



East Hills Station Upgrade

Landscape Character and Visual Impact Assessment

EAST HILLS STATION UPGRADE

LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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1 Introduction

1.1 Purpose

Envisage Consulting was commissioned by Cardno (NSW/ACT) Pty Ltd (Cardno) on behalf of Transport for New South Wales (TfNSW) to assess the landscape character and visual impacts of the proposed East Hills Station Upgrade (the Proposal).

This specialist assessment forms part of the Proposal's Review of Environmental Factors (REF) prepared to assess the impacts of the Proposal, in the considerations for determination under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.2 Overview of the Proposal

The Proposal involves an upgrade of East Hills Station as part of the Transport Access Program (TAP) to improve accessibility and amenities for customers. The Proposal includes the following key elements:

- construction of two new lifts to provide access between the existing station underpass and platforms
- upgrade of the existing station entrance on Park Road including:
 - floor regrading and modifications to the entrance with readjustments to bollards and bicycle hoops
 - upgrade of the existing entry ramp and stairs including upgrade of handrails stair nosings and tactiles to be compliant with Australian standards and guidelines
- modifications to the commuter car park along Park Road to allow for the upgrade of the two accessible parking spaces
- provision of a new kiss and ride space along Park Road adjacent to the taxi zone
- upgrades of the existing station entrance on Thompson Lane including:
 - provision of an accessible pathway between the station underpass, Thompson Lane and Maclaurin Avenue by regrading and modifications to the existing path
 - provision of a new rest area along the accessible pathway
- internal station building work including:
 - reconfiguration of the existing customer toilet facilities to provide one (1) new unisex Family Accessible Toilet (FAT), one (1) new male ambulant toilet and one (1) new female ambulant toilet
- other minor building modifications that may be required to accommodate new or upgraded electrical equipment including a

main switchboard, new or upgraded station communications equipment and other station services

- ancillary work including adjustments to lighting, relocation or replacement of existing customer facilities (platform seating, bins, payphone, Opal card readers, fencing) and improvement to station systems including additional CCTV cameras, hearing loops and wayfinding signage.

A detailed project description is provided in SECTION 3.

1.3 Brief Site description

East Hills Station is located in the south-western Sydney suburb of East Hills close to the Georges River, and within the City of Canterbury Bankstown Local Government Area (LGA).

The railway corridor traverses the centre of East Hills, with the station just north of the local East Hills shops in an elevated position. The station consists of a central island platform and eastern platform, with entries from both sides and commuter car parking on the western side. The location is shown in FIGURE 1-1.



FIGURE 1-1: PROPOSAL LOCATION

1.4 Report format

The report is set out as follows:

- SECTION 2 Defines the methodology for the assessment
- SECTION 3 Describes the Proposal and its main visual changes
- SECTION 4 Describes the site context and landscape character impact
- SECTION 5 Presents the assessment of visual impact
- SECTION 6 Describes measures to improve visual outcome
- SECTION 7 Presents a summary of key findings and conclusion.

2 Assessment methodology

This section outlines the assessment methodology which is based on TfNSW's *Guideline for Landscape Character and Visual Impact Assessment, Environmental Impact Assessment Practice Note EIA-N04, 2020* (referred to hereafter as the 'Guideline').

2.1 Assessments

Two assessments are presented in the Guideline to improve design outcomes:

- 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 project 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 project on people's views.

The method used 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. These terms are defined in 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.
- Magnitude: refers to the physical scale of a project, how distant it is and the contrast it presents to the existing condition.

The combination of sensitivity and magnitude provide the rating of the landscape character impact for a project, 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

Landscape character assessment

The Guideline 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 project)
3. determine the magnitude of change
4. assess landscape character impact (based on both the sensitivity of the character zone and magnitude of the Proposal in that zone).

The assessment of landscape character impact is provided at SECTION 4.

Visual impact assessment

The Guideline 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).

The assessment of visual impact is provided at SECTION 5.

2.2 Field survey

The site was inspected on 18 August 2020. The inspection included a walk-over of the station precinct and surrounding streets. The day was dry and sunny. An approximate viewshed (the area within which the Proposal would be seen at eye level above ground¹) was determined on site and potentially sensitive viewpoints identified. Private property was not accessed, with potential private viewpoints assessed from the nearest publicly accessible location.

2.3 Photography

Photographs included in the impact assessment section of this report have been taken with a full frame sensor camera and 50mm focal length lens using Global Positioning System (GPS) location data. The 50mm focal length is generally accepted as closest to the view perceived by a human eye. Unless otherwise noted, all photographs within this report were taken by Envisage Consulting on 18 August 2020.

¹ Definition from Guideline p6

3 Proposal description

3.1 Overview of Proposal elements

The Proposal layout is illustrated in FIGURE 3-1, with detailed Proposal plans included in the Proposal REF.

The Proposal includes the following key elements:

- construction of two new lifts to provide access between the existing station underpass and platforms
- upgrade of the existing station entrance on Park Road including:
 - floor regrading and modifications to the entrance with readjustments to bollards and bicycle hoops
 - upgrade of the existing entry ramp and stairs including upgrade of handrails stair nosings and tactiles to be compliant with Australian standards and guidelines
- modifications to the commuter car park along Park Road to allow for the upgrade of the two accessible parking spaces
- provision of a new kiss and ride space along Park Road adjacent to the taxi zone
- upgrades of the existing station entrance on Thompson Lane including:
 - provision of an accessible pathway between the station underpass, Thompson Lane and Maclaurin Avenue by regrading and modifications to the existing path
 - provision of a new rest area along the accessible pathway
- internal station building work including:
 - reconfiguration of the existing customer toilet facilities to provide one (1) new unisex Family Accessible Toilet (FAT), one (1) new male ambulant toilet and one (1) new female ambulant toilet
- other minor building modifications that may be required to accommodate new or upgraded electrical equipment including a main switchboard, new or upgraded station communications equipment and other station services
- ancillary work including adjustments to lighting, relocation or replacement of existing customer facilities (platform seating, bins, payphone, Opal card readers, fencing) and improvement to station systems including additional CCTV cameras, hearing loops and wayfinding signage.

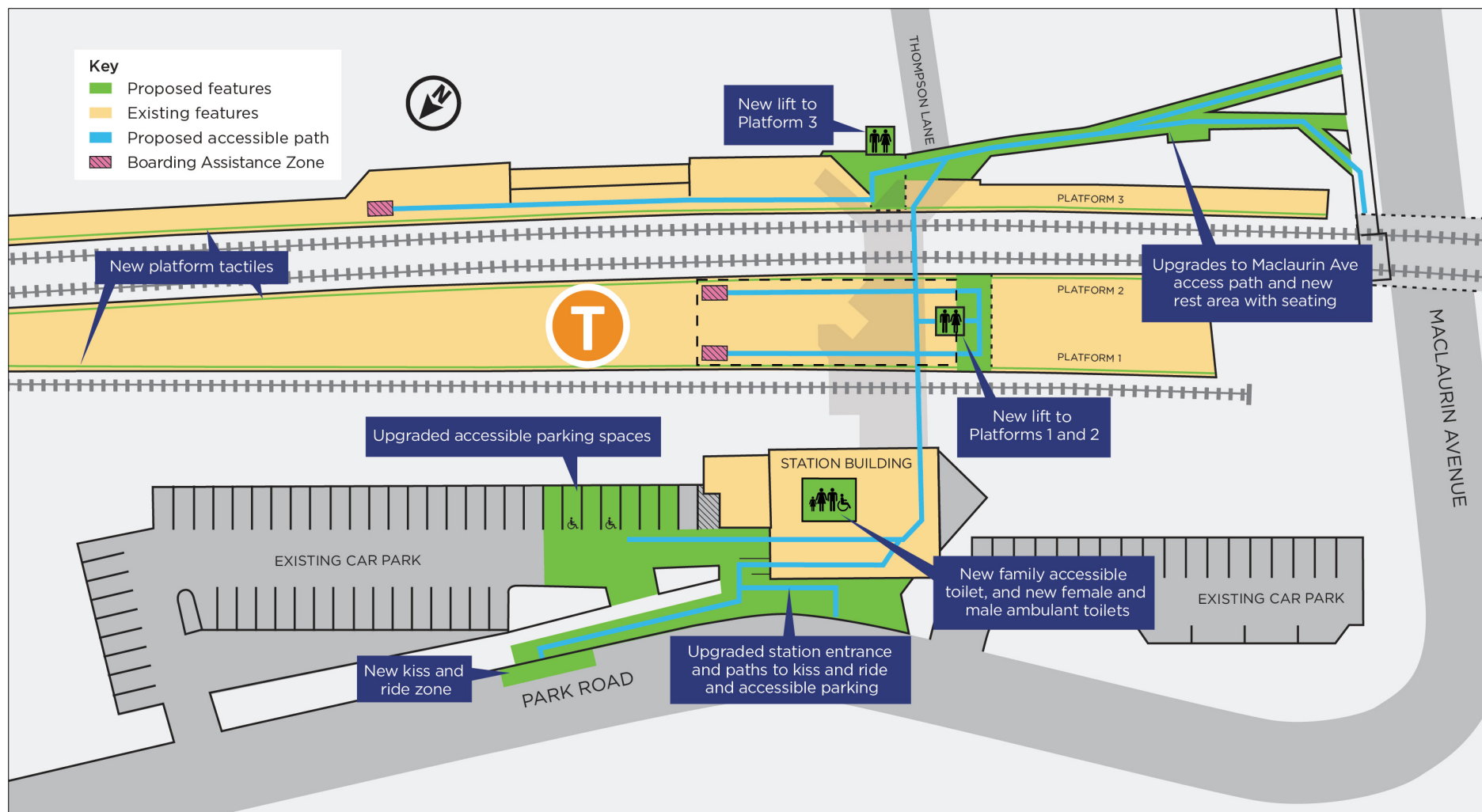


FIGURE 3-1: PROPOSAL LAYOUT²

² Provided by TfNSW

3.2 Scope of work

3.2.1 Station upgrades

The proposal work at the station to improve accessibility and customer experience would include:

- construction of a new 17 person lift (Lift 1, central lift) within the existing underpass, to access island Platform 1 and 2
- construction of a new 17 person lift (Lift 2, eastern lift) to connect the Thompson Lane entry and underpass to Platform 3
- construction of a new canopy extension over the new lift doors on Platform 1 and 2
- construction of new canopies at the lift lobbies to provide sheltered waiting space at both the platform level and street level for Lift 2
- construction of a new lift lobby and walkway at platform level linking Lift 2 to Platform 3
- provision of new hearing loops on the platforms
- removal of the existing fences in the concourse (fence separating paid and unpaid concourse areas)
- upgrades to the existing stairs between the underpass and platforms to achieve compliance
- replacement of tactiles along all platform edges and repainting of the platform safety zone
- reconfiguration of the existing customer toilet facilities to provide one (1) new unisex Family Accessible Toilet (FAT), one (1) new male ambulant toilet and one (1) new female ambulant toilet.
- replacement of water fountains on Platform 2 and in the underpass with accessible water fountains
- relocation of Opal Card readers within the underpass
- regrading of the station underpass to provide accessible paths between station amenities including
 - lifts
 - stairs
 - payphone
 - Ticket Vending Machine (Opal top up machine)
 - Opal card readers
 - food/drink vending machines
 - toilets.

3.2.2 Park Road station entrance

The proposed work to the Park Road station entry include:

- upgrades to the existing ramp and stairs at the Park Road station entrance, including extending the ramp to provide compliant gradients and landings, upgraded handrail, stair nosings and tactiles
- provision of two upgrade accessible parking spaces including new line marking, signage, bollards as required in the Park Road commuter carpark
- provision of an accessible path between the upgraded accessible parking spaces and the station; including localised regrading of the carpark and station entry, and relocation of the bike hoops and bollards within the station entry
- provision of a new Kiss and Ride parking space along Park Road located near the Taxi zone
- regrading of footpaths to provide paths connecting the station entry at street level to;
 - o Bus Stop 221313 East Hills Station, Park Road
 - o the new Kiss and Ride and taxi zone.

3.2.3 Thompson Lane station entrance

The proposed work to the Thompson Lane station entry include

- upgrades to the pathway between the station underpass, Thomson Lane and Maclaurin Avenue to provide accessible paths to Maclaurin Avenue Shops and Bus Stop 2213115 East Hills Station, Maclaurin Avenue
- provision of a new rest area along the path to Maclaurin Avenue including seating
- modifications to the barriers at the Thompson Lane underpass entrance.

3.2.4 Station building modifications

The proposed station building modification work would include:

- reconfiguration of the existing customer toilet facilities to provide one (1) new unisex Family Accessible Toilet (FAT), one (1) new male ambulant toilet and one (1) new female ambulant toilet
- other minor building modifications that may be required to accommodate new or upgraded electrical equipment including a main switchboard, new or upgraded station communications equipment and other station services.

3.2.5 Ancillary work

The following ancillary work is required as part of the upgrade:

- electrical upgrade works, which could include an upgrade to the existing transformers, main switch board and station distribution boards, and earthing/bonding provisions as required to accommodate the power requirements for the proposal (specific power requirements to be determined during detailed design)

- new stormwater drainage connections from the new lifts and canopy to the existing stormwater system
- services and utilities protection, adjustments and/or relocations to accommodate the new work
- lighting upgrades as required for the new work
- improvement to station security and communication systems, including modification to CCTV, public address system, and station passenger information systems as required for the new work.
- relocation of station furniture including but not limited to seats, boarding ramp cabinets, planter boxes, rubbish bins and lighting as required
- provision of wayfinding signage and other station signage as required for the new work
- temporary site compounds for construction team site sheds and facilities, and storage of materials and equipment near Thompson Lane. Tree removal and trimming would be required to accommodate the site compound (refer SECTION 3.3)
- provision of temporary construction and laydown areas on the platforms, in the underpass and in the commuter carparks
- temporary work (where required) to maintain access to the station.

3.2.6 Materials and finishes

Subject to detailed design, the Proposal would include the following materials and finishes for the key elements:

- lift shafts – concrete lift shaft with glazing
- platform canopies – steel canopies similar to existing platform canopies, handrails – stainless steel.

An Urban Design Plan (UDP) and/or Public Domain Plan (PDP) would be prepared by the Construction Contractor, prior to finalisation of detailed design for endorsement by TfNSW.

3.3 Effect on vegetation

The effect on vegetation is detailed in the Proposal's *Arboricultural Impact Assessment and Tree Protection Plan* (Tree Survey, 2020). In summary, the main visible impacts would be:

- Removal of one of two large Cypress trees (*Cupressus torulosa*, approximately 18m high) within TfNSW land on the eastern side the station building to allow construction access.
- The removal of two small trees (approximately 3m high) in the western car park (due to poor health).
- Branch trimming of a number of small trees mostly along the public pathway (connecting Thompson Lane station entry to Maclaurin Avenue) and of the large Peppercorn tree (*Schinus areira*) in the vacant TfNSW land on the eastern station side to allow construction access.

3.4 Construction activities

3.4.1 Work methodology

Subject to approval, construction is expected to commence in 2021 and take around 18 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.

The proposed construction activities, indicative staging and proposed construction traffic for the Proposal are fully detailed in the Proposal REF.

In summary, construction activities visible to the general public at various times would include:

- site compounds (fencing, tree protection zones, site offices, amenities, plant and material storage areas) (refer below)
- traffic control measures
- removal of three trees and trimming of a number of other trees to allow for the site compound, footpath work and lift construction
- relocating or upgrading utility / services where required
- use of a crane and piling rig
- safety barriers, lighting, and hoarding around nominated work areas
- lift constriction areas on platforms and in the underpass
- excavation, including of lift foundations
- construction of lift shaft structures and a new landing between Lift 2 (eastern lift) and Platform 3
- installation of cantilevered awnings to Lift 2 (eastern lift).

Full details of proposed construction activities are included in the Proposal REF.

3.4.2 Plant and equipment

The largest plant and equipment likely to be used during construction includes:

- | | | |
|------------------------------------|--|---|
| ▪ trucks (various types and sizes) | ▪ forklift | ▪ elevated work platform |
| ▪ mobile crane | ▪ lighting tower | ▪ bobcat |
| ▪ generators | ▪ rubber tracked excavators, piling rigs | ▪ hi-rail plant (elevated work platform/ flatbed/ hiab) |

3.4.3 Working 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

- no work on Sundays or public holidays.

Work outside of standard hours may be required occasionally at night, on weekends and during scheduled Sydney Trains rail possessions.

Full details of proposed work hours are included in the Proposal REF.

3.4.4 Ancillary facilities

A temporary construction compound would accommodate a site office, amenities, laydown and storage area for materials. An area for a construction compound has been proposed along Thompson Lane (refer FIGURE 3-2).

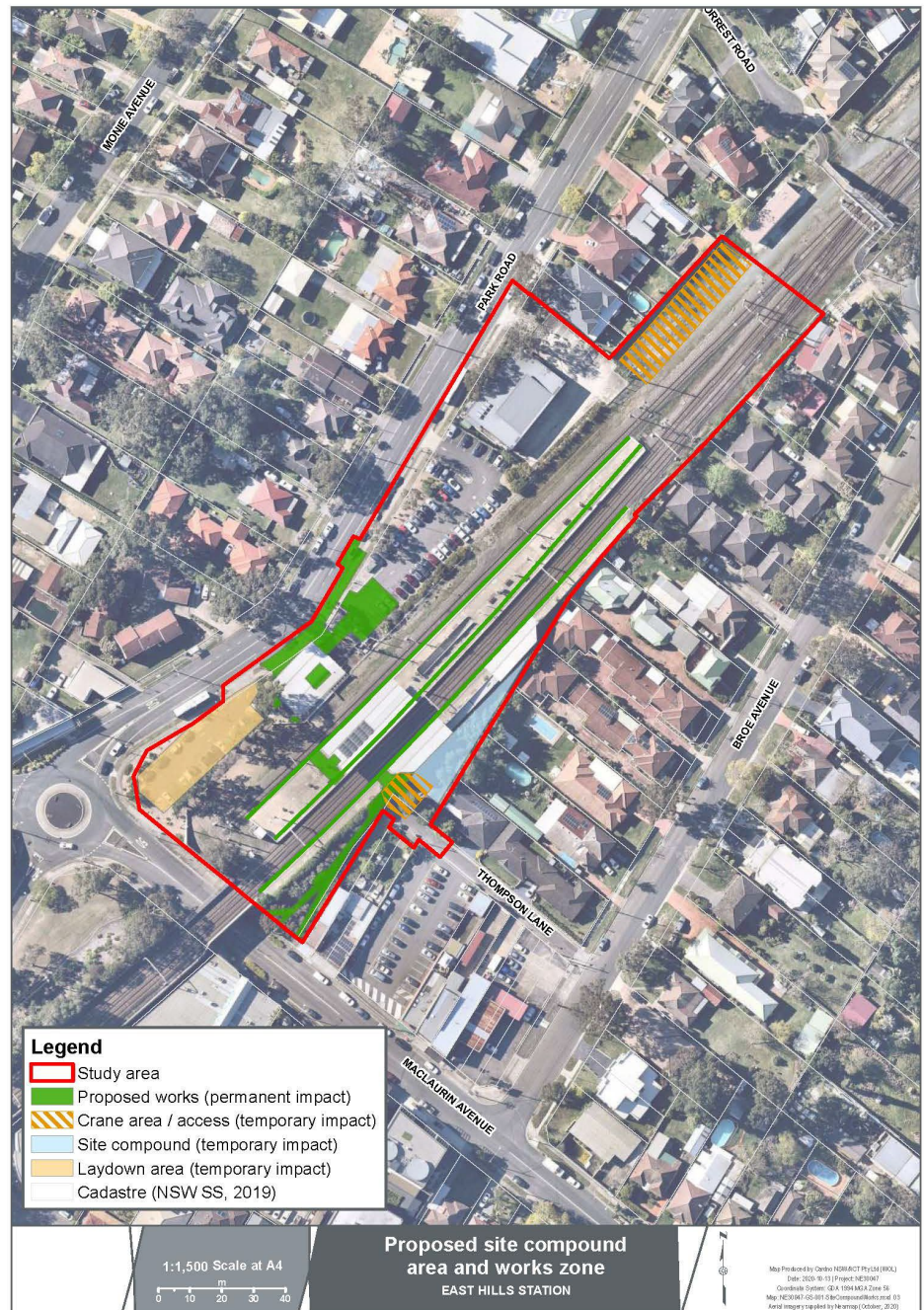


FIGURE 3-2: PROPOSED SITE COMPOUNDS AND WORK ZONE³

³ Figure provided by TfNSW

The area nominated for the compound is on land owned by TfNSW. Additionally, an area in the southern carpark on Park Lane would be used for material laydown, storage, assembly and general site support.

The area adjacent to Park Road would be utilised as a rail access point during the construction of the proposal. Impacts associated with utilising this area have been considered in the REF (refer SECTION 3 including requirements for rehabilitation).

3.5 Proposal elements visible at operation

Once the upgrading work are completed, the main Proposal elements most visible (apart from internal building work) would be:

- two new lift shafts extending approximately two metres above the existing roofline of the platform buildings
- upgraded station entries and access (e.g. new fencing, handrails, bollards and some relocated elements such as bicycle hoops, seating and other station furniture)
- at least six new trees planted to replace three trees removed during the construction phase.

FIGURE 3-3 shows an existing view towards the proposed Lift 1 (central lift) from the southern end of the central station platform. FIGURE 3-4 is a photomontage from that same viewpoint illustrating the likely look of the proposed new lifts and platform changes.



FIGURE 3-3: EXISTING VIEW FROM SOUTHERN END OF CENTRAL STATION PLATFORM



FIGURE 3-4: PREDICTED VIEW OF PROPOSAL FROM SOUTHERN END OF CENTRAL STATION PLATFORM

4 Site context and landscape character assessment

This section describes the existing site context and assesses the potential impact to landscape character (taking account of its sensitivity and predicted 'magnitude' of impact to determine the impact on landscape character).

4.1 Site context and landscape character

East Hills Station is located in the south-western Sydney suburb of East Hills close to the Georges River, within the City of Canterbury Bankstown Local Government Area (LGA). The station consists of a central island platform and eastern platform.

The context of the station, and key surrounding features, are shown in FIGURE 4-1 and described below.



FIGURE 4-1: LOCATION AND VISUAL CONTEXT

Landform

East Hills is situated on the northern side of a large bend in the Georges River. The surrounding landform is relatively flat, with the land rising only slightly from the river edge to a height of some 10m AHD (Australian Height Datum) over the East Hills area. The location is around midway along the Georges River as it flows east through southern Sydney, eventually reaching Botany Bay some 16km away.

The railway corridor traverses the centre of East Hills, with the station just north of the local East Hills shops and in an elevated position above the nearby shops and residences. The railway line continues south on an elevated embankment, bridging over both Maclaurin Avenue and Cook Crescent, before crossing over the Georges River.

FIGURE 4-2 illustrates the relatively flat landform around the station and the high amount of native vegetation in the nearby public reserves along the Georges River (seen in the background).

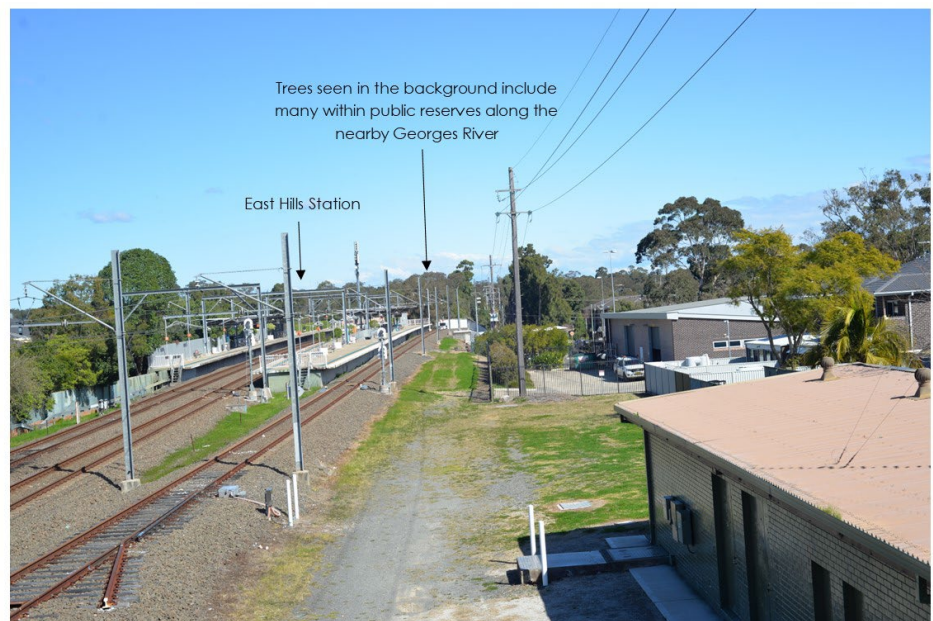


FIGURE 4-2: VIEW FROM PEDESTRIAN BRIDGE, LOOKING SOUTH TOWARDS STATION

Land use

The station is within a low-density residential area (zoned R2 under *Bankstown Local Environment Plan (BLEP), 2015*). Residences are primarily detached 1-2 storey dwellings with private properties generally well vegetated. There are numerous large public reserves in the vicinity with dense stands of tall, native trees, particularly along the Georges River. The closest such reserve is East Hills Park to the south, over which the railway line passes.

The nearby East Hills shopping area is comprised mostly of a strip of local shops and businesses up to two storeys high, including the East Hills Hotel (zoned B2 Local Centre under *BLEP*, refer FIGURE 4-3). There is a secondary commercial area on the opposite side of the railway line (zoned B1 Neighbourhood Centre), with Maclaurin Avenue bridged by the railway. The maximum height for both business zones is 14m.

There are no known heritage-listed items within the vicinity of the station.



FIGURE 4-3: EAST HILLS SHOPPING AREA

Station description and setting

East Hills Station and its associated railway infrastructure is typical of a small, suburban station in this part of southern Sydney (refer FIGURE 4-4 and FIGURE 4-5). The station is in an elevated position just north of the local East Hills shops, with the upper platform area elevated above the nearest residences.

There is a public, at-grade pedestrian access available through the lower level of the station, connecting the Thompson Lane station entry to the other station entry from Park Road. On the eastern side of the station is a public pathway connecting to the station entry (and Thompson Lane), through to MacLaurin Avenue. Commuter car parks are located on the western (Park Road) side of the station.



FIGURE 4-4: WESTERN STATION ENTRY (PARK ROAD)



FIGURE 4-5: EASTERN STATION ENTRY (THOMPSONS LANE)

FIGURE 4-6 provides images of local landscape character which illustrates characteristics dominated by a relatively flat landform, detached housing, traditional small shops, low (1-2 storey) building heights and substantial mostly native vegetation in the numerous surrounding reserves.



FIGURE 4-6: PHOTOGRAPHS SHOWING LANDSCAPE CHARACTER OF STATION AND VICINITY

4.2 Landscape character impact assessment

4.2.1 Sensitivity of landscape character

The landscape character of East Hills Station and its surroundings is typical of low-density urban environments and local stations in south-western Sydney. The common nature of that urban landscape and lack of particularly notable natural or cultural heritage characteristics mean that landscape character has a **low** sensitivity to the type of visual change proposed and would be unlikely to be markedly reduced.

4.2.2 Magnitude of change to landscape character

Construction

During construction, the Proposal would have a **moderate** magnitude of change on landscape character as:

- Construction activities would affect a relatively large proportion of the station, including a construction compound in the TfNSW land on the eastern side (off Thompson Lane) and a storage area within part of the western side car park.
- Construction would be a noticeable feature of the scene and contrast somewhat with surrounding scale and character through the appearance of construction machinery and periodic use of tall, moving cranes.
- Removal is required of one of two large Cypress trees (*Cupressus torulosa*, 18m high) on the eastern side in the railway corridor (to allow construction access). Although an exotic species, the loss of any tree of this size is regrettable in terms of removing an existing natural landscape element, leading to some loss of localised landscape character.
- The removal of two small trees (approximately 3m high) in the western car park (due to poor heath) would result in minimal impact on landscape character.
- The construction period is temporary.

Operation

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

- The new lifts would be only 2m taller (approximately) than the existing station roof structure, with the Proposal relatively compatible overall in scale and form with existing built character.
- Changes would be confined to a relatively small proportion of the wider scene.
- The proposed removal of the large Cypress tree would increase visibility to the station. Its removal would enable views of the new Lift 2 (eastern lift) from the eastern side of the station and near the eastern station entry.

- The three proposed trees to be removed would be offset in accordance with TfNSW's *Vegetation Offset Guide (2019)*, resulting in six new replacement trees planted in the station area (final locations would be identified in the design development stage) which should ultimately improve local landscape character and amenity for the public.
- Upgrading of the public path to MacLaurin Avenue, including new seating, would be a positive change.

4.2.3 Summary of landscape character impact

A summary of assessed impact on landscape character is shown in TABLE 4-1.

TABLE 4-1: ASSESSMENT OF LANDSCAPE CHARACTER IMPACTS

Phase	Sensitivity	Magnitude	Landscape character impact
Construction	Low	Moderate	Moderate-low
Operation	Low	Low	Low

5 Visual impact assessment

This section describes the likely extent of visibility of the Proposal, identifies existing viewpoints and their sensitivity to change, assesses the magnitude of change for each viewpoint, and determines a visual impact rating.

5.1 Extent of visibility

East Hills Station is visible from the nearest urban area as the railway line and platforms are situated several metres above the general ground level. Yet once beyond this immediate area (approximately 150m away), visibility is mostly obscured by buildings, trees and other structures due to the relatively flat landform. An approximate viewshed is shown in FIGURE 5-1.

5.2 Assessed viewpoints

The nearest potentially sensitive viewpoints (VPs) are from residences close to the station and public locations in nearby commercial areas. Views would also be available from some local roads and residences slightly further away.

Five public and private viewpoints (VPs) have been identified for assessment. All are within 150m and include the nearest residents and highest use public areas around the station:

- VP1: East Hills shopping area
- VP2: Park Road residences (opposite station)
- VP3: Commercial area, corner Park Road/Maclaurin Avenue
- VP4: Maclaurin Avenue, close resident
- VP5: Thompson Lane, neighbouring resident.

The viewpoints are described and assessed in TABLE 5-1 to TABLE 5-5.



FIGURE 5-1: APPROXIMATE VIEWSHED AND VIEWPOINTS IDENTIFIED FOR ASSESSMENT

TABLE 5-1: VP1 – EAST HILLS SHOPPING AREA


Viewpoint characteristics	This viewpoint represents the general views available from East Hills shops to the south of the station (eastern side of the railway line).
Sensitivity	<p>The sensitivity of views from the shopping area toward the Proposal (refer FIGURE 5-2) are rated as low as:</p> <ul style="list-style-type: none"> ▪ This is a public viewpoint from a local shopping area, yet views of the station are generally across a public car park ▪ The station is visually prominent from this viewpoint due its elevated position and can be seen behind the car park on the northern side of MacLaurin Avenue. 
Proposed view	A photomontage of the Proposal from this viewpoint is provided as FIGURE 5-3.
Magnitude of change	<p>The magnitude of change during construction is rated as low as:</p> <ul style="list-style-type: none"> ▪ Views of the temporary construction site and construction activities (at ground level) would be at least (80-100m away) and partially obscured by existing buildings and trees. If a crane is periodically used it would likely be visible. ▪ There may be some nightwork during which lights would be in operation, however, lights would be directed toward the work and away from residents. ▪ Construction would be temporary. <p>The magnitude of change at operation is rated as low as:</p> <ul style="list-style-type: none"> ▪ The two new lift shafts would slightly increase the height of built elements in the view (2m higher than the current roofline of the station), however would be generally compatible in form and scale with the existing station. ▪ Removal of the large Cypress (eastern side in railway corridor) would increase the extent of station in view and open up direct views of Lift 2 (eastern) lift shaft. ▪ Proposed work to improve access along the footpath alongside the railway would result in minimal visual change (upgrading path and some branch trimming).
Impact level	<p>CONSTRUCTION: The low sensitivity ranking, combined with a low magnitude of change, leads to an overall low level of impact during construction.</p> <p>OPERATION: The low sensitivity ranking, combined with a low magnitude of change, leads to an overall low level of impact.</p>



FIGURE 5-3: VP1 – LIKELY VIEW ONCE CONSTRUCTED

TABLE 5-2: VP2 – PARK ROAD RESIDENCES (OPPOSITE STATION)


Viewpoint characteristics	This viewpoint represents views from residences on the opposite side of Park Road to East Hills Station, with the closest house some 50m away from the proposed Lift 1 (central lift). It is also representative of public views possible from the local Park Road.
Sensitivity	 <p>FIGURE 5-4: VP2 - EXISTING VIEW</p> <p>An existing view (taken approximately 50m from the station) is shown in FIGURE 5-4.</p> <p>The sensitivity of this view toward the Proposal is rated as moderate as:</p> <ul style="list-style-type: none"> Residences are in close proximity (50-100m from the station), with private views from the front gardens and nearest rooms of 6-8 of the closest residences. Views east from Park Road (local road providing station access) are dominated by the station. The Proposal Site is visually prominent due to its elevated position.
Proposed view	A photomontage of the Proposal from this viewpoint is provided as FIGURE 5-5.
Magnitude of change	<p>The magnitude of change proposed during construction is rated as moderate as:</p> <ul style="list-style-type: none"> From this viewpoint there would be close residential views of a materials storage area in the western car park and tall mobile equipment and truck movements would be seen at various times. There may be some nightwork during which lights would be in operation, however, lights would be directed toward the work and away from residents. Construction would be temporary. <p>The magnitude of change proposed at operation is rated as low as:</p> <ul style="list-style-type: none"> There would be views of the top of Lift 1 (central lift) would be seen, yet only 2m higher than the current structure. Lift 2 would be unlikely to be seen at all. The changes would generally be compatible in form and scale to the existing station. Other upgrading work visible on this side of the station (such changes to the station entry stairs and ramps) mean minimal visual change.
Impact level	<p>CONSTRUCTION: The moderate sensitivity ranking, combined with a moderate magnitude of change, leads to an overall moderate level of impact during construction.</p> <p>OPERATION: The moderate sensitivity ranking, combined with a low magnitude of change, leads to an overall moderate-low level of impact.</p>



FIGURE 5-5: VP2 - LIKELY VIEW ONCE CONSTRUCTED

TABLE 5-3: VP3 – COMMERCIAL AREA, CORNER PARK ROAD/MACLAURIN AVENUE

Viewpoint characteristics	This viewpoint represents public views available from near the roundabout at the intersection of Park Road/Maclaurin Avenue. Views from this location are seen by road and footpath users as well as those using the small commercial area.
Sensitivity	 <p>FIGURE 5-6: VP3 - EXISTING VIEW (INDICATING APPROXIMATE LIFT OUTLINES)</p> <p>FIGURE 5-6 is a photograph of the existing viewpoint indicating the approximate location of the proposed lifts.</p> <p>The sensitivity of the view toward the Proposal area is rated as low:</p> <ul style="list-style-type: none"> From this public viewpoint there are clear views of East Hills Station approximately 100m away, with the station in an elevated position. There are moderate numbers of potential public viewers, including road and footpath users as well as those using the small commercial area. Views are obscured by existing trees near the station.
Magnitude of change	<p>The magnitude of change during construction is rated as low as:</p> <ul style="list-style-type: none"> The main construction compound would not be visible. A materials storage area, tall mobile equipment and truck movements would be seen at various times. There may be some nightwork during which lights would be in operation, however, lights would be directed toward the work and away from residents. Overall, however, the change would be minor and temporary. <p>The magnitude of change at operation is rated as low as:</p> <ul style="list-style-type: none"> The top of both lift shafts would be visible, however obscured by the existing trees in the foreground which would not be affected by the Proposal. Although taller than the existing platform structures (some 2m above), the lift shafts would be compatible with the existing station in form and scale.
Impact level	<p>CONSTRUCTION: The low sensitivity ranking, combined with a low magnitude of change, leads to an overall low level of impact.</p> <p>OPERATION: The low sensitivity ranking, combined with the low magnitude of change, leads to an overall low level of impact.</p>

TABLE 5-4: VP4 – MACLAURIN AVENUE, CLOSE RESIDENT

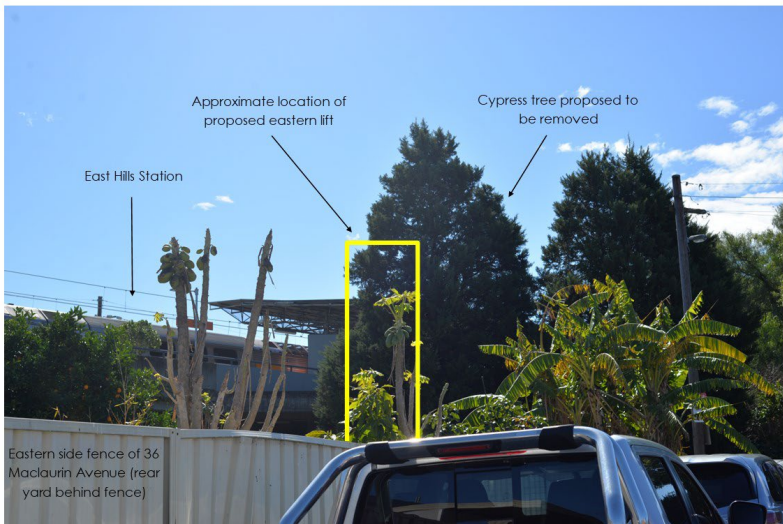

Viewpoint characteristics	This viewpoint is from one of the closest residents on the immediate eastern side of the railway line, next to the public footpath connecting MacLaurin Avenue through to the eastern station entry. The residence is at the rear of a commercial property at 36 MacLaurin Avenue and includes a second storey and balcony overlooking a rear yard in the direction of the station.
Sensitivity	<p>This private viewpoint was assessed from the nearest publicly accessible location, the neighbouring public carpark. FIGURE 5-7 is a photograph taken from within the public car park alongside the fence in the direction of the viewpoint and indicates the approximate location of the proposed Lift 2 (eastern lift).</p>  <p>FIGURE 5-7: VP4 - EXISTING VIEW (INDICATING APPROXIMATE LIFT 2 OUTLINE)</p> <p>The sensitivity of the view toward the Proposal area is rated as moderate as:</p> <ul style="list-style-type: none"> ▪ The viewpoint allows prolonged, private views of the station from an elevated position, yet those views are only available from the rear balcony and yard. ▪ The station currently dominates the view due to its close proximity (10m from rear fence on property boundary). ▪ The existing Cypress trees partially screen the eastern side of the station.
Magnitude of change	<p>The magnitude of change during construction is rated as moderate as:</p> <ul style="list-style-type: none"> ▪ Views of the temporary construction site and construction activities (likely featuring tall mobile equipment and truck movement) would be within close proximity. ▪ Removal of one of two large Cypress trees (18m high to allow construction access) would reduce screening of the station and increase the proportion of station within the view. ▪ There may be some nightwork during which lights would be in operation, however, lights would be directed toward the work and away from residents. <p>In addition to the changes indicated in FIGURE 5-7, the view would be similar (yet closer) to that shown for VP1 in FIGURE 5-3. The magnitude of change at operation is rated as low as:</p> <ul style="list-style-type: none"> ▪ The station already dominates the views from this residence at the rear of this commercial property. ▪ The two new lift shafts would be slightly taller built elements in the view (2m higher than the current roofline of the station), with the Lift 2 (eastern lift) visible, yet generally compatible in form and scale with the existing station. ▪ Removal of the large Cypress (eastern side in railway corridor) would increase the extent of station seen and allow direct views of Lift 2 (eastern lift).
Impact level	<p>CONSTRUCTION: The moderate sensitivity ranking, combined with a moderate magnitude of change, leads to an overall moderate level of impact during construction.</p> <p>OPERATION: The moderate sensitivity ranking, combined with a low magnitude of change, leads to an overall moderate-low level of impact.</p>

TABLE 5-5: VP5 – THOMPSON LANE, NEIGHBOURING RESIDENT

Viewpoint characteristics	This viewpoint is from the neighbouring residence on the immediate eastern side of the railway adjacent to the TfNSW vacant land.
Sensitivity	<p>The side of this single storey house faces towards the TfNSW vacant land, separated by a solid fence. Views from the residence toward the station are very close (approximately 10m away), with the tall concrete station walls the closest element. An existing large Peppercorn tree in the TfNSW vacant land provides substantial screening of the station from this viewpoint, with the two large Cypress trees also partially screening station views. FIGURE 5-8 shows the area in Thompson Lane in front of the property (front brick wall of property to right).</p>  <p>FIGURE 5-8: VP5 - EXISTING VIEW IN FRONT OF NEIGHBOURING RESIDENCE</p> <p>The sensitivity of the view toward the Proposal area is rated as moderate as:</p> <ul style="list-style-type: none"> ▪ The private residential viewpoint allows for very close views of the station. ▪ The Peppercorn tree partially screens station views, particularly from the rear yard. ▪ The position of the residence, side-on to the station (separated by a solid fence), means that views in the direction of the Proposal are not the most prevalent views from the property.
Magnitude of change	<p>The magnitude of change during construction is rated as moderate as:</p> <ul style="list-style-type: none"> ▪ Views of the temporary construction site and construction activities (likely featuring tall mobile equipment and truck movement) would be within close proximity. ▪ Construction activity would be a close and dominant feature if looking in the direction of the station. ▪ Construction is temporary. <p>The magnitude of change at operation is rated as low as:</p> <ul style="list-style-type: none"> ▪ The Lift 2 (eastern lift) would be in very close proximity (within 10m, that being approximately 3m closer than currently), however, only seen from the side windows of this residence and only increasing height by approximately 2m. ▪ From the rear yard the Peppercorn tree (in the vacant TfNSW land) would be trimmed but continue to largely screen views. ▪ The proposed removal of one of two large Cypress trees (tree to west) would slightly increase the extent of view to the station (and include the new lift), however, the remaining Cypress tree is closer to the viewpoint and would continue to obscure most of the view in that direction.
Impact level	<p>CONSTRUCTION: The moderate sensitivity ranking, combined with the moderate magnitude of change, leads to an overall moderate level of impact during construction.</p> <p>OPERATION: The moderate sensitivity ranking, combined with a low magnitude of change, leads to an overall moderate-low level of impact.</p>

5.3 Summary of visual impact to identified viewpoints

The Proposal's assessed impact to identified viewpoints is summarised in TABLE 5-6 and TABLE 5-7.

TABLE 5-6: ASSESSMENT OF VISUAL IMPACTS TO VIEWPOINTS – CONSTRUCTION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: East Hills shopping area	Low	Low	Low
VP2: Park Road residences (opposite station)	Moderate	Moderate	Moderate
VP3: Commercial area, corner Park Road/Maclaurin Avenue	Low	Low	Low
VP4: Maclaurin Avenue, close resident	Moderate	Moderate	Moderate
VP5: Thompson Lane, neighbouring resident	Moderate	Moderate	Moderate

TABLE 5-7: ASSESSMENT OF VISUAL IMPACTS TO VIEWPOINTS – OPERATION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: East Hills shopping area	Low	Low	Low
VP2: Park Road residences (opposite station)	Moderate	Low	Moderate-low
VP3: Commercial area, corner Park Road/Maclaurin Avenue	Low	Low	Low
VP4: Maclaurin Avenue, close resident	Moderate	Low	Moderate-low
VP5: Thompson Lane, neighbouring resident	Moderate	Low	Moderate-low

6 Mitigation

This section describes the positive design measures of the Proposal and additional measures that are recommended to improve the visual outcome.

6.1 Current mitigation measures

The Proposal incorporates the following mitigation measures:

- Unnecessary loss or damage to vegetation would be avoided by protecting trees prior to construction.
- All lighting would be designed and installed in accordance with *AS4282 Control of the Obtrusive Effects of Outdoor Lighting*.
- Any existing and future graffiti would be removed in accordance with TfNSW's standard requirements.
- An Urban Design Plan (UDP) and Public Domain Plan (PDP) would be prepared by the Contractor, in consultation with the Canterbury-Bankstown City Council, and submitted to TfNSW for endorsement by the Precincts and Urban Design teams, prior to finalisation of the detailed design.
- Trees to be removed would be offset in accordance with Transport for NSW Vegetation Offset Guide (2019). Offset planting would be prioritised in areas to manage visual impacts.

6.2 Recommended additional mitigation measures

In addition, the following measures are recommended to improve the visual outcome are:

1. To improve customer experience and amenity:
 - a) Advise City of Canterbury Bankstown Council of the planned upgrade as there may be opportunities for Council to coordinate landscape improvements such as additional tree planting near the station.
 - b) It is recommended that the replacement tree planting (estimated to be six trees) consist mostly of trees of a mature height and form to ultimately provide shade.
2. Reduce visual clutter by minimising new fencing and signage.
3. Ensure selected colours complement the station, especially the lift shafts.
4. Further investigation of construction methods that may allow for the retention of the large Cypress tree on the eastern side of the station would be undertaken. The tree has been identified for removal to provide for access during construction and although exotic is a natural element that contributes to visual screening of the station from the east and contributes to local amenity.

7 Key findings and conclusion

The Proposal would improve accessibility at East Hills Station by installing two lifts and upgrading other facilities such as footpaths and the existing entry ramp and stairs on the western side of the station.

The lifts would be the most notable visual change as these would be approximately two metres taller than the existing platform roofline. One large Cypress tree would be removed on the eastern side of the station (to allow for the lift construction), and two small trees in poor condition would be removed. A number of other trees require branch trimming, including some small trees along the public pathway connecting to Maclaurin Avenue, and a large Peppercorn Tree in the vacant TfNSW land.

The Proposal incorporates a number of positive characteristics that reduce its potential landscape character and visual impacts, including:

- The design of the Proposal is relatively compatible with the existing station in scale and form.
- The largest Proposal elements (the two lift shafts) are only two metres taller than the tallest existing built elements at the station and are relatively small components.
- Upgrading of the public path to Maclaurin Avenue, including new seating.

Two assessments were conducted to determine the level of visual impact of the Proposal: impact on landscape character and impact to viewpoints.

Impact on landscape character

During construction, local character would be temporarily affected by the introduction of large, moving equipment, and some tree removal. Following construction, the station would be slightly more visible from the east due to the loss of a Cypress tree. The new lifts would slightly increase the station's prominence, yet the predominant landscape characteristics of the surroundings would not be adversely affected. A summary of impact to landscape character is provided in TABLE 7-1.

TABLE 7-1: SUMMARY OF LANDSCAPE CHARACTER IMPACTS

Phase	Sensitivity	Magnitude	Landscape character impact
Construction	Low	Moderate	Moderate-low
Operation	Low	Low	Low

Impact to views

Five potentially sensitive viewpoints were identified for assessment within the relatively limited visual catchment of the Proposal area. Those viewpoints include the nearest residents and public areas with the highest use near the station.

During the temporary construction period, tall mobile equipment and construction activities would be very close to some residences (within approximately 10-30m of the nearest residents east of the station (VP4 and VP5) and on opposite side of Park Road (VP2)). From these viewpoints, views of construction activity would be prominent and unavoidable leading to a moderate temporary impact. Views of construction activity would be less prominent from viewpoints located further from the construction zone. The assessed impact on views during construction is summarised in TABLE 7-2.

TABLE 7-2: ASSESSMENT OF IMPACTS TO VIEWPOINTS – CONSTRUCTION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: East Hills shopping area	Low	Low	Low
VP2: Park Road residences (opposite station)	Moderate	Moderate	Moderate
VP3: Commercial area, corner Park Road/Maclaurin Avenue	Low	Low	Low
VP4: Maclaurin Avenue, close resident	Moderate	Moderate	Moderate
VP5: Thompson Lane, neighbouring resident	Moderate	Moderate	Moderate

Following construction, the station would be slightly more visible from the eastern side (nearest residents (VP4 and VP5) and East Hill shops (VP1)), due to the proposed Lift 2 (eastern lift) and removal of a nearby Cypress tree. Views of the western side of the station (VP 2 and VP3) would notice less change, with only the upper parts of the two lifts visible. Overall, there would be no more than a predicted moderate-low impact to surrounding viewpoints during operation. The assessed impact on views during operation is summarised in TABLE 7-3.

TABLE 7-3: ASSESSMENT OF IMPACTS TO VIEWPOINTS – OPERATION

Viewpoint	Sensitivity	Magnitude	Assessed visual impact
VP1: East Hills shopping area	Low	Low	Low
VP2: Park Road residences (opposite station)	Moderate	Low	Moderate-low
VP3: Commercial area, corner Park Road/Maclaurin Avenue	Low	Low	Low
VP4: Maclaurin Avenue, close resident	Moderate	Low	Moderate-low
VP5: Thompson Lane, neighbouring resident	Moderate	Low	Moderate-low

Conclusion

The Proposal would result in temporary visual impact during construction of a relatively moderate nature.

Once constructed, the Proposal would be compatible with the existing station in scale and form. Over time, replacement trees (to offset trees removed) would improve local landscape character and amenity within the vicinity of the station. The Proposal would occupy a relatively small proportion of the wider view and be absorbed into the visual form and scale of East Hills Station.

8 References

Transport for NSW (2020). *Guideline for Landscape Character and Visual Impact Assessment, Environmental Impact Assessment Practice Note EIA-N04*

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

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

Tree Survey (2020). *Arboricultural Impact Assessment and Tree Protection Plan - East Hills Station Upgrade Transport Access Program (TAP).*