation of amenity and character impacts is provided in section 16.7.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Visual impact                                             | <ul style="list-style-type: none"> <li>Public space and parkland used for construction would be reinstated, including compounds/site offices, as soon as possible once these areas are no longer required for the construction of the CSELR.</li> <li>Details on mitigation of visual impacts are provided in section 16.7.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Changes to access and local traffic conditions            | <ul style="list-style-type: none"> <li>Ongoing consultation with affected stakeholders and organisers of special events would be undertaken. Alternate routes to avoid impacting special events are to be provided where possible. Advance planning for major events should occur with the Randwick City Council.</li> <li>Most footpaths and cycleways would remain unaffected during construction; however in the limited cases where construction impinges on these paths, clearly marked alternatives would be provided.</li> <li>Traffic and transport mitigation strategies for the mitigation of local access and traffic impacts during construction of the CSELR proposal are provided in section 16.3.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Changes to local community services                       | <ul style="list-style-type: none"> <li>Access to local community services and open spaces would be maintained during construction of the CSELR proposal, where possible. This could include undertaking construction works in segments and stages. Where this is not possible, alternative access arrangements would be made in consultation with relevant service operators.</li> <li>Access to Anzac Parade properties, in particular UNSW access and other community services within the Kensington and Kingsford town centres, would be maintained by staging construction works.</li> <li>Alternate spaces would be considered that could substitute for the use of public space required for the construction of the CSELR.</li> <li>Open space required to be used for construction compounds and activities would be minimised as much as possible.</li> <li>Access plans would be prepared in consultation with property owners and businesses.</li> <li>Place managers would assist with ensuring needs of disadvantaged residents are accounted for, particularly as some residents may not have access to telephone or email facilities or may not speak English comfortably.</li> </ul> |
| Access to and use of public spaces and urban connectivity | <ul style="list-style-type: none"> <li>Sequencing of construction activities would be managed to ensure that impacts on public spaces are minimised.</li> <li>Where footpaths are narrowed or closed off, local diversions would be put in place.</li> <li>Pedestrians would be diverted to an alternate footpath or crossing prior to any works zone being established that would close off the footpath or crossing.</li> <li>During detailed design, seek opportunities to refine construction work areas to minimise impacts on public spaces.</li> <li>Provide clear signage around construction compounds utilising open spaces advising of the project, timing, access arrangements and contact details for complaints.</li> <li>Alternate spaces would be considered that could substitute for the use of public space required for the construction of the CSELR.</li> <li>Mitigation of public domain and connectivity impacts is provided in section 16.7 and further mitigation regarding impact to public spaces is provided in section 15.6 and 15.7.</li> </ul>                                                                                                                       |
| Noise and vibration                                       | <ul style="list-style-type: none"> <li>Details for the mitigation of noise and vibration impacts are provided in section 16.5.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Property acquisition                                      | <ul style="list-style-type: none"> <li>Where property acquisition is required, it would be acquired in accordance with the <i>Land Acquisition (Just Terms Compensation) Act 1991</i>. A property acquisition plan would be prepared as part of detailed design.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

Table 16.33 cont.

| POTENTIAL IMPACT                                | POTENTIAL MITIGATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety and security                             | <ul style="list-style-type: none"> <li>The CEMP would identify risks to safety and security on a site-by-site basis and provide appropriate mitigation measures.</li> <li>Detailed design would incorporate the principles of Crime Prevention through Environmental Design (CPTED).</li> <li><i>Disability Discrimination Act 1992</i> requirements would be adopted.</li> <li>Construction lighting standards would be met or exceeded.</li> <li>Hoarding/fence lines would be erected to maximise sight lines for pedestrians and avoid hiding places and blind spots to improve pedestrian personal security.</li> <li>Any gantry arrangements would have internal lighting.</li> <li>Relocation of CCTV cameras would be considered if construction obstructs their view field.</li> <li>Separation barriers would be installed along the borders of worksites.</li> <li>Consideration would be given to suspension of works on event days at UNSW or NIDA to minimise construction safety risks to crowds.</li> <li>Safety and security impacts would be addressed as part of the CEMP.</li> </ul> |
| Community and cultural issues                   | <ul style="list-style-type: none"> <li>The scheduling of construction activities would take into consideration major at the UNSW and NIDA to minimise impacts on the access to, and function of, these events. This would include consultation with relevant stakeholders.</li> <li>Staging of works would be undertaken to minimise disruption, in consultation with local community groups, to minimise impacts to community activities and functions.</li> <li>Materials promoting light rail operation and use would be prepared in multiple languages, particularly Mandarin, Indonesian, and Greek.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Health and wellbeing                            | <ul style="list-style-type: none"> <li>The CEMP is to identify risks to health and wellbeing on a site-by-site basis and would include appropriate mitigation measures.</li> <li>The CEMP would account for cumulative impacts of construction given concurrent works in the precinct.</li> <li>Health impacts would be addressed as part of the CEMP, including watering exposed areas to minimise dust impacts, using non-tonal reversing indicators, and fitting construction machinery with appropriate muffling devices.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Social sustainability and community functioning | <ul style="list-style-type: none"> <li>Works would be staged to minimise disruption, ensuring that community activities and functions can still take place.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Source: Based on Technical Paper 3 – Social Impact Assessment, Volume 3

Three main mitigation measures are proposed to be implemented during the construction and operational phases of the CSELR proposal to mitigate the potential economic impacts identified for the Kensington/Kingsford Precinct. These include the preparation of the following:

- Liaison with businesses and landowners would be undertaken to develop access plans to establish existing servicing and delivery requirements, access periods or alternative arrangements for businesses and landowners affect by the proposal. These access plans would also identify alternative routes, specific activities or land uses (such as schools, medical centres etc.) within each precinct and strategies to maintain emergency access throughout each precinct at all times. Further details regarding the proposed traffic management strategies for the Kensington/Kingsford Precinct are provided in section 16.3.3.
- A business and landowner engagement and management plan would provide ongoing information to businesses and landowners potentially affected by the proposal through a variety of sources including information packs, a website, regular newsletters/brochures and email alerts. The plan would also identify effective means for ongoing cooperation and communication with the business community.
- The CEMP would outline a range of mitigation measures to minimise the level of disturbance created as a result of construction related activities. The CEMP would contain a number of additional plans to manage specific impacts such as noise or traffic. Further details regarding the CEMP for the CSELR proposal are provided in Chapter 18.