AECOM

Transport for New South Wales
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Homebush Station Upgrade

Visual Impact Assessment

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Visual Impact Assessment

Client: Transport for New South Wales

ABN: 18 804 239 602

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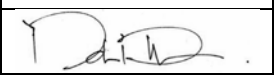
C	18-Oct-2016	Final	Mark Blanche Associate Director	

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1.0 Introduction

1.1 Background information

AECOM Australia Pty Ltd (AECOM) has been commissioned by Transport for New South Wales (TfNSW) to undertake a Visual Impact Assessment for the construction and operation phases of the proposed Homebush Station Upgrade ('the Proposal'). Construction of the Homebush Station Upgrade is expected to commence in early 2017, taking up to 18 months to complete.

1.2 Scope

The scope of this visual impact assessment is to:

- describe the existing landscape character of the Proposal study area and the visibility of the proposed works at Homebush Station
- identify key existing receivers/viewpoints and their sensitivity to the proposed change
- assess landscape character impacts of the Proposal
- assess visual impacts of the Proposal
- recommend management and mitigation strategies to minimise any impacts from the Proposal.

1.3 Proposed works

The Proposal involves an easy access upgrade of Homebush Station as part of the Transport Access Program which would improve accessibility and amenities for customers. The Proposal would provide a number of improved features to provide an accessible station and improved interchange facilities. The Proposal would include the following key elements:

- installation of four new lifts and upgrades to existing station access stairs to provide access to the existing footbridge
- installation of new canopies along the existing footbridge and lift landings for weather protection
- upgrades to the northern and southern station entrances
- refurbishment of the Amenities Building with a new family accessible toilet and new station office at footbridge level
- refurbishment of the Booking Office with a new lift lobby and new communications room at platform level
- new undercover bicycle rack on the northern side of the station
- provision of two new accessible parking spaces, a new taxi rank with provision for one space and a new kiss and ride space on the southern side of the station
- provision of a new kiss and ride space, a new bus bay and relocation of the existing bus shelter on the northern side of the station
- installation of a new pedestrian crossing on Loftus Crescent on the northern side of the station
- new kerb ramps to provide an accessible path of travel to new and existing interchange facilities
- ancillary works including services diversion and/or relocation, station power supply upgrade, platform regrading, minor drainage works, adjustments to lighting, upgrades to fencing and landscaping, new ticketing facilities including additional Opal card readers, improvements to station communication systems (including CCTV cameras and hearing loops) and wayfinding signage.

Figure 1 shows the key elements of the Proposal (subject to detailed design). Subject to approval, construction is expected to commence in early 2017 and take around 18 months to complete.

This report should be read in conjunction with Section 3 of the Homebush Station Upgrade Review of Environmental Factors (AECOM 2016), which provides a detailed description of the Proposal and its associated works.

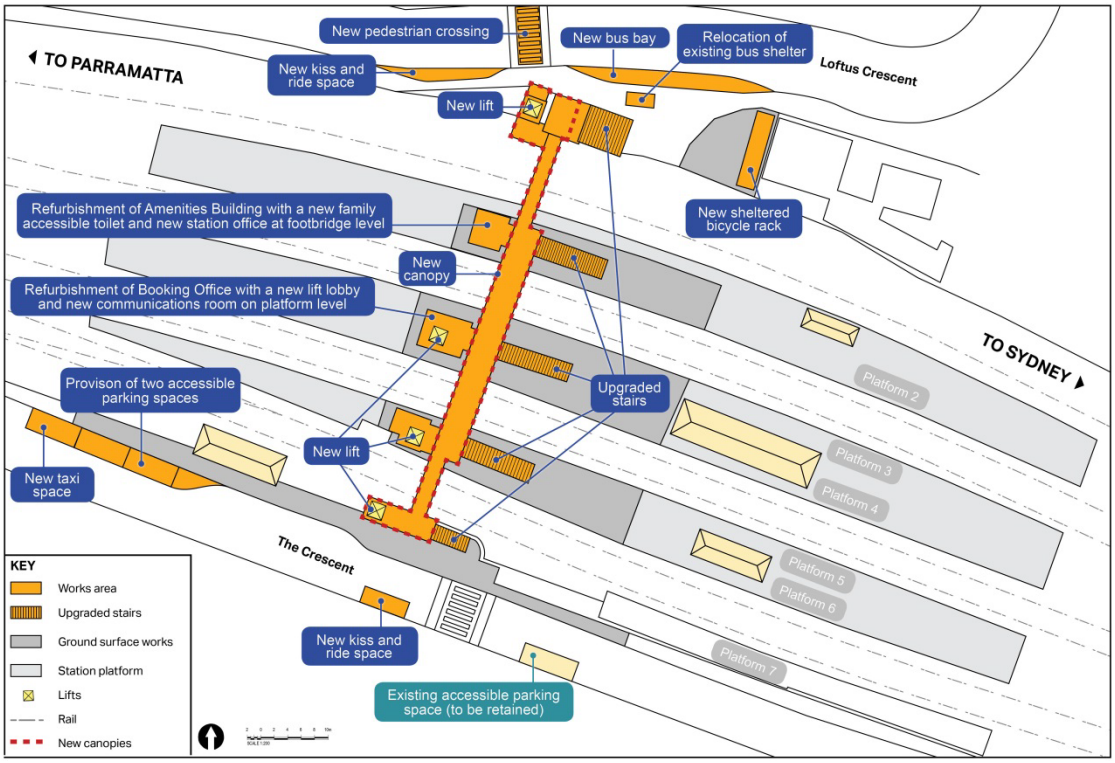

Figure 1 Key elements of the Proposal

(indicative only, subject to detailed design)

2.0 Methodology

This visual impact assessment has been undertaken in accordance with the Roads and Maritime Services (RMS) *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment* (RMS, 2013). This method is widely accepted by NSW Government agencies and is considered relevant to this Proposal in that it addresses changes to corridor infrastructure within the urban setting.

In accordance with these guidelines, the following assessments have been carried out:

- assessment of existing landscape character and visual environment
- assessment of landscape character and visual impacts
- recommendation of mitigation measures.

2.1 Sensitivity and magnitude

An impact grading matrix (refer to Table 1) is used to assess both landscape and visual impact, and examines sensitivity and magnitude to give a combined impact rating of between negligible and high.

2.1.1 Sensitivity

The sensitivity of the landscape is assessed based upon the extent to which it can accept change of a particular type and scale without adverse impacts on its character. Sensitivity varies according to the type of development and nature of the landscape, including:

- inherent landscape value, e.g. its condition, perceptual qualities and cultural importance
- the likely congruency of the proposed changes, i.e. the extent to which the proposal may fit or be 'visually absorbed' into the landscape, e.g. in relation to line, colour, form, texture, scale, etc.

The sensitivity of visual receptors and views are dependent on the:

- location and context of the viewpoint
- expectations and activity of the receptor
- number of the receptors
- importance of the view
- sensitivity of the receptors, which may include:
  - users participating in outdoor passive recreational pursuits
  - communities where the development results in changes in the landscape setting or valued views enjoyed by the community
  - occupiers of residences with views affected by the Proposal.

2.1.2 Magnitude

The magnitude of change affecting a landscape or visual receptor depends on factors such as nature, scale and duration of the particular change that is expected to occur. In the landscape, the magnitude of change would depend on factors such as the extent of the loss, change or addition of a feature, or changes in the backdrop, or outlook from a landscape that affect its character. The impact on a view would depend on factors such as the extent of visibility, degree of obstruction of existing features, degree of contrast with the existing view, angle of view, duration of view and distance from the Proposal.

Table 1 Landscape character and visual impact grading matrix

SENSITIVITY \ MAGNITUDE	HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
LOW	MODERATE	MODERATE - LOW	LOW	NEGLIGIBLE
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

2.2 Visual envelope mapping

The likely visibility of the Proposal, once operational, from surrounding areas has been broadly mapped to define a visual envelope. This provides an indication of which parts of the Proposal are likely to be viewed from surrounding land uses. The mapping typically shows 'worst case', i.e. some receivers may only see the roofline of the new lifts and canopies, while other receivers may view a more substantial part of the Proposal.

2.3 Photography

A photograph of Homebush Station from each of the nominated receiver locations has been used to assist in the analysis process. These photos were taken using a single-lens reflex digital camera using a 28 millimetre full frame lens with no parallax error.

Photomontages were then prepared to illustrate the likely visual changes from a number of key viewpoints and are included in Section 4.2. These images focus on viewing the Proposal in its wider setting, at the view level of a pedestrian at a nominal eye height of 1.7 metres. The materials and finishes used are indicative only and would be further investigated during detailed design.

To prepare photomontages, a 3D model of the Proposal was developed and confirmed against the elevations and sections from 2D concept design drawings. Viewpoint locations were selected and photographs taken during a site visit on 26 August 2016. Photographs were corrected for distortion using specific camera and lens profiles and camera coordinates were then merged with the 3D model to allow 'virtual camera' to be setup using these coordinates. Camera matching was undertaken using reference points common to the 3D model and physical features in the photographs. The model was then rendered with the photograph and edits to the foreground elements made as necessary.

3.0 Contextual analysis

3.1 Existing environment

Homebush Station is located approximately 17 kilometres west of the Sydney CBD, and is served by the T2 Airport, Inner West and South Line in the suburb of Homebush. The station has six tracks, two of which terminate at the station. There are three island platforms at the station. Loftus Crescent provides access to the station from the north, while The Crescent provides access from the south both via stairs and a footbridge. The Crescent also provides access to platform 7 via a ramp. Figure 2 shows the location and local context of the Proposal.

Station features include the Booking Office which is a two storey building on the middle island platform and houses the station services; ticketing, staff, CCTV rack and communications. The Amenities Building is a two storey building on the northern island platform and contains a store room at platform level and public amenities at footbridge level.

Homebush Station opened in 1855 and was upgraded in the 1920s. The Booking Office housing the ticketing, staff amenities and communications was updated in 1994 following a large fire which destroyed the original heritage listed building.

3.2 Existing station description

Homebush Station is heritage listed on the State Heritage Register (SHR), the RailCorp Section 170 Heritage and Conservation Register (No. 4801087) and the Strathfield Local Environmental Plan (LEP) 2012 (Item I40). The station represents three significant historical phases in the development of the NSW railways. It has a rare collection of railway structures dating from 1891, including original platforms, buildings and signal boxes. The station is the first example of island platforms in NSW, with the Booking Office being only one of three remaining examples of above-platform buildings.

Specific heritage elements of the existing station include:

- the exterior of the platform buildings
- the masonry platform walls
- ticket windows
- copper coin trays
- Booking Office (1891)
- signal box (1892)

The existing Homebush Station and surrounds include several key elements, including:

- east-west bound rail lines, steel gantries and associated electrical overhead wires
- the island platforms are approximately at existing street level from Loftus Crescent and around one metre lower than street level from The Crescent
- the existing red brick stairs to the existing footbridge are a prominent visual feature at the station entrances
- existing bus stops and shelters located on The Crescent and Loftus Crescent
- security and safety fencing
- wayfinding signage.

Mature trees are located along the station platforms and there are sparsely planted trees located along of the northern fence line adjacent to Loftus Crescent including a mixture of exotic and native species which provide some screening of the railway from residential areas to the north. There are also sparsely planted trees along the southern fence line adjacent to The Crescent. The rail corridor is primarily bare of vegetation with the exception of some minor weed cover.

Land use on the southern side of Homebush Station generally comprises a mix of residential and commercial uses. Several educational facilities and places of worship along with a medical centre are also located south of the station. The area to the north of the station is characterised by low to high density residential dwellings, a light industrial area, local shops, car parking facilities and an electricity substation.

3.3 Landscape character zones

Landscape character zones were determined primarily by land use, as these were considered to be the strongest defining landscape character elements in the area. Five dominant landscape character zones have been identified surrounding the Proposal, comprising:

- residential landscape character zone
- high density residential landscape character zone
- infrastructure landscape character zone
- local centre and heritage landscape character zone
- mixed use landscape character zone.

Figure 3 presents the extents of these dominant landscape character zones.

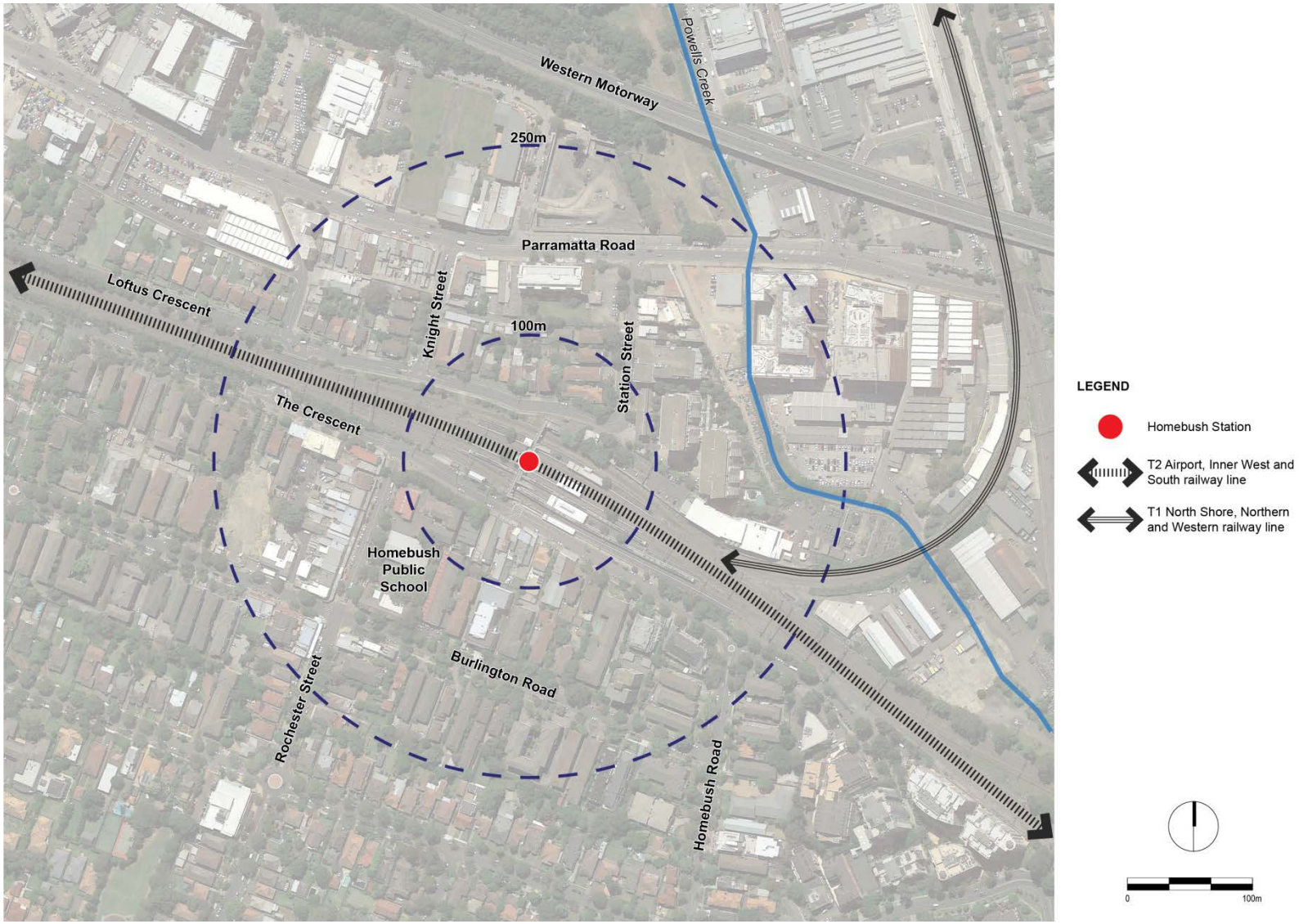

Figure 2 Homebush Station site location and local context

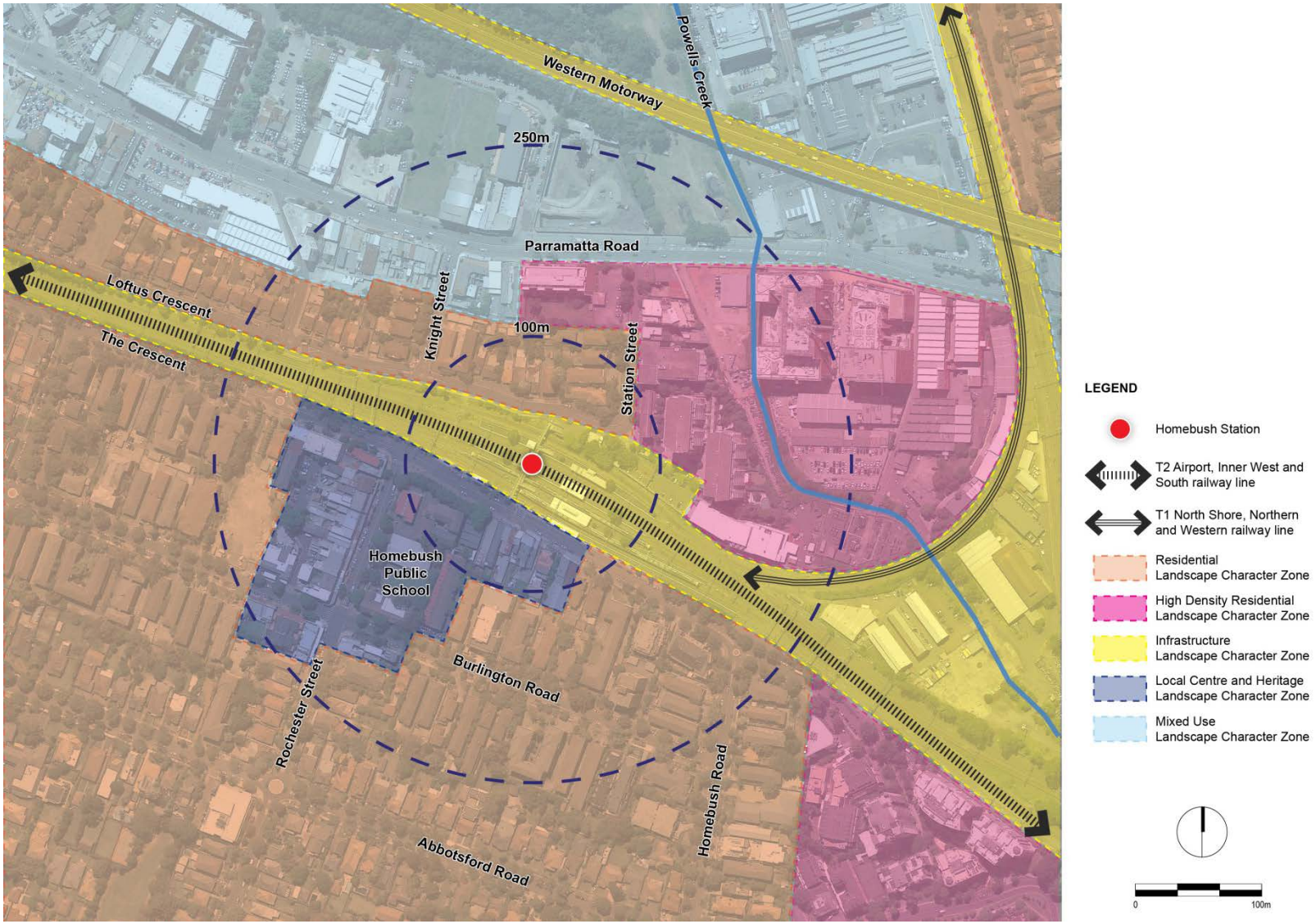

Figure 3 Homebush Station landscape character zones

4.0 Landscape character impact assessment

An assessment of the landscape character impacts from the construction and operation of the Proposal on the five dominant landscape character zones has been undertaken to determine the potential changes to the character of the landscape.

4.1 Residential landscape character zone

4.1.1 Existing situation

The residential landscape character zone is defined by a gently rolling landscape, overlaid with a loose grid of roads, throughout a predominantly residential landscape (refer to Figure 3 for the extent of this landscape character zone).

Medium density housing (consisting of two to four storey apartments) is largely located to the south of the railway line. A small group of medium density housing is located north of the railway line where it converges with the high density landscape character zone. A typical example of medium density located along The Crescent is shown in Figure 4.

Single storey dwellings are also located within this landscape character zone and typically located south of Burlington Road (south of the station). To the north, single storey dwellings are located along Loftus Crescent. A representative of single storey dwellings is shown in Figure 5.

Mature trees consisting of predominantly large native and exotics are scattered throughout the landscape, many comprising trees along residential streets and garden areas. The majority of the streets to the south of the railway line are lined with mature Brush Box (*Lophostemon confertus)* (which provide filtered screening of the railway from the south along The Crescent (refer to Figure 6). Existing street trees north of the railway station comprise mature Brush Box plantings along residential streets. However, there is no street tree planting alongside the railway corridor in Loftus Crescent due to overhead powerlines, with trees comprising plantings in residential gardens only.

Figure 4 Typical medium density housing located along The Crescent

Figure 5 Typical single storey dwelling located along Loftus Crescent

Figure 6 Mature street trees provide filtered screening of the railway line to right of frame along The Crescent

4.1.2 Landscape character impacts

The Proposal would have a series of impacts on the character of the landscape, as follows:

- during construction, a temporary construction compound would likely be located within the paved area at the Loftus Crescent station entrance and the immediately adjacent grassed area to the east of the paved area adjacent to the northern station entrance. Temporary storage/laydown areas may also be required on the island platforms
- typical visual impacts would include the presence of temporary fencing and hoarding, road barriers, cranes, signage, scaffolding, temporary ticketing office and amenities
- the change would be limited to the edge between where the mixed use and residential landscape character zone converge with the Proposal. Visual impacts would be generally characterised by the new lifts and canopies. To achieve clearances for safety and rail operational requirements, the top height of the new infrastructure would be approximately 9.5 metres above existing ground level and would be visible to residents to the north along Loftus Crescent
- road works and interchange works (installation of new pedestrian crossing, kiss and ride bay, bus shelter and seats, and sheltered bicycle rack) would be visible in the residential landscape character zone.

4.1.3 Impact assessment

The sensitivity of the landscape is rated as low, as the land use, pattern and scale have the capacity to accommodate the type of change envisaged. The height of the proposed infrastructure would be similar to surrounding buildings and consistent with local planning requirements. The magnitude of change is rated as low, as this is considered a minor change within the context of the broader landscape setting. The upgrade is a minor change to a small area of an existing infrastructure element adjoining this landscape character zone.

Although the new lifts, canopies, road works and interchange upgrades would be visible to nearby buildings, the change would in most cases be only visible in the area immediately adjacent to the Proposal site. The proposed changes are in keeping with the existing landscape character and maintain the consistency of design and materials that has characterised the existing station.

The overall rating for this landscape character zone is low (refer to Table 2). The upgrade work is relatively minimal and would be most noticeable as a landscape character impact in the short term (i.e. during construction), and a minor change in landscape character in the operation phase. During operation, the Proposal would represent a minor change to this landscape character zone.

Table 2 Impact grading matrix for the residential landscape character zone

		MAGNITUDE			
		HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
SENSITIVITY	HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
	MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
	LOW	MODERATE	MODERATE - LOW	**LOW**	NEGLIGIBLE
	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

4.2 High density residential landscape character zone

4.2.1 Existing situation

This landscape character zone comprises a small portion to the north-east and south-east of the area surrounding the Proposal. High density residential comprising multi-storey apartments overlook the railway line and beyond. The area is characterised by closely spaced high rise apartments with lower levels visually screened by mature street tree planting along Loftus Crescent and The Crescent. District and regional views from these high rise apartments would be available from upper level balconies and windows. Refer to Figure 7 for a typical example of a high rise apartment located at the corner of Station Street and Loftus Crescent (to the north-east of the station).

Figure 7 A typical high rise apartment located on Station Street

4.2.2 Landscape character impacts

The Proposal would have a series of impacts on the character of the landscape, as follows:

- during construction, a temporary construction compound would likely be located within the paved area at the Loftus Crescent station entrance and the immediately adjacent grassed area to the east of the paved area adjacent to the northern station entrance. The compound would accommodate a laydown and storage area for materials. Temporary storage/laydown areas would also be required on the western side of station platforms (Platforms 1, 2, 3 and 4)
- typical visual impacts would include the presence of temporary fencing, hoarding, road barriers, cranes signage, scaffolding, temporary ticketing office and amenities
- the upgrade includes new infrastructure elements comprising new lifts and a new canopy on the existing footbridge which would be permanent visible features and upgrades at the station entrances including a new bus bay, relocated bus shelter and kiss and ride areas
- the removal of seven small exotic trees within and directly north-east of the rail corridor would potentially open up views to the station, however this is localised to a very small area and the change in character would be likely to impact only a small number of residences in lower level

apartments, and is not considered to be a significant impact on landscape character of the study area

– the change would be limited to the upper levels of the high rise apartments located at the corner of Station Street and Loftus Crescent (north-east of Homebush Station) which have direct views to the Proposal from their balconies and windows.

4.2.3 Impact assessment

The sensitivity of the landscape is rated as low, as the land use, pattern and scale have the capacity to accommodate the type of change envisaged. The magnitude of change is rated as low, as this is considered a minor change within the context of the broader landscape setting. The upgrade is a minor change to a small area of an existing infrastructure element adjoining this landscape character zone.

Although the new lifts, canopies, road works and interchange upgrades would be visible from the upper levels of the high rise apartments located at the corner of Station Street and Loftus Crescent, the change would in most cases be only visible in the area immediately adjacent to the north of the Proposal. The proposed changes are in keeping with the existing landscape character and use of the infrastructure corridor landscape character zone.

The overall rating for this landscape character zone is low (refer to Table 3). The upgrade work is relatively minimal and would be most noticeable as a landscape character impact in the short term (i.e. during construction), and a minor change in landscape character in the operation phase. During operation, the Proposal would represent a minor change to this landscape character zone given the distance to receivers and presence of screening from existing street trees and buildings. The removal of seven small exotic trees within and directly north-east of the rail corridor would have minimal impact as the Proposal would enhance the visual amenity of this landscape character zone.

Table 3 Impact grading matrix for the high density residential landscape character zone

SENSITIVITY	MAGNITUDE: HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
LOW	MODERATE	MODERATE - LOW	**LOW**	NEGLIGIBLE
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

4.3 Infrastructure corridor landscape character zone

4.3.1 Existing situation

The railway line is a highly contained, linear landscape character zone between approximately 60 and 70 metres wide. Refer to Figure 3 for the extents of the infrastructure corridor landscape character zone. The corridor comprises a distinct unit which traverses the landscape, with the railway line and platform sitting below the surrounding ground plane. Features of Homebush Station include the two storey Booking Office and Amenities Building, the existing footbridge, island platforms and platform buildings.

Homebush Station is heritage listed on the State Heritage Register (SHR), the RailCorp Section 170 Heritage and Conservation Register (No. 4801087) and the Strathfield Local Environmental Plan (LEP) 2012 (Item I40). The station represents three significant historical phases in the development of the NSW railways. The station heritage buildings remain highly intact and include the overhead booking office, signal box, brick store rooms and footbridge. These buildings collectively demonstrate a former era of travel, communication and trade.

Prominent visual elements of Homebush Station include the existing footbridge and canopy, Booking Office, Amenities Building, platform buildings, stairs, steel gantries and associated overhead wires.

From outside the corridor, this landscape character zone is experienced as an impenetrable barrier, consisting of a series of masonry walls, stairs and security fences. These elements tend to limit visual access across the railway line. Figure 8, Figure 9 and Figure 10 show photographs of this zone.

Figure 8 View towards Homebush Station looking north-west from The Crescent

Figure 9 View towards Homebush Station looking north-east from The Crescent

Figure 10 View of the northern station entrance stairs from Loftus Crescent looking south-west

4.3.2 Landscape character impacts

The Proposal would have a series of impacts on the character of the landscape, as follows:

- temporary changes to the character during construction, e.g. temporary fencing, hoarding, road barriers, cranes, signage, scaffolding, temporary ticketing office and amenities
- impacts would generally comprise relatively minor changes to a small section of a larger railway corridor
- the upgrade includes new infrastructure elements including new lifts, canopies, road works and interchange upgrades. The new lifts at each of the station entrances and within the station would exhibit scale and bulk over the existing structure. New infrastructure would be a prominent architectural element of the character zone and would be designed to be in keeping with the existing heritage features of the station.

4.3.3 Impact assessment

The sensitivity of the landscape is rated as low, as the land use, pattern and scale have the capacity to accommodate the type of change envisaged. The contained nature of the railway corridor limits the impact of the changes to this landscape character zone on the broader surrounding landscape.

The magnitude of change is rated as low, as this comprises a relatively minor change in the landscape character. The change would in most cases be only visible in the area immediately adjacent to the Proposal and the change is in keeping with the existing landscape character and use. The addition of relatively few contemporary architectural elements is undertaken in a well-integrated manner with the heritage features of the station.

The overall rating for this landscape character zone is low (refer to Table 4). The upgrade works are relatively minimal and would be noticeable as a landscape impact in the short term, creating a greater level of impact during construction due to the introduction of temporary fencing, hoarding, road barriers, signage, scaffolding, cranes, temporary site offices and amenities. During operation the Proposal would have an overall low impact upon the landscape character zone. The Proposal would sit well with the existing landscape character.

Table 4 Impact grading matrix for the infrastructure corridor landscape character zone

SENSITIVITY \ MAGNITUDE	HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
LOW	MODERATE	MODERATE - LOW	**LOW**	NEGLIGIBLE
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

4.4 Local centre and heritage landscape character zone

4.4.1 Existing situation

The Proposal is located within a small local centre and heritage landscape character zone containing a mix of shops, small businesses and cafes. Refer to Figure 3 for extent of the local centre and heritage landscape character zone.

The local centre and heritage landscape character zone is generally located in one or two storey premises with ground floor retail shops and residential above. Refer to Figure 11 and Figure 12 for typical examples of this landscape character zone. Homebush Station forms an important feature element of this view and acts as a means of wayfinding for users of this landscape character zone. This precinct of the shops and station comprises an exceptionally high quality example of a Federation period landscape setting.

Figure 11 Local centre and heritage landscape character zone along The Crescent looking south-east

Figure 12 Typical shop fronts located along Rochester Street

4.4.2 Landscape character impacts

The Proposal would have a series of impacts on the character of the landscape, as follows:

- temporary changes to the character during construction including the potential use of temporary fencing, hoarding, road barriers, cranes, signage, scaffolding, temporary ticketing office and amenities
- impacts would generally comprise relatively minor changes to a small section of a larger railway corridor
- the upgrade includes new infrastructure elements including new lifts and canopies. The new lifts at each of the station entrances and throughout the station would exhibit increased scale and bulk over the existing structure. The new infrastructure would be a prominent architectural element of the character zone
- road works and interchange works (including installation of new kiss and ride areas, accessible parking spaces, taxi rank and associated kerb ramps) would be visible in this landscape character zone
- the removal of 10 trees along The Crescent, Loftus Crescent and the station platforms has potential to open up views to the station
- well considered new architecture would provide positive new elements within a physically reduced environment including minimal recent streetscape initiatives.

4.4.3 Impact assessment

The sensitivity of the landscape is rated as high notwithstanding the physical environment of the local centre as described above. This landscape character zone comprises a highly visited area and is activated by the nearby station, which puts emphasis on this area as a gateway to the surrounding residential areas and beyond.

The magnitude of change is rated as high. This Federation precinct is considered to have a high townscape character and quality which are potentially not well matched with the form, line, colour and materials of the architectural elements. Notwithstanding, the change would in most cases be only visible in the area immediately adjacent to the Proposal and the change is in keeping with the existing landscape character and use. The addition of relatively few contemporary architectural elements provides an unobtrusive link to the heritage features of the station.

The overall rating for this landscape character zone is high (refer to Table 5). However, works associated with the Proposal are relatively minimal and would be noticeable as a landscape impact in the short term (i.e. during construction), and a minor change in the landscape character early in the operation phase. The overall heritage impact of the Proposal has been assessed as neutral (Orwell & Peter Phillips, 2016). Although the new structures would change the appearance of the station and remove some significant fabric, they would facilitate its ongoing use for its original purpose and will maintain the consistency of design and materials that has characterised the station since its construction in 1892. Given that the introduction of equitable access is essential to the continuing operation of Homebush Station, the Proposal would achieve this with the least adverse impact on heritage significance compared to alternative options considered.

Table 5 Impact grading matrix for the local centre and heritage landscape character zone

SENSITIVITY \ MAGNITUDE	HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
HIGH	**HIGH**	HIGH - MODERATE	MODERATE	NEGLIGIBLE
MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
LOW	MODERATE	MODERATE - LOW	LOW	NEGLIGIBLE
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

4.5 Mixed use landscape character zone

4.5.1 Existing situation

The mixed use landscape character zone flanks Parramatta Road and is an active commercial and residential corridor. The character is primarily influenced by the utilitarian nature of the road setting, with businesses and commercial development on lower levels and high rise residential above. Built form is prominent on either side of Parramatta Road, and as a result limits views to the surrounding landscape and beyond. Refer to Figure 3 for extent of the mixed use landscape character zone.

4.5.2 Landscape character impacts

Overall the Proposal would have a limited impact on this landscape character zone. The mixed use landscape character zone is visually isolated from the changes due to the surrounding built form and existing vegetation.

4.5.3 Impact assessment

The sensitivity is considered low as the changes to the Proposal fall outside this landscape character zone as it is separated by residential and high density residential.

The magnitude of change due to the Proposal is negligible. The overall rating for this landscape character zone is negligible (refer to Table 6). Views from this landscape character zone would not be available to the Proposal and it doesn't lie within or share a common boundary with this landscape character zone.

Table 6 Impact grading matrix for the mixed use landscape character zone

SENSITIVITY \ MAGNITUDE	HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
MODERATE	HIGH - MODERATE	MODERATE	MODERATE - LOW	NEGLIGIBLE
LOW	MODERATE	MODERATE - LOW	LOW	**NEGLIGIBLE**
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

5.0 Visual impact assessment

5.1 Visual envelope mapping

The Proposal includes the installation of new lifts, canopies, road works and interchange upgrades. The Proposal would introduce well considered architectural elements which are complementary to the scale and form of the adjoining local centre. The new infrastructure would be located in a similar location to the existing, with the four new lifts located west of the existing footbridge. The top height of the new infrastructure would be approximately 9.5 metres above existing ground level on Loftus Crescent and 7.95 metres above existing ground level on The Crescent.

The potential visibility of the Proposal from the surrounding area is shown in Figure 13. The visual envelope extends in an east-west orientation following the main parallel view corridor of the railway line, The Crescent and Loftus Crescent.

Associated interchange works on the surrounding local road network (including a new pedestrian crossing on Loftus Crescent) and upgraded interchange facilities (including new kiss and ride and taxi facilities, accessible parking spaces and installation of kerb ramps) would only be visible in the immediate vicinity of these works which would be undertaken along The Crescent and Loftus Crescent.

The road works and interchange facility upgrades would be minimal in nature and would be in keeping with the existing streetscape.

The viewshed beyond the Proposal is responsive to both mature tree planting and residential development to the north and the south, and results in a generally restricted extent of visibility from many areas. The residential interface to the railway line is setback and screened by mature street planting along streets.

5.2 Visual impact assessment

Ten visual receiver locations have been identified to represent viewpoints for assessment of potential impacts on views as a result of the Proposal, as shown in Figure 14. These are:

1. Corner of The Crescent and Homebush Road – this receiver assesses the impact of changes on residential neighbours
2. The Crescent – this receiver assesses the visual impact on residential neighbours
3. The Crescent – this receiver assesses the impact of the changes on pedestrians and users of the Homebush Medical Centre
4. The Crescent – this receiver assesses the visual impact on commercial neighbours and pedestrians on the southern side of The Crescent
5. The Crescent – this receiver assesses the impact of the changes on pedestrians adjoining Homebush Public School
6. Corner of The Crescent and Rochester Street – this receiver assesses the visual impact on pedestrians and commercial neighbours at the corner of The Crescent and Rochester Street
7. Corner of Loftus Crescent and Knight Street – this receiver assesses the impact of changes on residential neighbours at the corner of Loftus Crescent and Knight Street
8. Loftus Crescent – this receiver location assesses the visual impact on residential neighbours on the northern side of Loftus Crescent
9. Loftus Crescent – this receiver assesses the impacts on residential neighbours and pedestrians, directly opposite the station entrance, on the northern side of Loftus Crescent
10. Station Street – this receiver assesses the visual impact on residential neighbours on the eastern side of Station Street.

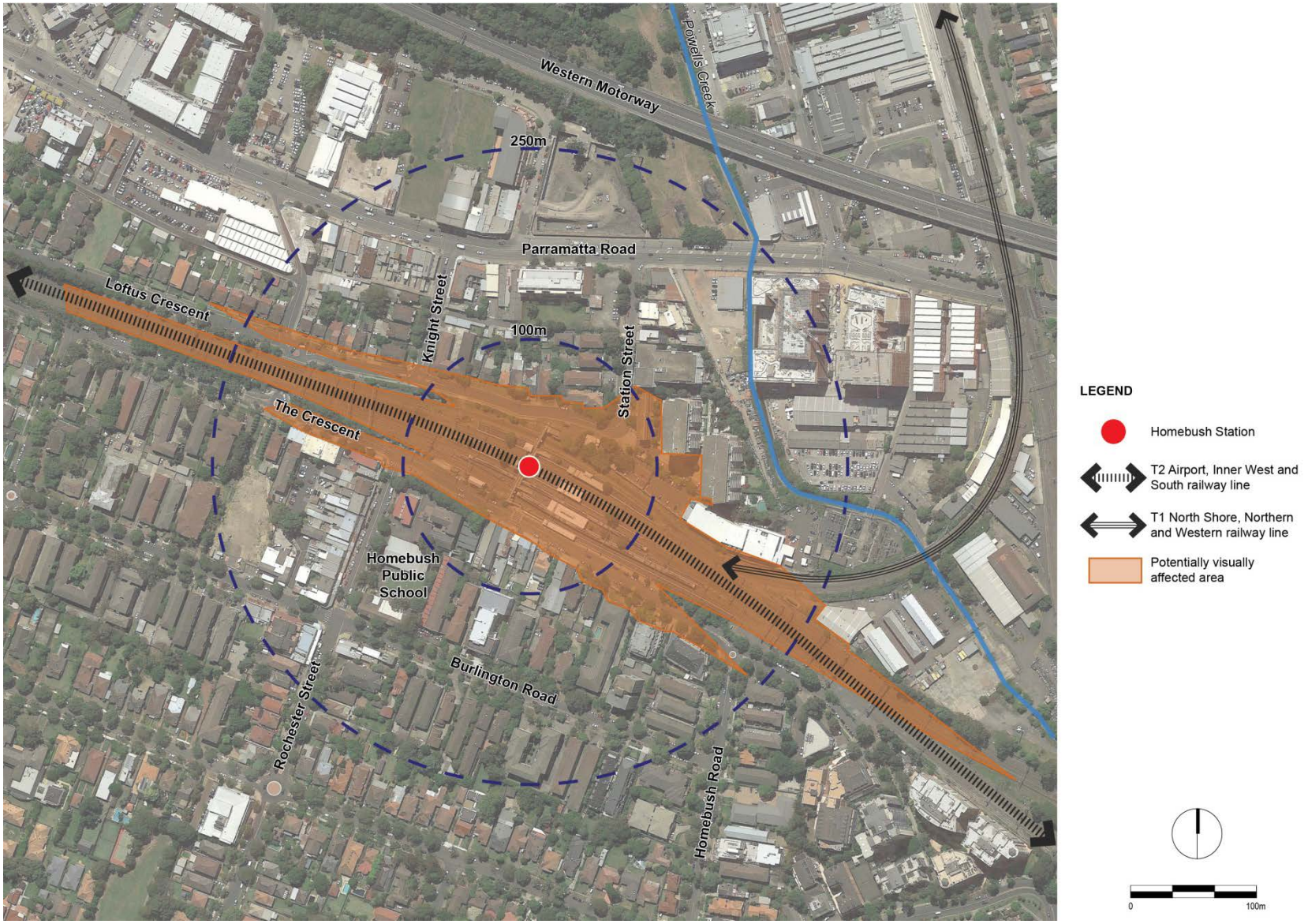

Figure 13 Visual envelope map showing potential visually affected areas

Figure 14 Visual impact assessment receiver locations

5.2.1 Construction visual impacts

The construction of the Proposal would include the following activities:

- establishment of site compound (erect fencing, tree protection zones, site offices, amenities and plant/material storage areas)
- establishment of temporary facilities as required (e.g. temporary ticketing office)
- partial demolition existing structures to allow for new lifts and stairs
- relocation of services
- construction of lift shafts, stairs, fencing, and new canopies
- installation of new lifts and associated fixtures, lighting, signage and CCTV cameras
- installation of new canopies over both station entrances, the existing footbridge and lift landings
- refurbishment of the heritage Amenities Building to provide a new family accessible toilet and new station office on the footbridge level
- refurbishment of the heritage Booking Office to provide a new lift lobby on the footbridge level and a new communications room on the platform level
- realignment of The Crescent kerbing to provide two accessible parking spaces (one new space and one relocated space), a new taxi rank with provision for one space and a new kiss and ride space on the southern side of the station
- realignment of the Loftus Crescent kerbing to provide a new kiss and ride space, a new bus bay and relocation of the existing bus shelter on the northern side of the station
- provision of accessible parking spaces, kiss and ride and taxi facilities
- installation of wayfinding signage
- electrical and power supply upgrade works
- landscaping, fencing adjustments and bollards
- activities to test and commission power supply, lifts, lighting, new/modifications to station services, ticketing systems, communication and security systems.

Subject to approval, construction is expected to commence in early 2017 and take around 18 months to complete. The construction methodology would be further developed during the detailed design of the Proposal in consultation with TfNSW.

Construction activities would be temporary and transient in nature. To the south, views towards construction activities would be limited to the west of the existing footbridge, where the existing masonry walls and stairs do not provide screening to this area. Views from the north would be partially blocked by the existing footbridge, however the temporary construction compound likely located within the paved area at the Loftus Crescent station entrance and the immediately adjacent grassed area to the east of the paved area adjacent to the northern station entrance would be visually prominent. The overall visual impact of the construction of the Proposal is considered to be low, given that construction activities would be temporary and transient in nature.

5.2.2 Operational visual impacts

Table 7 provides an assessment of the visual sensitivity and magnitude of each receiver location (as identified in Figure 14) during the operation of the Proposal. Photomontages showing the changes in views as a result of the Proposal are provided for three key viewpoints, as follows:

- receiver Location 3. The Crescent, refer to Figure 15 and Figure 16
- receiver Location 8. Loftus Crescent, refer to Figure 17 and Figure 18
- receiver Location 10. Station Street, refer to Figure 19 and Figure 20.

Overall, the Proposal would broadly have a moderate visual impact on the majority of people living, working in or travelling through the urban landscape surrounding Homebush Station during operation.

Table 7 Visual impact assessment

Receiver Location	Sensitivity	Magnitude	Rating
1. Corner of The Crescent and Homebush Road	The sensitivity would be low within the context of a low number of residents who would have highly oblique views towards the Proposal.	The magnitude of change would be low. Views towards the Proposal would be substantially screened and filtered by existing street tree planting along The Crescent.	Low
2. The Crescent	The sensitivity of the Proposal is low as it is expected that a low number of residents would have direct views to the Proposal.	The magnitude of change would be low. Views toward Homebush Station are partially screened by existing street tree planting along The Crescent. The Proposal would generally be expected to have low levels of visibility from this location, with only the top of the new footbridge canopy and lifts visible.	Low
3. The Crescent	The sensitivity would be moderate. Pedestrians and users of the Medical Centre would have direct and immediate views towards Homebush Station.	The magnitude of change would be moderate to high in the context of the heritage setting/place. The Proposal would form visually prominent elements along the northern side of The Crescent. The Proposal would introduce new architectural elements (i.e. new lifts and canopies and upgraded station entrance stairs) which complement the scale and form of the commercial buildings adjoining Homebush Station. New architectural elements would be well considered; respect heritage values and provide amenity benefit to the streetscape.	High to moderate
4. The Crescent	The sensitivity of the Proposal would be moderate. Commercial neighbours and pedestrian users would experience direct views in close proximity to the Proposal. A moderate number of commercial and pedestrians users would be expected.	The magnitude of change would be high. Views from this location would be detailed and include key built elements including the new lifts and canopies and stairs. The visual prominence of the Proposal elements would be accentuated by being silhouetted against the sky. Receiver numbers would be high, however the sensitivity of these receivers to the Proposal is considered to be low because views would be transitory. The Proposal would introduce constructed elements which complement the scale and form of the existing commercial and residential buildings adjoining the station.	High to moderate

Receiver Location	Sensitivity	Magnitude	Rating
5. The Crescent	The sensitivity would be moderate. Pedestrians and users of Homebush Public School would have direct and immediate views towards the Proposal.	The magnitude of change would be moderate. The Proposal would form visually prominent elements along the northern side of The Crescent. New architectural elements would be well considered; respect the heritage values and provide amenity benefit to the streetscape.	Moderate
6. Corner of The Crescent and Rochester Street	The sensitivity would be low, comprising pedestrians and commercial neighbour views.	The magnitude of change would be low. Visible portions of the Proposal would largely be restricted to the southern side of the station. The Proposal would introduce well considered architectural elements which are complementary to the scale and form of adjoining residential buildings.	Low
7. Corner of Loftus Crescent and Knight Street	The sensitivity would be low. Residential receivers and pedestrian views would be indirect and seen from a distance.	The magnitude of change would be low. The Proposal would generally be expected to have low levels of visibility from this location, with only a small portion of the northern most lift and top of the footbridge canopy visible.	Low
8. Loftus Crescent	The sensitivity would be moderate within the context of a low number of residents which would comprise highly oblique views towards the Proposal.	The magnitude of change would be moderate. Visible portions of the Proposal would largely be restricted to the northern end. The Proposal would introduce well considered architectural elements which are complementary to the scale and form of adjoining residential buildings.	Moderate
9. Loftus Crescent	The sensitivity of the residential receivers is high due to the close proximity to the Proposal. Views would be direct and from the primary place of residence, a view in which the receiver would have a proprietary interest.	The magnitude of change to the view seen from this receiver location is moderate. Views from this location would be detailed and include key built elements such as new canopies and lifts. However, the Proposal would introduce constructed elements which complement the scale and form of the existing infrastructure adjoining the station and would comprise well considered architectural elements.	High to moderate

Receiver Location	Sensitivity	Magnitude	Rating
10. Station Street	The sensitivity of receivers would be high. Within the context of a relatively high number of residential receivers from this location. Upper level views toward Homebush Station would be expected from the high rise residential apartments along the eastern side of Station Street. However, the station would be likely to only comprise a small component of a much larger view from these elevated locations.	The magnitude of change to the view seen from this receiver location is moderate. Views from this location would be detailed and include key built elements such as new canopies and lifts.	High to moderate

Figure 15 Receiver Location 3 – existing view looking north-west across The Crescent to Homebush Station

Figure 16 Receiver Location 3 – Photomontage 1 – proposed view looking north-west across The Crescent to Homebush Station

Figure 17 Receiver Location 8 – existing view looking south-east along Loftus Crescent to Homebush Station

Figure 18 Receiver Location 8 – Photomontage 2 - proposed view looking south-east along Loftus Crescent to Homebush Station

Figure 19 Receiver Location 10 – existing view looking south-west from Station Street to Homebush Station

Figure 20 Receiver Location 10 – Photomontage 3 - proposed view looking south-west from Station Street to Homebush Station

6.0 Mitigation measures

Mitigation measures would be implemented to minimise the level of visual impact during the design development, construction and operation phases of the Proposal.

6.1 Design development

The Proposal is located within what is considered to be an exceptional townscape setting along the southern frontage of The Crescent, with the station flanked by commercial buildings.

The Conservation Management Plan (CMP) for Homebush Station (Orwell and Peter Phillips, 2005) states that … 'The Homebush Station complex is one of the most important surviving groups of buildings on the State railway system' … and that 'all of the later alterations and additions … have been constructed in a complementary style to the original work, giving the station an evocative quality and consistency of architectural character that is rare within the NSW rail system.' The report goes on to say that … 'The consistency of the design at Homebush Station extends to the character of the nearby buildings in The Crescent, most of which date from the late 19th or 20th century, creating an important civic precinct (2005, Orwell and Peter Phillips).'

The CMP also notes the … 'overall form, scale and architectural character' of Homebush Station is of 'exceptional significance', noting that 'the place should be conserved, and that actions that would diminish its cultural significance through use or alterations to fabric and spaces should be avoided.' (*ibid*.). The Burra Charter defines:

- Place: as 'site, area, landscape, building or other work, group of buildings or other works, and may include components, spaces and views'
- Cultural Significance: '… is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects'
- Fabric: as 'all the physical material of the place including components, fixtures, contents and objects'

Within this context, the following mitigation measures are recommended:

- consideration be given to incorporating input from a heritage architect to further refine the architectural design
- the design be of a 'complementary style to the original work' … in order to retain the …'evocative quality and consistency of architectural character that is rare within the NSW rail system'
- consideration of a a historically more relevant material than what appears to be Colorbond® steel be considered for the lift wells and canopy rooves
- the design of the Proposal meets 's.7 Conservation policies' and 's.8 Implementation of conservation policies' within the Conservation Management Plan (*ibid.*)
- consideration of a collaborative approach with Strathfield Council for the provision of street tree planting to the parking lane of the Crescent, using period Brush Box (*Lophostemon confertus*) street trees, either to the whole street frontage or the commercial area to increase the amenity of this area (refer Figure 21).

Figure 21 The provision of street tree planting as a proposed mitigation measure

The following general mitigation measures are further recommended to minimise visual impacts during the design development process:

- during detailed design, the design of the proposed platform canopies, other canopies, columns and fascia edge is to be further refined to articulate and form profiles which may assist in minimising of bulk and height. Canopy design would be undertaken in accordance with the Sydney Trains Canopies & Shelters Design Guide for Heritage Stations July 2016
- consideration in selection and location for street tree planting along The Crescent and Loftus Crescent which may provide partial screening or backdrop setting for constructed elements from surrounding receiver locations such as receiver locations 4 and 9
- select materials and colour finishes for new elements with the aim of minimising bulk of the structures (e.g. new lifts and canopies) and incorporate transparent materials to maximise natural light into the structures, and use non-reflective materials for facades and finishes
- design of new elements to achieve an architectural character that is complementary to existing elements rather than contrasting
- provide an attractive public space that acknowledges the existing mixed use commercial development to the south of the station and creates attractive station entrances
- lighting design to minimise upward spread of light near to and above the footbridge. Care should be taken when selecting luminaires to ensure that light spill and glare are kept to a minimum
- design of street furniture to consider Strathfield Municipal Council guidelines, as relevant
- disturbance of vegetation would be limited to the minimum amount necessary to construct the Proposal to maintain screening of views.

6.2 Construction

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

- Tree Protection Zones (TPZs) would be established around trees to be retained. Tree protection would be undertaken in line with *AS 4970-2009 Protection of Trees on Development Sites* and would include exclusion fencing of TPZs
- provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts on key view points during construction. Hoardings and site fencing would be removed following construction completion
- provide cut-off or directed lighting to be used with and outside of the construction site, with lighting location and direction considered to ensure glare and light spill is minimised.

6.3 Operation

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

- ongoing maintenance and repair of constructed elements
- graffiti would be removed in accordance with TfNSW's standard requirements
- long term maintenance and replacement of tree planting and landscaping to maintain visual filtering and the framing of views to the station, and maintenance of adjoining streetscape amenity.

7.0 References

AECOM, 2016, Review of Environmental Factors - Homebush Station Upgrade, Sydney

Roads and Maritime, 2013, *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment,* Sydney

Sydney Trains, 2016, *Canopies & Shelters Design Guide for Heritage Stations,* Sydney

Orwell and Peter Phillips, 2005, *Conservation Management Plan – Homebush Railway Station*, Sydney

Orwell and Peter Phillips, 2016, *Statement of Heritage Impact – Homebush Station Upgrade,* Sydney