

# BIRRONG STATION UPGRADE



Landscape Character and Visual Impact Assessment

November 2019

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## LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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# 1. Introduction

## 1.1 Purpose of this report

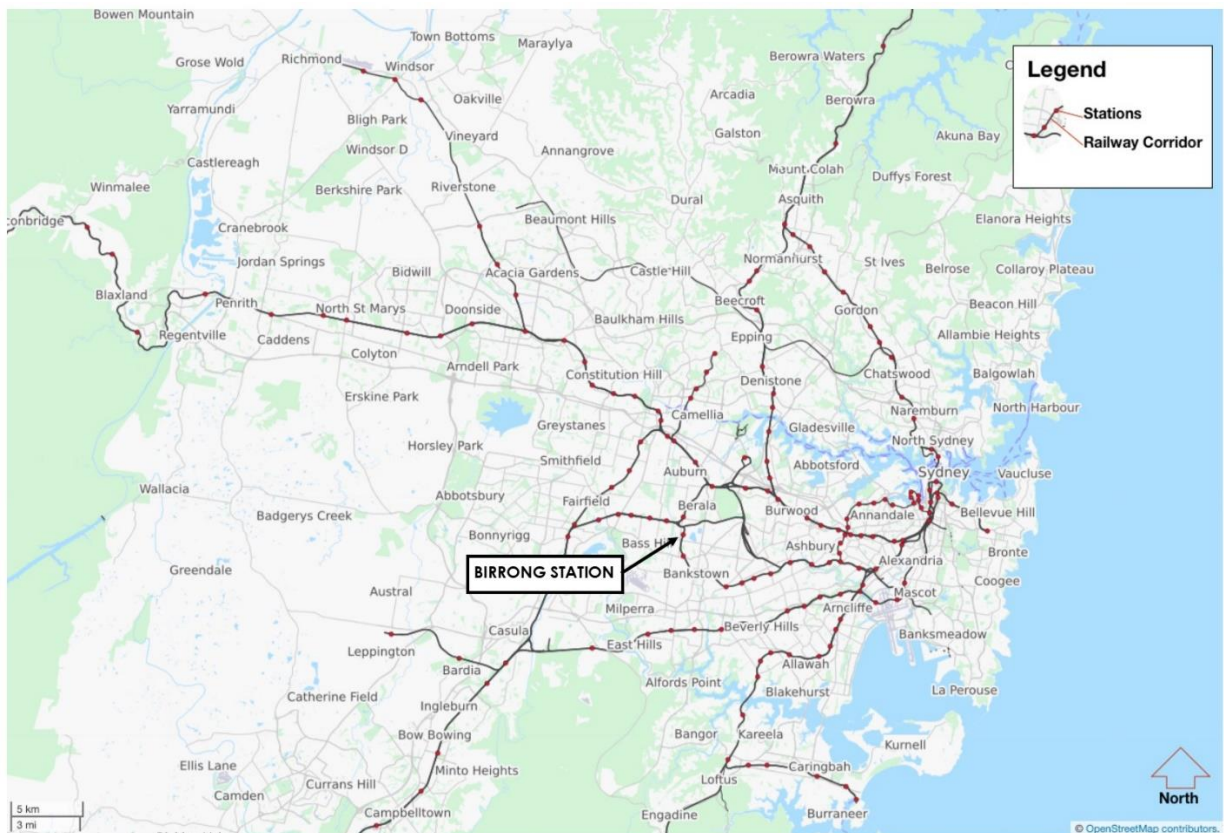
This report assesses the landscape and visual impacts associated with Transport for NSW's (TfNSW's) proposed upgrade to Birrong Station, Birrong. The Proposal aims to provide a station precinct that is accessible to those with a disability, limited mobility, parents/carers with prams, and customers with luggage.

This Landscape Character and Visual Amenity Impact Assessment supports the Review of Environmental Factors (REF), which has been developed concurrently with this report.

## 1.2 Proposal overview

The Proposal is part of the Transport Access Program (TAP), which is an NSW Government initiative to ensure that stations meet legislative requirements stipulated within the *Commonwealth Disability Discrimination Act, 1992 (DDA)* and the *Disability Standards for Accessible Public Transport, 2002 (DSAPT)*.

Birrong Station is approximately 21 kilometres west of Sydney central business district (CBD). A location map is provided in **FIGURE 1-1**.



**FIGURE 1-1: LOCATION OF BIRROING RAILWAY STATION**

The main elements of the Proposal that would be visible at completion are:

- a new footbridge over the rail corridor with a central lift and stairs to the railway platform
- new protection screens to the footbridge
- new entrances (including stairs, ramps and landscape improvements) on both sides of the railway corridor
- canopies at the boarding assistance zones (BAZ)
- reinstatement of the Avalon Street overbridge parapet following removal of the existing stairs (i.e. the gap created by the current station entry in the parapet would be filled to match the existing bridge).

There would be upgrades to the station building, however, these upgrades (such as a family accessible toilet and an ambulant toilet) are largely internal, apart from a new canopy to the accessible toilet, and overall the building would not look significantly different.

A detailed Proposal description is provided in **SECTION 4.0**.

### 1.3 Report format

The report is set out in the following format:

- SECTION 2.0 Defines the methodology for the assessment
- SECTION 3.0 Describes the location and context of the site
- SECTION 4.0 Describes the Proposal and its main visual changes
- SECTION 5.0 Assesses the likely effects to landscape character
- SECTION 6.0 Assesses the likely effects to surrounding viewpoints
- SECTION 7.0 Describes measures that have been, and could be, incorporated to improve the visual outcome, and
- SECTION 8.0 Presents a summary of key findings and conclusion.

## 2. Assessment methodology

This section outlines the assessment methodology based on the NSW Road and Maritime Services' *Guideline for Landscape Character and Visual Impact Assessment, Environmental Impact Assessment Practice Note EIA-N04*, December 2018, referred to hereafter as the 'Guideline'.

### 2.1 Field survey

The Site was inspected 30 September 2019 under the supervision of TfNSW staff. The inspection included a walk-over Railcorp property and surrounding streets. The day of the inspection was dry and sunny.

During the site inspection an approximate viewshed (i.e. the potential area from where the Proposal could be seen) was determined and potentially sensitive viewpoints identified. Private property was not entered, with viewpoints assessed from the nearest publicly accessible location.

### 2.2 Assessment

The Guideline requires a two-part assessment process, each equally important:

- landscape character assessment - the assessment of impact on the aggregate of an area's built, natural and cultural character or sense of place – which helps determine the overall impact of a Proposal on an area's character and sense of place.
- visual impact assessment - the assessment of impact on views - which helps define the day to day visual effects of a Proposal on people's views.

The method to measure impact is based on the combination of sensitivity of the existing area or view to change, and magnitude of the Proposal on that area or view. Sensitivity and magnitude are defined by the Guideline as:

- Sensitivity: refers to the qualities of an area, the number and type of receivers and how sensitive the existing character of the setting is to the proposed nature of change. Sensitivity ranking criteria used for this assessment are provided at **TABLE A.1, APPENDIX A.**
- Magnitude: refers to the physical scale of the Proposal, how distant it is and the contrast it presents to the existing condition. Magnitude of change ranking criteria used for this assessment are provided at **TABLE A.2, APPENDIX A.**

The combination of sensitivity and magnitude provide the rating of the landscape character impact for a Proposal, or visual impact for individual viewpoints (refer **TABLE 2-1**).

**TABLE 2-1: LANDSCAPE CHARACTER AND VISUAL IMPACT RATING MATRIX**

		Magnitude			
		High	Moderate	Low	Negligible
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
		Negligible	Negligible	Negligible	Negligible

### 2.2.1 Landscape character assessment

The Guideline<sup>1</sup> sets out the tasks for landscape character impact assessment:

1. Analyse existing landscape character and its sensitivity
2. Identify landscape character zones (if required because of the size or complexity of the Proposal)
3. Determine the magnitude of impact
4. Assess landscape character impact (based on both the sensitivity of the character zone and magnitude of the proposal in that zone).

### 2.2.2 Visual impact assessment

The Guideline<sup>2</sup> sets out the tasks for visual impact assessment:

1. Identify the extent of visibility of the Proposal
2. Identify existing viewpoints and their sensitivity to change
3. Determine the magnitude of change from each viewpoint
4. Assess visual impact (based on a composite of the sensitivity of the view and magnitude of the proposal in that view).

## 2.3 Photomontages

Following the assessment, viewpoints from a variety of viewing locations were identified for preparation of simulated images or 'photomontages' of the Proposal. The photomontage is an indicative image which illustrates the likely visual changes from representative viewpoints should the Proposal proceed. Photomontages are referred to within the assessment at **SECTION 6.0**, with the full set provided in **Appendix B**. The photomontages have been independently prepared by Cambium Group.

## 2.4 Mitigation measures

As described in **SECTION 7.0**, where relevant and possible, mitigation measures have been included to reduce potentially adverse visual impacts as part of the current Proposal, and additional recommendations have been made.

<sup>1</sup> Section 5 of the Guideline

<sup>2</sup> Section 6 of the Guideline



# 3. Site context

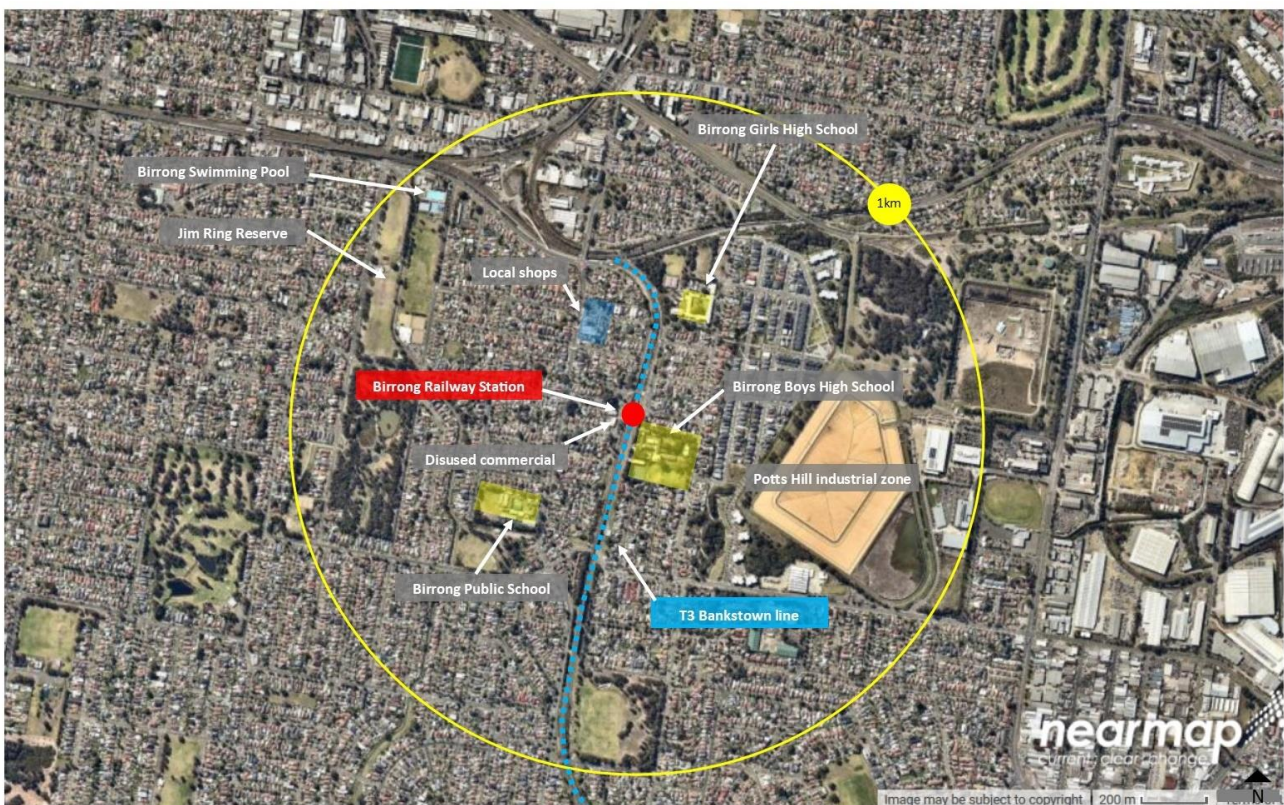
This section describes the site location and general context of the Proposal.

## 3.1 Site location and station context

Birrong Station is located at Rodd Street, Birrong, within the Canterbury-Bankstown local government area, in Sydney's south-west. Birrong Station is on the T3 Bankstown line, approximately 21 kilometres from the Sydney CBD. Birrong Station services the T8 Airport and South Line, providing public transport links between Liverpool and Sydney CBD and City Circle via Bankstown.

In peak periods there are approximately nine services per hour, with six services in off peak periods. In 2013, approximately 1,940 trips were recorded on an average weekday, and patronage is expected to rise in the future.

The station is entered via a pedestrian path along the Avalon Street overbridge and stairs to the platform. A locality map showing the station vicinity is provided in **FIGURE 3-1**.



**FIGURE 3-1: VISUAL CONTEXT OF PROPOSAL LOCATION**

## 3.2 Landform and existing land use

The local context and existing land use surrounding Birrong Station is provided at **FIGURE 3-2**.

The landform immediately surrounding Birrong Station is comprised of a slight slope that falls from east to west. This results in the station being bounded by a

cutting to the east, with the western side generally at ground level near the station building, increasing to a low cutting further north as the landform rises to the side of the road bridge. North of the platform is the existing Avalon Street overbridge which has stairs providing the only entrance to the station. Further north of the overbridge the landform slopes gently away.



**FIGURE 3-2: LOCAL CONTEXT AND SURROUNDING LAND USE**

Existing land use surrounding the station is predominately low-density housing, with the exception of Birrong Boys High School to the east and local commercial properties (currently vacant) to the west.

On the immediate sides of the station are the following existing land uses:

- East – low density housing and Birrong Boys High (shares a boundary with railway corridor).
- West – a mixture of: a small parking area (containing 17 spaces on eastern side of Hudson Parade); a local, low density residential street (Hudson Parade); currently vacant shops (corner of Hudson Parade and Avalon Street), a small public reserve alongside the corridor; and, a larger public reserve on the opposite side of Avalon Street (Avalon Reserve).
- North – Avalon Street overbridge (with stairs to platform) with low density residential each side.

- South – the railway corridor continues in this direction flanked by Birrong Boys High (east) and low density residential (west).



**FIGURE 3-3: VIEW OF BIRRONG STATION BUILDING FROM HUDSON PARADE**



**FIGURE 3-4: AVALON STREET OVERBRIDGE (INCLUDES PEDESTRIAN PATHWAY AND STATION ENTRANCE SEEN TO LEFT)**

### **3.3 Biodiversity**

Land use associated with suburban development and the railway has resulted in a highly modified environment within and around the Proposal site.

According to the Biodiversity Assessment<sup>3</sup>, the Proposal would not result in a significant impact to ecological values (including threatened species,

<sup>3</sup> Umwelt (Australia) Pty Limited (on behalf of Transport for NSW) (October 2019). *Birrong Station Upgrade – Biodiversity Assessment*

endangered populations, migratory species or TECs), primarily due to the small extent and minor nature of the proposed works. A description of existing vegetation and the required removal of one tree is described in **Section 4.3.3**.

### 3.4 Heritage

TfNSW's Preliminary Environmental Assessment (PEA)<sup>4</sup> found no non-indigenous heritage value or listings associated with the station precinct itself.

A search for known Aboriginal heritage items within 200 metres of the station was also undertaken for the PEA. The search confirmed there to be no known Aboriginal heritage items within or close to the station.

### 3.5 Planning and legislative requirements

The Proposal is subject to the provisions of the *State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)* and Part 5, Division 5.1 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and is permissible without consent under the Infrastructure SEPP.

The Proposal is permissible without development consent and does not formally require consideration of local planning instruments, where possible the design and/or systems associated with any development should have some regard for these, and to establish a high level of aesthetic synergy with the wider LGA.

Under *Bankstown Local Environmental Plan (LEP) 2015* (refer **Figure 3.5**), the railway line, station and the reserve areas on either side are Zoned SP2 Infrastructure. The Proposal meets the objectives of the zone, that is, to provide for infrastructure and related uses.



**FIGURE 3-5: EXISTING LAND USE ZONING, BANKSTOWN LOCAL ENVIRONMENTAL PLAN 2015<sup>5</sup>**

<sup>4</sup> Transport for NSW (TfNSW, 2018) Birrong Station Upgrade Preliminary Environmental Assessment (PEA)

<sup>5</sup> Ibid

The surrounding residential area is zoned R2 Low Density Residential. Objectives of that zone are<sup>6</sup>:

- *'To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To allow for certain non-residential development that is compatible with residential uses and does not adversely affect the living environment or amenity of the area.*
- *To allow for the development of low density housing that has regard to local amenity.*
- *To require landscape as a key characteristic in the low density residential environment'.*

The Proposal meets the relevant zone objectives, in particular that it is compatible with residential land uses, does not adversely affect the living environment or amenity and responds to landscape as a key characteristic due to the proposed public domain improvements and landscape works.

### **3.6 Future land use**

Bankstown Council<sup>7</sup> has identified that a substantial proportion of the area immediately surrounding the station is planned for future high density residential (refer Error! Reference source not found.). Buildings of up to 3-4 storeys are planned within the area indicated as the 'Village Centre Boundary', with Birrong Station the central focus of that area.

That transformation will alter the existing built environment and presumably lead to an increase in local residents and station users. At this stage the timing of such change, and the final type and height is unconfirmed. As no masterplan or other detailed planning documents or timeframes are currently available, this change has not been taken into account as part of the detailed impact assessment (**SECTION 6.0** and **7.0**) yet should be kept in mind as part of the future of this location.

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<sup>6</sup> Bankstown Local Environmental Plan (LEP) 2015

<sup>7</sup> Bankstown Council (2016) North Central Local Area Plan.

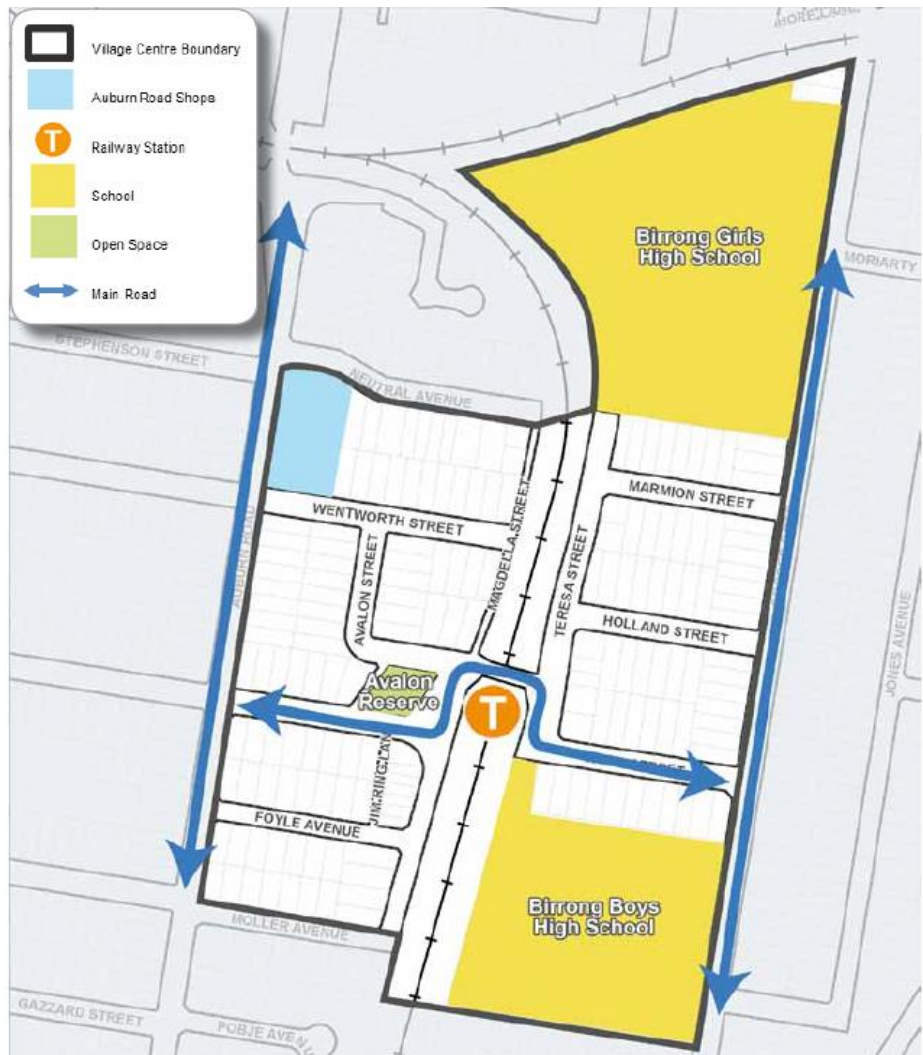
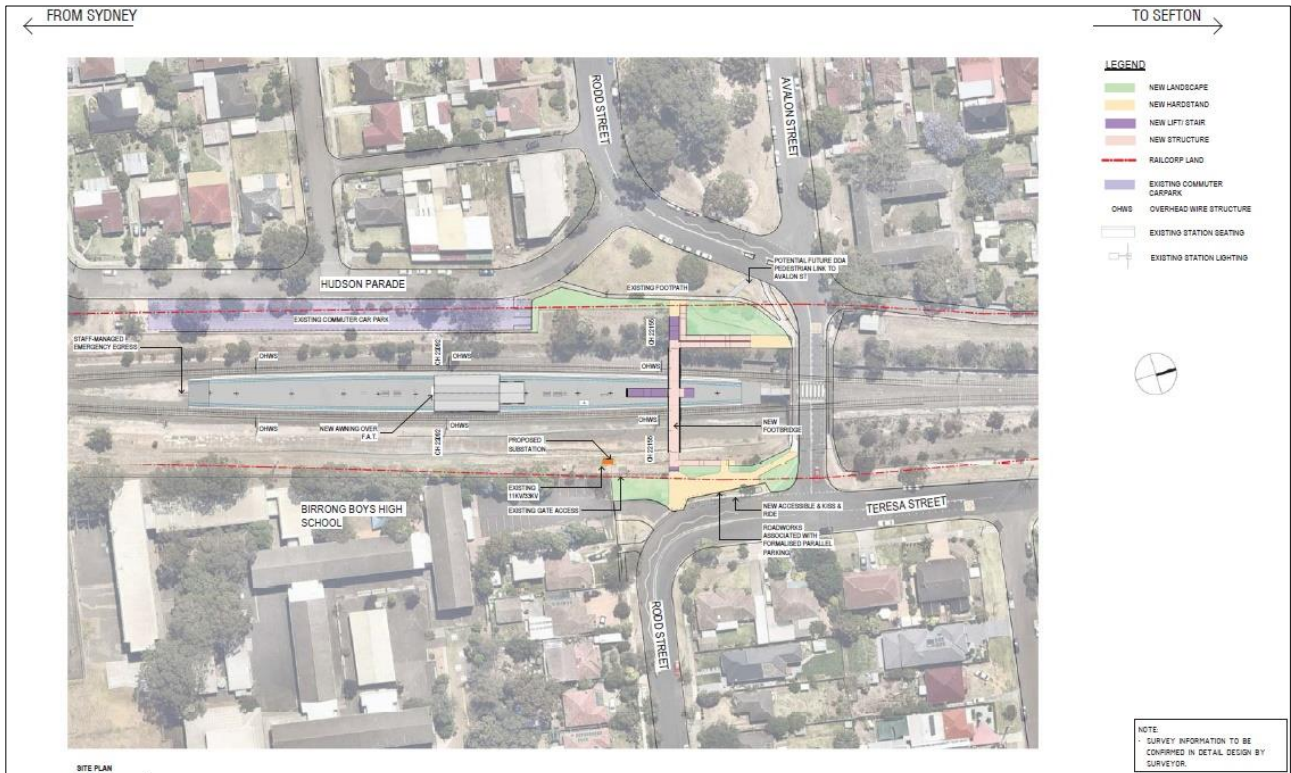


FIGURE 3-6: FUTURE LAND USE CHANGE PLANNED AROUND BIRRONG STATION<sup>8</sup>

<sup>8</sup> Ibid

# 4. Proposal description

This section outlines the major components and work items of the Proposal. **Figure 4-1** shows the proposed Station precinct layout with key elements of the Proposal. The design would be further developed during the detailed design phase.



**FIGURE 4-1: PROPOSAL LAYOUT<sup>9</sup>**

## 4.1 Proposal elements visible at completion

The main Proposed elements that would be visible at completion (i.e. operation) are:

- a new footbridge over the rail corridor with a central lift and stairs to the railway platform (overall height approximately 11 metres (m) above the railway platform to the lift roof)
- new protection screens on the footbridge
- new entrances (including stairs, ramps and landscape improvements) on both sides of railway corridor
- canopies at the boarding assistance zones (BAZ)
- reinstatement of the Avalon Street overbridge parapet following removal of the existing stairs (i.e. the gap in the parapet would be filled to match the existing bridge).

<sup>9</sup> TAP3 Birrong Updated Concept Design Drawings FINAL 280518 (supplied by TfNSW)

There would be upgrades to the station building, however, these upgrades (such as a family accessible toilet and ambulant toilet) are largely internal, apart from a new canopy to the accessible toilet, and overall the building would not look substantially different.

## 4.2 Detailed Proposal description

The Proposal aims to provide a station precinct that is accessible for all sections of the community, including people with a disability, limited mobility, parents/carers with prams, and customers with luggage.

The Proposal comprises the following main components:

### **New footbridge, lift and ramps:**

- installation of a new pedestrian footbridge south of the existing Avalon Street overbridge which would provide a cross corridor pathway from Rodd Street (east) over the rail corridor to Rodd Street (west). The footbridge would be comprised of a concrete structure with protection screens
- installation of one lift to provide access between the new pedestrian footbridge and the platform
- construction of a new eastern station entrance, to include accessible ramp and stairs to connect to the new footbridge, with landscaping near the entrance
- construction of a new western entrance, to include a new accessible ramp and stairs to connect to the new footbridge, with landscaping near the entrance
- removal of the existing stairs to the platform from the Avalon Street overbridge and reinstating the existing bridge parapet.

### **Platform and station building works:**

- localised platform regrading to ensure accessibility tactile grounds surface indicators and linemarking would be undertaken as required to achieve DSAPT compliance.
- canopies at the boarding assistance zones (BAZ) (design of these canopies is yet to be determined and would be finalised in detailed design)
- conversion of the existing unisex toilet to a unisex ambulant toilet
- upgrades to the existing family accessible toilet including:
  - replacement of items for compliance with DSAPT
  - new entry ramp
  - extension of the roof canopy of the platform building to provide adequate shelter at the family accessible toilet entrance.

### **Interchange upgrades:**

- a signposted accessible kiss and ride bay on Teresa Street adjacent to the eastern station entrance



- an accessible parking space to the eastern side of the station (adjacent to Birrong Boys High School staff car park entrance)
- conversion of the two existing accessible parking spaces in the commuter car park to standard car parking spaces
- provision of five bicycle hoops near the new footbridge on the Teresa Street side.

**Electrical supply and systems work:**

- upgrade to the station power supply and a new 11kV padmount substation to be located on the eastern side of the rail corridor, south of the proposed footbridge
- adjustments to station lighting, security systems including CCTV and communication systems including public announcement and hearing induction loops.

## 4.3 Construction phase

### 4.3.1 Timing

Subject to approval, construction is expected to commence in mid-2020 and take around 16 months to complete. The construction methodology would be further developed during the detailed design of the Proposal by the nominated Construction Contractor in consultation with TfNSW.

### 4.3.2 Disturbance area and temporary site facilities

The extent of the proposed disturbance area is shown in **FIGURE 4-2**. The disturbance area would provide for:

- a single construction compound
- materials and equipment storage
- access to the construction zone
- parking for construction workers.

The area would be demarcated with 1.8m high mesh fencing for public safety.

A temporary construction compound would accommodate a site office, amenities, laydown and storage area for materials. Areas on the western side of the station, off Hudson Parade, have been identified for the construction compound and use as stockpile areas. No public parking spaces would be temporarily affected by the compound. The construction compound would be located on land owned by Railcorp. Impacts associated with utilising this area have been considered in the REF, including requirements for rehabilitation.



FIGURE 4-2: POTENTIAL EXTENT OF DISTURBANCE AREA

### 4.3.3 Vegetation Removal

There would be little vegetation affected by the Proposal. According to the Biodiversity Assessment<sup>10</sup> the following vegetation is present:

- 'One vegetation community is present in the study area, being Plant Community Type (PCT) 849 Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain. This community occurs on the western side of the study area, adjacent to the existing carpark and within the northern rail corridor
- This PCT covers 0.14 ha of the study area and is consistent with Cumberland Plain Woodland in the Sydney Basin Bioregion critically endangered ecological community (CEEC)...
- All other vegetation occurring in the study area is highly disturbed through maintenance activities (i.e. slashing along the rail corridor) and landscaping. The area in the north-western corner of the study area contains a planted canopy of brush box (*Lophostemon confertus*) and planted mid-storey of oleander (*Nerium oleander*), with manicured groundcover.'

The main vegetation affected, according to the Biodiversity Assessment<sup>11</sup>, would be a moderate-sized native tree (*Eucalyptus crebra*) located within the railway corridor on the western side requiring removal (refer **Figure 4.3**). Some other small trees/shrubs and some immature trees (mostly Casuarinas on the internal railway embankment on the western side) are also likely to require removal.

<sup>10</sup> Umwelt (Australia) Pty Limited (on behalf of Transport for NSW) (October 2019). *Birrong Station Upgrade – Biodiversity Assessment*

<sup>11</sup> *Ibid*



**FIGURE 4-3: TREE REQUIRING REMOVAL TO ALLOW FOR CONSTRUCTION OF PROPOSAL**

#### **4.3.4 Equipment, machinery and earthworks**

During construction, various types of equipment and machinery would be required to complete the works. Expected larger equipment includes excavators, trucks, light vehicles, piling rigs, mobile cranes, concrete pumps/trucks.

Excavations and earthworks would generally be required for the following:

- installation of the lift on the platform
- installation of footings for the pedestrian bridge, access path and stairs
- installation and relocation of services and utilities.

Excavated material would be reused onsite where possible or transported to an appropriately licensed offsite waste disposal facility in accordance with relevant legislative requirements.

#### **4.3.5 Construction hours**

Most of the work required for the Proposal would be undertaken during standard (NSW) Environment Protection Authority (EPA) construction hours, which are as follows:

- 7.00 am to 6.00 pm Monday to Friday
- 8.00 am to 1.00 pm Saturdays.

Work outside of standard hours may be required occasionally at night, on weekends and during scheduled SydneyTrains trackwork periods.

### **4.4 Proposed public domain, landscape and rehabilitation works**

Upon completion of the proposed construction works, all disturbed areas would be landscaped and rehabilitated. Rehabilitation works would include removal of the construction compound, temporary fencing and storage areas;

resurfacing of the carpark and re-grassing of disturbed turf areas where required.

A Concept Landscape Plan has been prepared as shown in **FIGURE 4.4**. The plan illustrates public domain improvements that would occur on both sides of the railway corridor, including substantial tree planting, indicative plant species and materials.



**FIGURE 4-4: CONCEPT LANDSCAPE PLAN FOR PROPOSAL<sup>12</sup>**

<sup>12</sup> TAP3 Birrong Updated Concept Design Drawings FINAL 280518 (supplied by TfNSW)

# 5. Impact to landscape character

This section assesses the likely impact of the Proposal on landscape character based on the combination of two criteria: sensitivity<sup>13</sup> and magnitude of change<sup>14</sup>.

## 5.1 Landscape character

### Existing landscape character

The existing landscape character is dominated by the surrounding low-density residences, modest-sized station building, gently sloping landform and a relatively low tree cover. The existing residential area is mostly comprised of single-story detached houses on moderate-sized blocks. Birrong Boys High on the eastern side of the station (refer **FIGURE 5-1**) is the most dominant existing built form, consisting of 2-3 storey brick buildings alongside the railway corridor.



**FIGURE 5-1: BIRRONG BOYS HIGH SEEN FROM OPPOSITE SIDE OF RAILWAY CORRIDOR**

Birrong Station has a small station building with an attractive, more traditional appearance. It sits on an island platform with a railway line on each side. North of the platform is the existing two-lane Avalon Street overbridge which has stairs to platform. The bridge has solid dark, brick sides (or parapet) and a narrow pedestrian footpath along the southern side. Further north of the bridge the landform slopes gently away and prevents views from that direction at ground-level.

Vegetation cover around the station is relatively low, with surrounding streets tending to have small street trees. The small public reserve alongside the

<sup>13</sup> Sensitivity assessment criteria are listed in TABLE A -1, APPENDIX A.

<sup>14</sup> Magnitude of change criteria are listed in TABLE A-2, APPENDIX A.

corridor on the western side includes a number of larger trees as does the larger public reserve on the opposite side of Avalon Street (Avalon Reserve). The reserve on the eastern side of the railway corridor is bare of trees.

The landscape character is typical of suburban streets and does not have any recognised landscape or heritage conservation value. Photographs of the surrounding landscape character are provided as **Figure 5-2**.

## 5.2 Sensitivity of landscape character

The landscape character of the site and immediate surroundings is rated as having a **low** sensitivity to change:

- the station building, other infrastructure and general landscape have not been formally recognised as having landscape or heritage conservation value
- the landscape surrounding the station has a relatively low tree cover and is typical of other nearby residential areas.



FIGURE 5-2: LANDSCAPE CHARACTER OF LOCAL AREA

## 5.3 Magnitude of change to character

The visual changes anticipated with the Proposal have been described in **SECTION 4.0**. The main changes to landscape character would occur during construction, during which the Proposal would have a **high** magnitude of change on the landscape character:

- the construction area (including the compound) would be moderately large, involve large equipment and would dominate local character within the immediate area which would diminish the scenic quality of the landscape character
- these changes would be temporary.

Following construction, the Proposal would have a **low** magnitude of change on the landscape character:

- The Proposal would be a visible and recognisable new element within the overall scene, yet one that is relatively compatible with the surrounding character. The overall height would be approximately 11 metres (m) above the railway platform to the lift roof, with the lift shaft protruding approximately 2.75m above the height of the footbridge protection screens (with the panels 3m high).
- The proposed new station entry and landscaping would increase the station's attractiveness and enhance local landscape character and the overall amenity for customers.

#### 5.4 Summary of landscape character impact

When operational, the station precinct would look substantially different due to the new infrastructure (comprising the footbridge and lift shaft) contrasting with the scale of the existing station building. However, this change would occur within a landscape setting that is pleasant and typical of other nearby urban areas.

The assessed impact of the Proposal on landscape character during construction and post-construction is shown in **TABLE 5-1**.

**TABLE 5-1: ASSESSMENT OF LANDSCAPE CHARACTER IMPACT**

Phase	Sensitivity	Magnitude	Landscape character impact
Construction	Low	High	Moderate
Post-construction	Low	Low	Low

# 6. Impact to viewpoints

This section assesses the likely impact of the Proposal on representative viewpoints based on the combination of two criteria: sensitivity<sup>15</sup> and magnitude of change<sup>16</sup>. The main emphasis is on public viewpoints due to the far higher number of viewers affected.

## 6.1 Visibility of the Proposal

Birrong Station has a relatively small visual catchment due to the surrounding topography which has a slight slope falling from east to west. The station sits within a cutting which limits views down to the station when on the eastern side unless close to the fenced boundary. The existing Avalon Street overbridge also blocks views from locations to the north-east (Teresa Street) and north-west (Magdella Street).

There are views available of the station building from the lower western side (Hudson Parade, Rodd Street and the public reserve on the immediate western side) and from the eastern side of Rodd Street. Views are also possible for pedestrians when descending the stairs from the Avalon Street overbridge and when looking through the existing entrance created by the stairs in the sidewall of the bridge. Road users in vehicles only have a brief opportunity to glimpse the station through the existing entrance in the bridge parapet.

The Proposal would be more visible than the existing station elements as it includes an elevated footbridge and even higher lift shaft protruding above the level of the cutting. The overall height would be approximately 11 metres (m) above the railway platform to the lift roof, with the lift shaft protruding approximately 2.75m above the height of the footbridge protection screens (with the panels 3m high)).

Direct views of the Proposal location include:

- Public views from local roads (Hudson Parade, Rodd Street (west and east), Avalon Street and Magdella Street) and the public reserves to the west and east.
- Private views from adjacent residential properties (on Hudson Parade, Rodd Street (west and east), Avalon Street and Magdella Street).
- Views from other potentially sensitive viewing locations (such as the Birrong Boys High School, the overbridge and Birrong Station platform).

The approximate viewing area (or viewshed) is shown at **FIGURE 6-1**.

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<sup>15</sup> Sensitivity assessment criteria are listed in TABLE A -1, APPENDIX A.

<sup>16</sup> Magnitude of change criteria are listed in TABLE A-2, APPENDIX A.





FIGURE 6-1: APPROXIMATE VIEWSHED AND REPRESENTATIVE VIEWPOINTS ASSESSED

## 6.2 Assessed Viewpoints

A number of representative public and private viewpoints (VPs) within the viewing area have been identified for assessment. These viewpoints cover views from Birrong Station itself and views from the surrounding main viewing directions. All are within approximately 200m of the station as this is where the main change would be seen.

Those viewpoints are:

- VP1: View from station platform
- VP2: View from Rodd Street (east) (also represents view from entrance of Birrong Boys High school)
- VP3: View from the north of Hudson Parade
- VP4: View from corner of Avalon Street and Magdella Street.

The viewpoint locations are shown in **FIGURE 6-1**.

For each viewpoint, a brief description of the existing view, the assessed sensitivity to change, and the assessed magnitude of change to the view has been provided. Simulated images (photomontages) which illustrate the Proposal following construction are referred to within the following assessment with the full set of photomontages included as **Appendix B**.

### 6.3 VP1: View from Birrong Station platform

This viewpoint represents the general changes to views from the Birrong Station platform, near the station building. The existing view is illustrated in **Figure 6-2** and a simulated image of the Proposal in **Figure 6-3**.

#### Existing view

From the station building the view to the north is of the platform extending towards the Avalon Street overbridge, the overbridge and stairs to the platform, a lower cutting to the west and higher embankment to the east.

#### Sensitivity

The sensitivity of the view toward the Proposal is **low**:

- the viewpoint is close to the Proposal site and there are direct views of that location by customers of the station
- the existing view is typical of a small station in a residential environment, with the brick overbridge being quite dominant in the scene and the higher embankment on the eastern side has minimal landscaping.

#### Magnitude of change

The magnitude of change to the view during construction is rated as **moderate**:

- the area of disturbance would extend over a significant portion of the viewed area seen by customers
- construction activities would be an immediately apparent part of the scene and there would be views of the construction compound and the incremental construction of the footbridge, lift shaft, and central stairs in particular.

Following construction, the magnitude of change to the view is rated as **low**:

- the footbridge and lift shaft would be a dominant part of the scene, introducing larger scale infrastructure, including the centrally located entry stairs
- these built elements would be seen by rail customers that would expect to see such infrastructure, with the new infrastructure of a larger scale in comparison to the existing station building, and hence being a large, new built element
- over time, the planned tree planting on the western and eastern sides would mature and reduce the visual contrast and perceived scale of the footbridge on each side of the railway corridor.

#### Assessed impact

Construction: The low sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate-low** level of impact.

Operation: The low sensitivity ranking, combined with the low magnitude of change post construction, would lead to an overall **low** level of impact following construction.



**FIGURE 6-2: VIEWPOINT 1 (VP1): EXISTING VIEW FROM EASTERN SIDE OF STATION BUILDING**



**FIGURE 6-3: VIEWPOINT 1 (VP1): SIMULATED IMAGE (PHOTOMONTAGE) OF LIKELY VIEW OF PROPOSAL FROM EASTERN SIDE OF STATION BUILDING**

## 6.4 VP2: View from Rodd Street (east)

This viewpoint represents the general change to views from the eastern side, including the area of Rodd Street (east). It also represents the general changes seen from the front entrance to Birrong Boys High School. The existing view is illustrated in **Figure 6-4** and a simulated image of the Proposal in **Figure 6-5**.

### Existing view

This section of Rodd Street (east) is elevated above the railway corridor and so views of the station building are only possible when looking down, although other railway infrastructure such as the overhead lines and gantries are more visible. The brick overbridge is seen close to the north and blocks most views in that direction (to the north). Similarly, the buildings of Birrong Boys High bookend the view when looking south and prevent further views in that direction.

### Sensitivity

The sensitivity of the view toward the Proposal is **moderate**:

- the viewpoint is close to the Proposal site and there are direct views of that location with quite a high number of users, particularly associated with Birrong Boys High
- however, the existing view is typical of the surrounding residential area and bare of larger trees.

### Magnitude of change

The magnitude of change to the view during construction is rated as **moderate**:

- the area of disturbance would extend over part of the viewed area. The construction compound and more extensive works and access would be visible on the opposite, western side
- construction activities would be an immediately apparent part of the scene, with views of the incremental construction of the footbridge and lift shaft seen, with the closest views of the changes on the western side including the ramps immediately beside in closest proximity.

Following construction, the magnitude of change to the view is rated as **low**:

- the footbridge and lift shaft would be the dominant part of the scene and introduce a large built element, yet from this location the difference in height would be less apparent due to its elevated location
- the access improvements and landscaping on the eastern side would in general increase the attractiveness of this part of the station entry
- over time, the planned tree planting would mature and soften the visual contrast of the new built elements seen from this side.

### Assessed impact

Construction: The moderate sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate** level of impact.

Operation: The moderate sensitivity ranking, combined with the low magnitude of change post construction, would lead to an overall **moderate-low** level of impact following construction.



**FIGURE 6-4: VIEWPOINT 2 (VP2): EXISTING VIEW FROM RODD STREET (EAST), APPROXIMATELY 100M AWAY**



**FIGURE 6-5: VIEWPOINT 2 (VP2): SIMULATED IMAGE (PHOTOMONTAGE) OF LIKELY VIEW OF PROPOSAL FROM RODD STREET (EAST)**

## 6.5 VP3: Northern end of Hudson Parade

VP3 represents the viewpoint from in front of the existing vacant shops and takes account of the changes to the small public reserve (within railway corridor) on the eastern side. The existing view is illustrated in **Figure 6-2** and a simulated image of the Proposal in **Figure 6-7**.

### Existing view

This location is slightly lower than the ground level around the western side of the proposed footbridge. Currently, there are views towards the station building through the surrounding wire-mesh fence.

### Sensitivity

The sensitivity of the view toward the Proposal is **moderate**:

- the viewpoint is close to the station (100m) and would have direct views of the Proposal
- the affected area includes the public reserve on the eastern side, which is within the outer boundaries of the railway corridor.

### Magnitude of change

The magnitude of change to the view during construction is rated as **high**:

- the Proposal would occupy a large proportion of the area seen.
- the area of disturbance would extend over a significant portion of the viewed area and the site compound would be closest to this viewpoint.
- construction activities would be an immediately apparent part of the scene and there would be views of the incremental construction of the footbridge, lift shaft, and western ramp and stairs.

Following construction, the magnitude of change to the view is rated as **low**:

- the footbridge and lift shaft would remain a dominant part of the scene and introduce a large built element.
- the access improvements and landscaping on the western side would in general increase the attractiveness of this part of the station entry.
- over time, the planned tree planting would mature and reduce the visual contrast and perceived scale of the footbridge.

### Assessed impact

Construction: The moderate sensitivity ranking, combined with the high magnitude of change, leads to an overall **high-moderate** level of impact.

Operation: The moderate sensitivity ranking, combined with the low magnitude of change post construction, would lead to an overall **moderate-low** level of impact following construction.



**FIGURE 6-6: VIEWPOINT 3 (VP3): EXSITING VIEW FROM HUDSON PARADE (NORTH)**



**FIGURE 6-7: VIEWPOINT 3 (VP3): SIMULATED IMAGE (PHOTOMONTAGE) OF LIKELY VIEW OF PROPOSAL FROM HUDSON PARADE (NORTH)**

## 6.6 VP4: View from corner of Avalon Street and Magdella Street

VP4 represents the public and private views that would be available from close proximity to the north-east, taking in the corner of Avalon Street and Magdella Street and nearby viewing locations. The existing view is illustrated in **Figure 6-8** and a simulated image of the Proposal in **Figure 6-9**.

### Existing view

This location is slightly higher than the western side of the proposed footbridge, and so has a slightly elevated viewing position.

Currently there are filtered views towards the station building which is some 100m away. Breaking up these views are some taller shrubs and a number of trees within the railway corridor.

### Sensitivity

The sensitivity of the view toward the Proposal is **moderate**:

- the viewpoint is close to the station (100m) and slightly elevated above the Proposal site (approximately 60m from the footbridge)
- the location of the Proposal lies between the station building and this viewpoint however, views of the station and carpark are limited by existing vegetation.

### Magnitude of change

The magnitude of change to the view during construction is rated as **moderate**:

- the Proposal would occupy a large proportion of the area seen.
- the area of disturbance would extend over a significant portion of the viewed area.
- construction activities would be an immediately apparent part of the scene and there would be views of the construction compound and the incremental construction of the footbridge, lift shaft, and western ramp and stairs.

Following construction, the magnitude of change to the view is rated as **low**:

- the footbridge and lift shaft would remain a dominant part of the scene and introduce a large built element.
- the access improvements and landscaping on the western side would in general increase the attractiveness of this part of the station entry.
- over time, the planned tree planting would mature and reduce the visual contrast and perceived scale of the footbridge.

### Assessed impact

Construction: The moderate sensitivity ranking, combined with the moderate magnitude of change, leads to an overall **moderate** level of impact.

Operation: The moderate sensitivity ranking, combined with the low magnitude of change post construction, would lead to an overall **moderate-low** level of impact following construction.





**FIGURE 6-8: VIEWPOINT 4 (VP4): EXISTING VIEW FROM CORNER OF AVALON STREET AND MAGDELLA STREET**



**FIGURE 6-9: VIEWPOINT 4 (VP4): SIMULATED IMAGE (PHOTOMONTAGE) OF LIKELY VIEW OF PROPOSAL FROM CORNER OF AVALON STREET AND MAGDELLA STREET**

## 6.7 Summary of visual impact

The assessed impact of the Proposal on views during construction and post-construction is summarised in **Table 6-1** and **Table 6-2**.

**TABLE 6-1: ASSESSMENT OF IMPACTS TO VIEWPOINTS - CONSTRUCTION**

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: View from station platform	Low	Moderate	Moderate-low
VP2: View from Rodd Street (east)	Moderate	Moderate	Moderate
VP3: View from the north of Hudson Parade	Moderate	High	High -moderate
VP4: View from corner of Avalon Street and Magdella Street	Moderate	Moderate	Moderate

**TABLE 6-2: ASSESSMENT OF IMPACTS TO VIEWPOINTS - OPERATION**

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: View from station platform	Low	Low	Low
VP2: View from Rodd Street (east)	Moderate	Low	Moderate - low
VP3: View from the north of Hudson Parade	Moderate	Low	Moderate-low
VP4: View from corner of Avalon Street and Magdella Street	Moderate	Low	Moderate-low

# 7. Mitigation measures

This section describes current positive design measures of the Proposal and additional design measures that could be incorporated to improve the visual outcome.

## 7.1 Positive visual attributes of the Proposal

The Proposal has a number of characteristics which reduce its potential landscape character and visual impacts:

- the location of a single lift shaft (i.e. the tallest element) has avoided the greater change that would occur with an additional lift shaft on the western side rather than the proposed ramps and stairs. That design measure means that there is less vesical contrast with the surrounding residential character and scale
- the proposed new entrance and landscaping at the station entrance would increase the station's attractiveness and enhance local landscape character
- the Proposal retains the visual permeability of the station, with views still possible across the railway corridor
- all lighting would be designed and installed in accordance with the requirements of AS4282 Control of the Obtrusive Effects of Outdoor Lighting
- unnecessary loss or damage to vegetation would be avoided by protecting trees prior to construction and/or trimming vegetation (if necessary) to avoid total removal.
- any existing and future graffiti would be removed in accordance with TfNSW's standard requirements.

## 7.2 Additional measures

Birrong Station has a small station building which has an attractive, older style appearance. It is important proposed changes are designed to be as visually-sympathetic to the small scale of the station building and to the station's setting as possible.

Particular attention should be given to:

- ensuring that the design of the new structure is as visually lightweight as possible (including minimising the height of the lift overrun and the overall lift shaft width, and reducing the height of the protection screens to as low as possible)
- ensuring that the treatment of the public spaces on both sides of the footbridge are carefully designed to reduce the impact to landscape character on the associated public reserves, particularly the location of ramps, handrails and proposed landscaping and street trees.

In addition to the above, to improve the visual outcomes of the Proposal, the following design measures are suggested:

- where visible to residents or in direct public view, screen the work site and compounds by covering temporary construction zone fencing with shade cloth (or similar material) to minimise visual impacts.
- ensure a safe pathway, separate from the vehicular driveway, is provided between the Rodd Street station entrance and Birrong Boys High.
- consider landscape opportunities to improve the appearance of the existing eastern embankment if feasible.
- new tree planting (already proposed) should include canopy trees (where possible) to filter views to the railway corridor for the closest residents and from surrounding public viewpoints and provide amenity benefits such as shade and landscape improvement.

# 8. Key findings & conclusion

## Impact to landscape character

The existing landscape character is dominated by the surrounding low density residential, modest-sized station building, gently sloping landform and a relatively low tree cover.

Birrong Station has a small station building which has an attractive, traditional appearance. It is important proposed changes are designed to be as visually-sympathetic to the small scale of the station building and to the station's setting as far as possible. The landscape surrounding the station is typical of surrounding residential areas, including having with a relatively low tree cover.

During construction, local landscape character would be temporarily reduced by construction activities. However, following construction, the proposed upgrade would enhance the station precinct accessibility and attractiveness and the proposed landscaping would improve the general amenity. The impact to local landscape character was assessed as moderate during construction, and low following construction.

## Visibility and visual impact to surrounding viewpoints

Direct views of the Proposal would be possible from:

- public views from local roads (Hudson Parade, Rodd Street (west and east), Avalon Street and Magdella Street), Teresa Street and the public reserves to the west and east
- private views from adjacent residential properties (on Hudson Parade, Rodd Street (west and east), Avalon Street and Magdella Street)
- views from other potentially sensitive viewing locations (such as the Birrong Boys High School and Birrong Station platform).

Four future representative viewpoints of the Proposal were identified to assess the potential visual impact:

- VP1: View from station platform
- VP2: View from Rodd Street (east) (also represent view from entrance of Birrong Boys High school)
- VP3: View from the north of Hudson Parade
- VP4: View from corner of Avalon Street and Magdella Street.

The highest change would occur during the construction period. Some viewpoints would be in close proximity to the construction zone and construction activities would be an immediately apparent (and unavoidable) part of the scene. The visual impact during construction was assessed as high-moderate from one viewpoint (VP3: View from the north of Hudson Parade) and moderate for the remainder.

The visual impact following construction was assessed as moderate-low from three viewpoints (VP2: View from Rodd Street (east), VP3: View from the north of Hudson Parade and VP4: View from corner of Avalon Street and Magdella Street). The impact to the remaining viewpoint would be low (VP1: View from station platform).

### **Measures to consider during the detailed design phase**

Birrong Station has a small station building which has an attractive, traditional appearance. In response the scale of the proposed changes should be as visually-sympathetic to it and the station setting as possible.

Recommendations include: that the new structure be as visually lightweight as possible (including minimising the height of the lift overrun and the overall lift shaft width) and designing public spaces on both sides of the footbridge to be as attractive as possible.

### **Overall conclusion**

Overall, when operational, the station precinct would look substantially different due to the large built structure that the footbridge and lift shaft would introduce to it, and this would contrast with the scale of the existing station building. However, this change would occur within a landscape setting that presently is typical of surrounding low-density residential areas with an associated relatively low sensitivity to such change.

The proposed new trees and other landscaping would serve to reduce this visual contrast over time and soften the overall look of these new elements. Instigation of the recommended design measures (above) would improve the final design outcome.

## 9. References

Bankstown Council (April 2016). *North Central Local Area Plan*.

Roads and Maritime Services (December 2018) *Guideline for Landscape Character and Visual Impact Assessment, Environmental Impact Assessment Practice Note EIA-N04*.

Transport for NSW (February 2018) *Birrong Station Upgrade Preliminary Environmental Assessment - Transport Access Program*.

Bankstown Council (2015). *Bankstown Local Environmental Plan (LEP), 2015*.

Transport for NSW (22 July 2019) *Vegetation Management (Protection and Removal) Guideline*.

Transport for NSW (23 August 2019) *Vegetation Offset Guide*.

Transport for NSW (23 August 2019) *Weed Management and Disposal Guide*.

Umwelt (Australia) Pty Limited (on behalf of Transport for NSW) (October 2019). *Birrong Station Upgrade – Biodiversity Assessment*.

## Appendix A: Criteria for Assessment

**TABLE A -1: SENSITIVITY RANKING CRITERIA**

Sensitivity	Criteria (general guide only, some or all may apply)
High	<ul style="list-style-type: none"> <li>• Landscape or heritage of high to very high conservation value or</li> <li>• Public views with a high to very high number of users or</li> <li>• Viewers are in close proximity or</li> <li>• The site has a high visual prominence or</li> <li>• Viewers have opportunity for prolonged or stationary views</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>• Landscape or heritage of moderate conservation value or</li> <li>• Public views with a moderate to high number of viewers or</li> <li>• Viewers are in close or moderate proximity or</li> <li>• The site is visually prominent or</li> <li>• Private views in close proximity with mostly unimpeded views</li> </ul>
Low	<ul style="list-style-type: none"> <li>• Some landscape or heritage conservation value but of lower visual value or</li> <li>• Public views for a small number of users or</li> <li>• Viewers at a more distant proximity and</li> <li>• Site is less visually prominent</li> <li>• Viewers have short-time period to view / transitory views</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• Landscape has no or very little heritage or visual value</li> <li>• Very few people can view</li> <li>• Viewers are long distance from site</li> <li>• Site is not visually prominent</li> <li>• Viewers have short time period to view or no private/stationary views</li> </ul>

**TABLE A-2: MAGNITUDE OF CHANGE RANKING CRITERIA**

Magnitude	Criteria (general guide only, some or all may apply)
High	<ul style="list-style-type: none"> <li>• Significant size and extent of area affected</li> <li>• Permanent and irreversible change</li> <li>• Immediately apparent part of the scene</li> <li>• Significantly contrasts in scale and character (either existing or planned)</li> </ul>
Moderate	<ul style="list-style-type: none"> <li>• Moderate in size and extent of area affected</li> <li>• Temporary, or if permanent, effects reduced over time</li> <li>• A dominant feature of the scene</li> <li>• Contrasts in scale and character (either existing or planned)</li> </ul>
Low	<ul style="list-style-type: none"> <li>• Small in size and extent of area</li> <li>• Temporary, or if permanent, visual effects able to be reduced substantially</li> <li>• A visible and recognisable new element within the overall scene, yet one that is relatively compatible with the surrounding character.</li> </ul>
Negligible	<ul style="list-style-type: none"> <li>• The Proposal constitutes only a minor component of the wider view</li> <li>• Might be missed by the casual observer or receptor.</li> </ul>



## Appendix B: Photomontages (simulated images of Proposal)

Figure 7-3  
VP1 - PHOTOMONTAGE POST CONSTRUCTION



Camera viewpoint	VP1
Camera	Nikon D610 full frame SLR
Focal length	50mm
Camera RL	42.71m
Camera coordinates	317289.10, 6247927.34
Date and time	02/10/19 13:15

Figure 7-5  
VP2 - PHOTOMONTAGE POST CONSTRUCTION



Camera viewpoint	VP2
Camera	Nikon D610 full frame SLR
Focal length	50mm
Camera RL	47.10m
Camera coordinates	317380.26, 6247945.34
Date and time	02/10/19 12:45

Figure 7-7  
VP3 - PHOTOMONTAGE POST CONSTRUCTION



Camera viewpoint	VP3
Camera	Nikon D610 full frame SLR
Focal length	50mm
Camera RL	40.81m
Camera coordinates	317253.23, 6247935.87
Date and time	02/10/19 13:40

Figure 7-9  
VP4 - PHOTOMONTAGE POST CONSTRUCTION



Camera viewpoint	VP4
Camera	Nikon D610 full frame SLR
Focal length	50mm
Camera RL	44.68m
Camera coordinates	317270.94, 6248033.66
Date and time	02/10/19 12:35