

Edgecliff Railway Station Upgrade

Statement of Heritage Impact



Edgecliff Railway Station Upgrade

Statement of Heritage Impact

Client: Transport for NSW

ABN: 18 804 239 602

Prepared by

AECOM Australia Pty Ltd

Level 8, 540 Wickham Street, PO Box 1307, Fortitude Valley QLD 4006, Australia
T +61 7 3553 2000 F +61 7 3553 2050 www.aecom.com
ABN 20 093 846 925

16-Nov-2017

Job No.: 60549167

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 AS/NZS4801 and OHSAS18001.

© AECOM Australia Pty Ltd (AECOM). All rights reserved.

AECOM has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. No other party should rely on this document without the prior written consent of AECOM. AECOM undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. This document has been prepared based on the Client's description of its requirements and AECOM's experience, having regard to assumptions that AECOM can reasonably be expected to make in accordance with sound professional principles. AECOM may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified. Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

Quality Information

Document Edgecliff Railway Station Upgrade

Ref 60549167

Date 16-Nov-2017

Prepared by Dr Kate Quirk

Reviewed by Luke Kirkwood

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
1	04-Oct-2015	Draft	Luke Kirkwood Principal Heritage Advisor	
2	06-Oct-2017	For Issue	Luke Kirkwood Principal Heritage Advisor	
3	02-Nov-2017	Response to client comments	Luke Kirkwood Principal Heritage Advisor	
4	16-Nov-2017	Response to client comments	Luke Kirkwood Principal Heritage Advisor	

Table of Contents

Executive Summary		i
1.0	Introduction	1
	1.1 Project Background	1
	1.2 This Report	2
	1.3 Site Identification	2
2.0	Legislative Context	4
	2.1 Introduction	4
	2.2 Commonwealth Legislation	4
	2.2.1 Environment Protection and Biodiversity Conservation Act 1999	4
	2.2.2 Disability Discrimination Act 1992	4
	2.3 State Legislation	4
	2.3.1 Environmental Planning and Assessment Act 1979	4
	2.3.2 State Environmental Planning Policy (Infrastructure) 2007	4
	2.3.3 The Heritage Act 1977	5
	2.4 Local Government	5
	2.4.1 Woollahra Local Environmental Plan 2014	5
3.0	Historical Context	6
	3.1 Eastern Suburbs Railway and Edgecliff Station	6
	3.2 Historical Themes	9
4.0	Physical Description	10
	4.1 General Location	10
	4.2 Edgecliff Railway Station	10
	4.2.1 Bus interchange	10
	4.2.2 Gallery level	11
	4.2.3 Concourse level	11
	4.2.4 Platform level	12
5.0	Significance Assessment	15
	5.1 Introduction	15
	5.2 Significance Assessment	16
	5.3 Comparative Analysis	17
	5.4 Significance Grading	17
6.0	Proposal Description and Impacts	19
	6.1 Project Drivers	19
	6.2 Options Selection	19
	6.3 The Proposal	19
	6.3.1 Lifts	19
	6.3.2 Stairs	19
	6.3.3 Escalators	19
	6.3.4 Passing Bays	20
	6.3.5 Ticket barriers	20
	6.3.6 Access ramp	20
	6.3.7 Bin Storage	20
	6.3.8 Ancillary Works	21
	6.3.9 Moveable Heritage	21
	6.3.10 Archaeological Heritage	21
	6.4 Potential Impacts to Heritage Fabric and Significance	22
7.0	Statement of Heritage Impact	24
	7.1 Introduction	24
	7.2 Heritage Impact Assessment	24
	7.3 Statement of Heritage Impact	25
8.0	Recommendations & Mitigation Measures	26
9.0	References	28

List of Tables

Table 1	Edgecliff Station historical themes	9
Table 2	Section 170 significance assessment	16
Table 3	Grading of significance criteria (from NSW Heritage Office, 2001:11)	17
Table 4	Edgecliff Railway Station grading of fabric	17
Table 5	Assessment of impacts to the heritage significance of Edgecliff Station	22
Table 6	Summary of the nature of the impacts	25
Table 7	Proposed recommendations and mitigation measures	26

List of Figures

Figure 1	Edgecliff Station Precinct boundary	3
Figure 2	The ‘Mole’ tunnelling machine used in the construction of the Eastern Suburbs Railway (Sydney Architecture, 2015)	6
Figure 3	Original plan of Edgecliff Station Concourse level, showing shops, ticket barriers and other facilities (Plan 2296/8-E). Approximate area of proposed works shown in red.	8
Figure 4	Detail of furniture for Edgecliff Station (Plan 2296/44-C, 2296/35-D)	8
Figure 5	Edgecliff bus interchange, showing bus platforms, cycle path, roadway and roof	10
Figure 6	Edgecliff gallery showing original terrazzo floors and replacement columns and ceiling	11
Figure 7	Concourse at Edgecliff Railway Station, showing moulded plywood ceiling, terrazzo floors, aggregate render walls, and stainless steel cladding	12
Figure 8	Platform at Edgecliff Railway Station, showing moulded plywood ceiling, tile floors and aggregate render walls	13
Figure 9	Platform at Edgecliff Railway Station, showing decorative blue tile around tri-level station sign	13
Figure 10	Decorative blue tile removed for installation of fire hose	14
Figure 11	Plan of concourse indicating proposed location of lifts, escalators, stairs, bin room and gate line	20
Figure 12	Elevation showing proposed lifts, stairs, passing bays and escalators	21

Executive Summary

Transport for NSW (TfNSW) is the government agency responsible for the delivery of major transport infrastructure projects in NSW and is the proponent for the Edgecliff Station Upgrade (the 'Proposal'). The Proposal is part of the Transport Access Program (TAP) which is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

Edgecliff Railway Station is located in Woollahra Local Government Area (LGA), and is one of a number of stations constructed in the 1970s as a part of the new Eastern Suburbs Railway Line. The station is listed on the Sydney Trains Section 170 Heritage and Conservation Register (SHI No. 4801167) as an item of local significance. It has been identified as being of historical, social, technical, research and representative significance. Its aesthetic, research and representative significance is linked to the 1970s design, embodied in the terrazzo flooring, moulded plywood ceilings and blue tiled columns, which remain intact.

In 2015, AECOM undertook an options design and analysis process, during which three options were considered (AECOM Australia Pty Ltd, 2015b). Following the options analysis and a multi-criteria analysis (MCA), it was determined that Option B2 was the preferred option, and a Statement of Heritage Impact was prepared for this design (AECOM Australia Pty Ltd, 2015a). Option B2 has now been revised in response to stakeholder comments and further design development. The key features of the revised option (the Proposal) are summarised as follows:

- installation of a new lift (Lift 1) inside the paid station concourse area to provide access between the paid station concourse and the station platform
- installation of a new lift (Lift 2) outside the paid station concourse area to provide access between the station concourse, gallery level retail and the bus interchange
- replacement of the existing four escalators that provide access between the paid station concourse and station platform with new escalators
- provision of new fire stairs to provide emergency egress between the paid station concourse and the station platform
- relocation of the existing ticket gate line and the addition of gates to increase circulation space in the paid station concourse
- partial demolition of the existing platform buildings to improve pedestrian passing movement
- installation of new pedestrian crossings and pram ramps at the bus interchange to provide an accessible path of travel from the new lift to the existing bus stands
- relocation of the existing bicycle shed at the bus interchange
- provision of three new kiss and ride spaces on New McLean Street, sheltered seating and installation of a new undercover bicycle rack
- modification of the existing pedestrian access ramp on New McLean Street to provide an accessible path of travel from the station concourse to the interchange facilities
- partial removal of telephone booths to create a bin storage area
- ancillary works including adjustments to lighting, electrical upgrades, minor drainage works, new seating, improvement to station communications systems (including CCTV cameras) and wayfinding signage and installation of TGSIs.

This report provides a Statement of Heritage Impact relating to the Proposal. This Statement of Heritage Impact has determined that the proposed works will impact on fabric of heritage significance and that these impacts cannot be avoided. The insertion of the lifts and passing bays is necessary to provide disabled and pram access, as required under the *Disability Discrimination Act 1992*, while the stairs, dedicated bin store area escalator replacements are required for fire safety compliance. It is proposed that the impacts to heritage significant fabric is minimised as far as practicable and where

unavoidable, the impacts can be mitigated through detailed design to ensure the moulded plywood ceiling panels are sympathetically replaced or adapted to manage the juncture between the surrounding ceiling and the lift shaft and by making good the terrazzo flooring as necessary. As the station is listed on the Section 170 Heritage Register, consultation with the Sydney Trains Heritage Group will be undertaken.

1.0 Introduction

1.1 Project Background

Transport for NSW (TfNSW) is the government agency responsible for the delivery of major transport infrastructure projects in NSW and is the proponent for the Edgecliff Station Upgrade (the 'Proposal'). The Proposal is part of the Transport Access Program (TAP) which is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure.

Edgecliff Railway Station is located in the Woollahra Local Government Area (LGA), and is one of a number of stations constructed in the 1970s as a part of the new Eastern Suburbs Railway Line. The station is listed on the Sydney Trains Section 170 Heritage and Conservation Register (SHI No. 4801167) as an item of local significance. It has been identified as being of historical, social, technical, research and representative significance. Its aesthetic, research and representative significance is linked to the 1970s design, embodied in the terrazzo flooring, moulded plywood ceilings and blue tiled columns, which remain intact.

In 2015, AECOM undertook an options design and analysis process, during which three options were considered (AECOM Australia Pty Ltd, 2015b). Following the options analysis and a multi-criteria analysis (MCA), it was determined that Option B2 was the preferred option, and a Statement of Heritage Impact was prepared for this design (AECOM Australia Pty Ltd, 2015a). Option B2 has now been revised in response to stakeholder comments and further design development. The key features of the revised option (the Proposal) are summarised as follows:

- installation of a new lift (Lift 1) inside the paid station concourse area to provide access between the paid station concourse and the station platform
- installation of a new lift (Lift 2) outside the paid station concourse area to provide access between the station concourse, gallery level retail and the bus interchange
- replacement of the existing four escalators that provide emergency egress between the paid station concourse and station platform with new escalators
- provision of new fire stairs to provide access between the paid station concourse and the station platform
- relocation of the existing ticket gate line and the addition of gates to increase circulation space in the paid station concourse
- partial demolition of the existing platform buildings to improve pedestrian movement
- installation of new pedestrian crossings and pram ramps at the bus interchange to provide an accessible path of travel from the new lift to the existing bus stands
- relocation of the existing bicycle shed at the bus interchange
- provision of three new kiss and ride spaces on New McLean Street, sheltered seating and installation of a new undercover bicycle rack
- modification of the existing pedestrian access ramp on New McLean Street to provide an accessible path of travel from the station concourse to the interchange facilities
- partial removal of telephone booths to create a bin storage area
- ancillary works including adjustments to lighting, electrical upgrades, minor drainage works, new seating, improvement to station communications systems (including CCTV cameras) and wayfinding signage and installation of TGSIs.

This report provides a Statement of Heritage Impact for the revised Option B2 design (the Proposal).

1.2 This Report

This report has been prepared to assess the proposed upgrades to Edgecliff Station. It is structured in the following manner:

- Section 1** – Introduces the project, location and proposed works
- Section 2** – Outlines the historical context of Edgecliff and the Railway Station in particular
- Section 3** – Provides a physical description of the Edgecliff Railway Station Group
- Section 4** – Includes the assessed heritage significance of the Station Group
- Section 5** – Describes the proposed works
- Section 6** – Contains the Statement of Heritage Impact
- Section 7** – Provides recommendations and mitigation measures
- Section 8** – Includes a list of references cited in the report.

1.3 Site Identification

Edgecliff Railway Station is located on the Eastern Suburbs Line and is operated and maintained by Sydney Trains. Edgecliff is an underground station and is located beneath the Eastpoint Food Fair on the corner of New South Head Road and Ocean Street, Edgecliff (Figure 1).

Edgecliff Railway Station is located in the Woollahra Local Government Area (LGA), and is one of a number of stations constructed in the 1970s as a part of the new Eastern Suburbs Railway Line. The station is listed on the Sydney Trains Section 170 Heritage and Conservation Register (SHI No. 4801167). The listing provides no curtilage plan, due to its subterranean nature, but states '[t]he listing boundary is the whole of the underground concourse and platform system and the entrance ramps and stairs' (NSW Heritage Division, 2009).



Figure 1 Edgecliff Station Precinct boundary

2.0 Legislative Context

2.1 Introduction

A number of planning and legislative documents govern how heritage is managed in New South Wales and Australia. The following section provides an overview of the requirements under each as they apply to the Proposal.

2.2 Commonwealth Legislation

2.2.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) defines ‘environment’ as both natural and cultural environments and therefore includes Indigenous and non-Indigenous historic cultural heritage items. Under the Act protected heritage items are listed on the National Heritage List (items of significance to the nation) or the Commonwealth Heritage List (items belonging to the Commonwealth or its agencies). These two lists replaced the Register of the National Estate (RNE). The RNE has been suspended and is no longer a statutory list; however, it remains as an archive.

Under Part 9 of the EPBC Act, any action that is likely to have a significant impact on a matter of national environmental significance (known as a controlled action under the Act), may only progress with approval of the relevant minister. An action is defined as a project, development, undertaking, activity (or series of activities), or alteration. An action will also require approval if:

- It is undertaken on Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land; and,
- It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

A search of relevant heritage lists indicates that there are no places of National or Commonwealth Heritage significance in or around the station curtilage, and therefore the Proposal would not require referral under the EPBC Act with respect to heritage.

2.2.2 Disability Discrimination Act 1992

The *Disability Discrimination Act 1992* (DDA) aims to reduce, to the level possible, discrimination against people with a disability. The DDA requires that people are given equal opportunity to access public transport and buildings, including those with heritage significance. The Proposal is being undertaken, in part, to comply with the requirements of the DDA.

2.3 State Legislation

2.3.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) allows for the preparation of planning instruments to direct development within NSW. This includes Local Environment Plans (LEP), which are administered by local government, and principally determine land use and the process for development applications. LEPs usually include clauses requiring that heritage be considered during development applications and a schedule of identified heritage items be provided. The EP&A Act also allows for the creation of State Environmental Planning Policies (SEPP), as discussed in Section 2.3.2.

2.3.2 State Environmental Planning Policy (Infrastructure) 2007

SEPPs are environmental planning instruments which address planning issues within the State. SEPPs often make the Planning Minister the consent authority for the types of development they relate to. The *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP 2007) is of relevance to this Proposal.

Clause 14 of ISEPP 2007 applies to infrastructure developments carried out by, or on behalf of, a public authority if the development is likely to impact a local heritage item or heritage conservation area (other than a heritage item that is also a State heritage item). Under ISEPP 2007, a public

authority, or person/s acting on behalf of a public authority, must not carry out a development to which this clause applies, unless an assessment of the proposed impact has been prepared and forwarded to the local government of the area for comment. Comments received within 21 days must be taken into consideration.

2.3.3 The Heritage Act 1977

The *Heritage Act 1977* (as amended) was enacted to conserve the environmental heritage of New South Wales. Under Section 32, places, buildings, works, relics, moveable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the NSW State Heritage Register (SHR). Items that are assessed as having State heritage significance can be listed on the SHR by the Minister on the recommendation of the NSW Heritage Council.

Under Section 170 of the *Heritage Act 1977*, NSW Government agencies are required to maintain a register of heritage assets. The Register places obligations on the agencies, but not on non-government proponents, beyond their responsibility to assess the impact on surrounding heritage items.

A search of the NSW State Heritage Register indicates that Edgecliff Railway Station is listed on the Sydney Trains S170 Heritage and Conservation Register under State Heritage Inventory database #4801167. Under Section 170A(1)(c) Sydney Trains must provide the Heritage Division with written notice prior to demolition of any place, building or work entered in its register.

Archaeological features and deposits are afforded statutory protection by the 'relics provision'. Section 4(1) of the *Heritage Act 1977* (as amended 2009) defines a 'relic' as follows:

any deposit, artefact, object or material evidence that:

(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and

(b) is of State or local heritage significance.

The 'relics provision' requires that no archaeological relics be disturbed or destroyed without prior consent from the Heritage Council of NSW. Therefore, no ground disturbance works may proceed in areas identified as having archaeological potential without first obtaining an Excavation Permit pursuant to Section 140 of the *Heritage Act 1977*, or an Archaeological Exception under Section 139 of the *Heritage Act 1977*.

The Heritage Council must be notified of the discovery of a relic under Section 146 of the *Heritage Act 1977*.

2.4 Local Government

Edgecliff Station is located within Woollahra Local Government Area (LGA). Section 2.4.1 outlines the relevance of the Woollahra LEP to the Proposal.

2.4.1 Woollahra Local Environmental Plan 2014

The Woollahra LEP 2014 controls development in relation to heritage items within the Woollahra LGA. Principally, heritage items cannot be demolished, damaged, subdivided, structurally altered or the land excavated for archaeological purposes without consent of the Council (Clause 5.10). A Statement of Heritage Impact may be required in order to consider an application.

Schedule 5 of the LEP provides a list of identified heritage items, heritage conservation areas and archaeological sites. Edgecliff Station is not listed as a local heritage item in the LEP, and there are no items of local heritage significance in or directly adjacent to the Proposal. However there are a series of places nearby, including the Ascham school precinct (LHR239), the Former Post Office and interiors (LHR240), and House and interiors (LHR241). Each of these places is more than 30 metres from the Proposal and it is not anticipated that they will be impacted by the works.

3.0 Historical Context

3.1 Eastern Suburbs Railway and Edgecliff Station

The idea of an eastern suburbs railway line was first proposed in the early the 20th century by then Chief Engineer for metropolitan railway construction, J.J. Bradfield, as a part of his wide reaching plan to modernise the Sydney transport system. Bradfield's proposals included the construction of the Sydney Harbour Bridge, the electrification of the city's railways, and the construction of an extensive new rail system linking all parts of Sydney, including an underground system linking Redfern Station to Bondi in the east. The outbreak of WWI halted the development of any of these plans, and although the Sydney Harbour Bridge and railway electrification was subsequently completed in the 1930s, much of Bradfield's railway scheme was never commenced (Bradfield, 1916; NSW Government, 2010).

The construction of an eastern suburbs railway line was again outlined and authorised in the *City and Suburban Electric Railways (Amendment) Act, Act No. 13 of 1947*. The Act modified Bradfield's original scheme, but still proposed more than 14 miles (22.5 km) of new, mainly underground lines between the CBD and Bondi, with possible future extensions to North Bondi. Works began on new underground platforms at Central Station and on tunnelling activities before the plan was again abandoned in the early 1950s (Sydney Architecture, 2015).

In 1967, the NSW Government again revisited the idea of the eastern suburbs railway, engaging the Snowy Mountains Engineering Corporation (SMEC) to design and build the line. The 1967 route followed that of the 1947 plan from Central Station to Bondi, but then continued on to Kingsford. The track was again largely underground, and would require four underground stations - Martin Place, Kings Cross, Edgecliff and Bondi Junction - as well as a surface station at Woollahra. New boring technology would be used to create most of the tunnels (Figure 2), along with more traditional drill and blast in deeper sections, and some cut and cover in shallow sections (NSW Heritage Division, 2009b; Sydney Architecture, 2015).

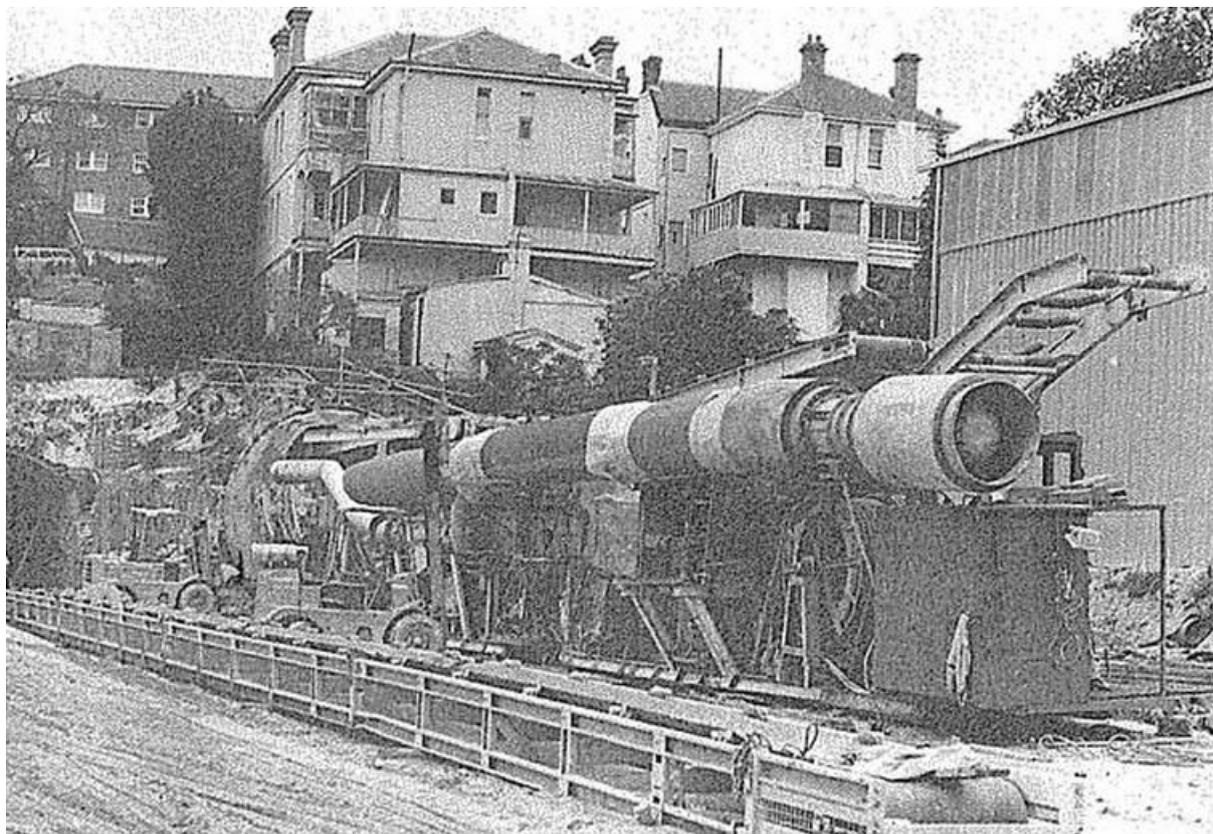


Figure 2 The 'Mole' tunnelling machine used in the construction of the Eastern Suburbs Railway (Sydney Architecture, 2015)

Construction of the SMEC plan commenced in 1968, but the project was beset by problems and was soon over budget and behind schedule. The project was unpopular with many Sydney residents, including those displaced by property resumptions at Woollahra and those disturbed by the around the clock tunnelling, and was also the scene of a number of the industrial disputes that dogged the NSW transport sector in the late 1970s (Black, 2007; NSW Heritage Division, 2009b). In 1976, tunnelling had reached Bondi Junction and much of the track had been laid, but little progress had been made with the stations. The incoming Wran Government commissioned a review of the project, and the decision was made to substantially curtail the works. The line would now end at Bondi Junction, rather than extending to Kingsford. Woollahra Station was abandoned, and the size and facilities of the other stations were reduced (Sydney Architecture, 2015).

Like the railway tunnels, the stations of the eastern suburbs railway represented the newest ideas in engineering and design. The station caverns were created by a combination of subsurface tunnelling and surface excavation, and the stations themselves were designed by noted architecture firm Fowell Mansfield Jarvis and Maclurcan, which had been responsible for many of the public buildings constructed in Sydney following WWI (Apperly, Irving, & Reynolds, 1994).

The station design was intended to draw on the style of the 1920s Museum and St James Stations, while representing the modern aesthetic that had developed in the post-war period. Use was made of new building materials, such as exposed concrete aggregate, moulded plywood and stainless steel, and also new technologies. This included the introduction of double-decker trains to the Sydney rail network, reflected in the tri-level station name on the platform, and the provision of multiple banks of escalators for station access, as well as automatic ticketing machines and turnstile barriers (NSW Heritage Division, 2009b). While the escalators were a success, the ticketing machines and barriers posed more of a problem: the machines frequently broke down, parts were difficult to obtain, and the technology was soon obsolete, requiring replacement (Black, 2007).

Edgecliff Station was opened in 1979, more than 60 years after it was initially proposed, and has been in operation since. The station itself was constructed over two levels – concourse and platforms – and above these was a gallery and bus interchange. The concourse provided shops, ticketing and other facilities (Figure 3), as well as access to the platforms below via banks of escalators. Walls were of aggregate render, with plywood ceilings, and aluminium or stainless steel fixtures on escalators and stairs. Terrazzo flooring and skirting was used on the concourse level, while the platforms were finished with bitumen. Blue decorative tile was used on structural columns, and furniture was either small banks of moulded plastic chairs, or long benches of moulded plywood (Figure 4). The station has undergone numerous updates over the last 35 years, including an upgrade of the bus interchange in 2009, and extensive internal refurbishment in 2010. The layout and many original features, such as the plywood ceilings and decorative tiling, remain intact, but other elements, such as the original benches and seats, and the bitumen finish on the platforms, have been replaced (NSW Heritage Division, 2009b).

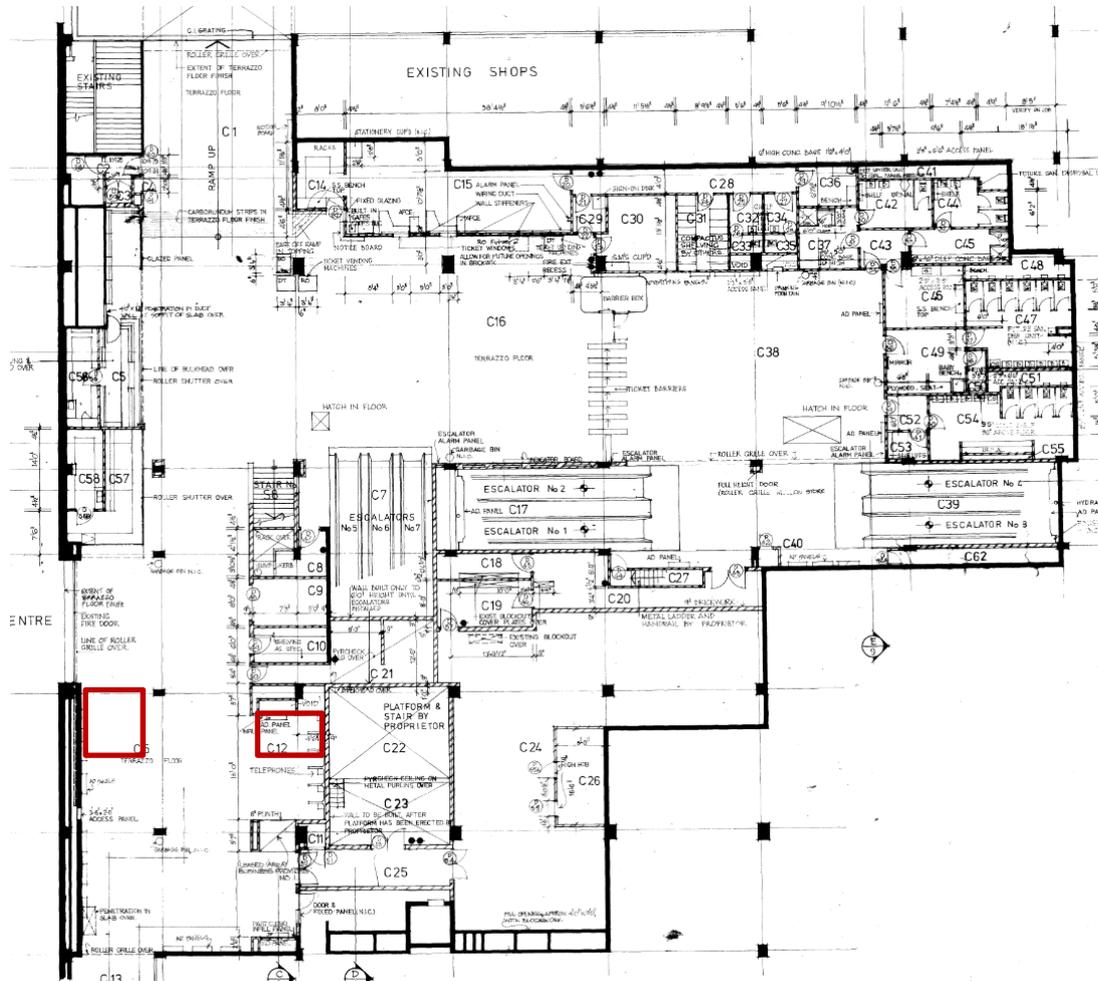


Figure 3 Original plan of Edgecliff Station Concourse level, showing shops, ticket barriers and other facilities (Plan 2296/8-E). Approximate area of proposed works shown in red.

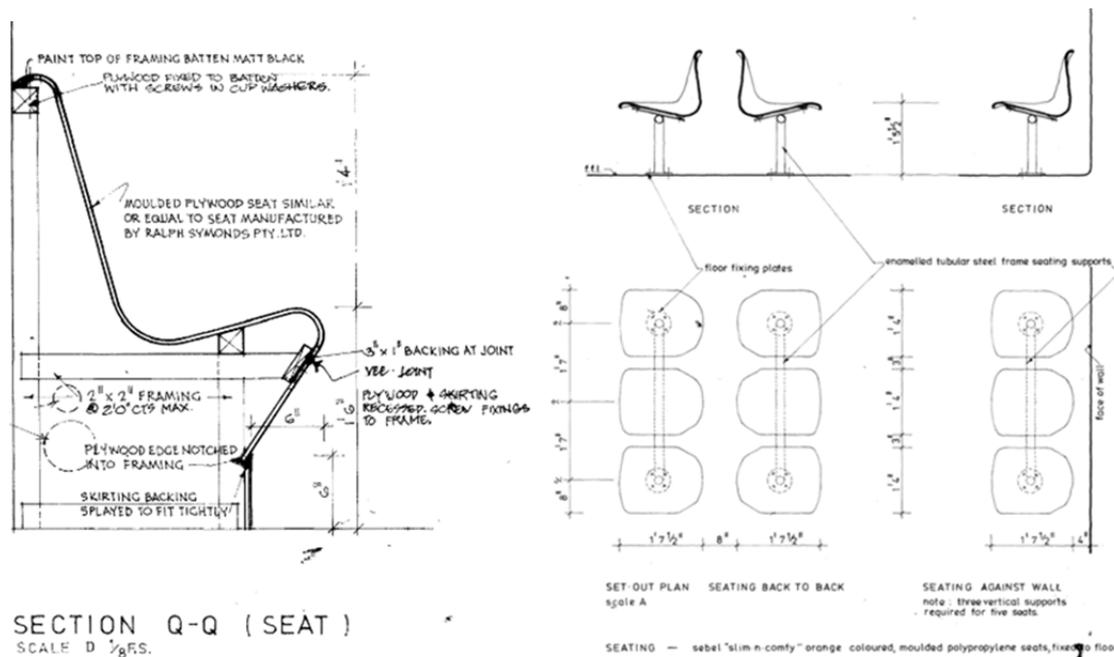


Figure 4 Detail of furniture for Edgecliff Station (Plan 2296/44-C, 2296/35-D)

3.2 Historical Themes

Commonwealth and NSW heritage agencies use themes as a means of categorising how a place contributed to historical events at a national, state and local level (Australian Heritage Commission, 2001; NSW Heritage Office, 2001b). Historical themes are a means of relating site-specific developments to broader historical patterns. The themes which apply to Edgecliff Station are provided in Table 1. Sydney Trains has developed themes specifically applicable to its railway heritage. These themes have been used instead of local themes (McKillop, 2009).

Table 1 Edgecliff Station historical themes

National (Theme Group)	National Theme	State	Local
3. Developing Local, Regional and National Economies	3.8 Moving goods and people 3.8.5 Moving goods and people on land	Transport	Providing suburban rail transportation
	3.8 Moving goods and people 3.8.6 Building and maintaining railways	Transport	Providing suburban rail transportation
4. Building Settlements, Towns and cities	Supplying urban services	Transport	Providing suburban rail transportation

4.0 Physical Description

4.1 General Location

Edgecliff Railway Station is an underground station located in the suburb of Edgecliff, approximately 3km south east of the Sydney CBD. Primary access is via a gallery level on New South Head Road. The station services the T4, Eastern Suburbs and Illawarra Line, as well as the South Coast Line. A bus interchange is located on the roof of the station, and shops are located on either side. Other facilities include a taxi rank, escalators, and a kiss and ride zone. The station does not have a lift, and is not wheelchair accessible.

4.2 Edgecliff Railway Station

Edgecliff Railway Station is located across two separate levels; a concourse level with street access from New South Head Road and New McLean Street, retail shops and station ticket gates, and; a platform level which is located below the concourse level and provides access to the train services. Above the concourse level is a gallery level with street access from New South Head Road and retail shops. This level also acts as a transit area between the bus interchange above and concourse level below. Currently, each of these levels is accessed via a series of stairs and escalators. The levels are described in further detail in the following sections. Of these four levels, only those related to the actual railway station – the concourse and the platforms – as well as the access ramps and stairs are listed on the Sydney Trains S170 register.

4.2.1 Bus interchange

The bus interchange is located on the roof of the station building, and consists of four island platforms, with three of the platforms each accommodating three bus stands, whilst the fourth platform has a single bus stand for school bus services only. Each of the island platforms has a waiting area with bins and seats, as well as barrier walls. The road surface, platforms and curbs are all of concrete, and the entirety of the interchange area is covered by a flat colorbond roof with clear, pyramid shaped skylights (Figure 5). A small parking area for cars is located adjacent to the eastern side of the interchange and a recently constructed cycle path runs around the perimeter of the interchange.

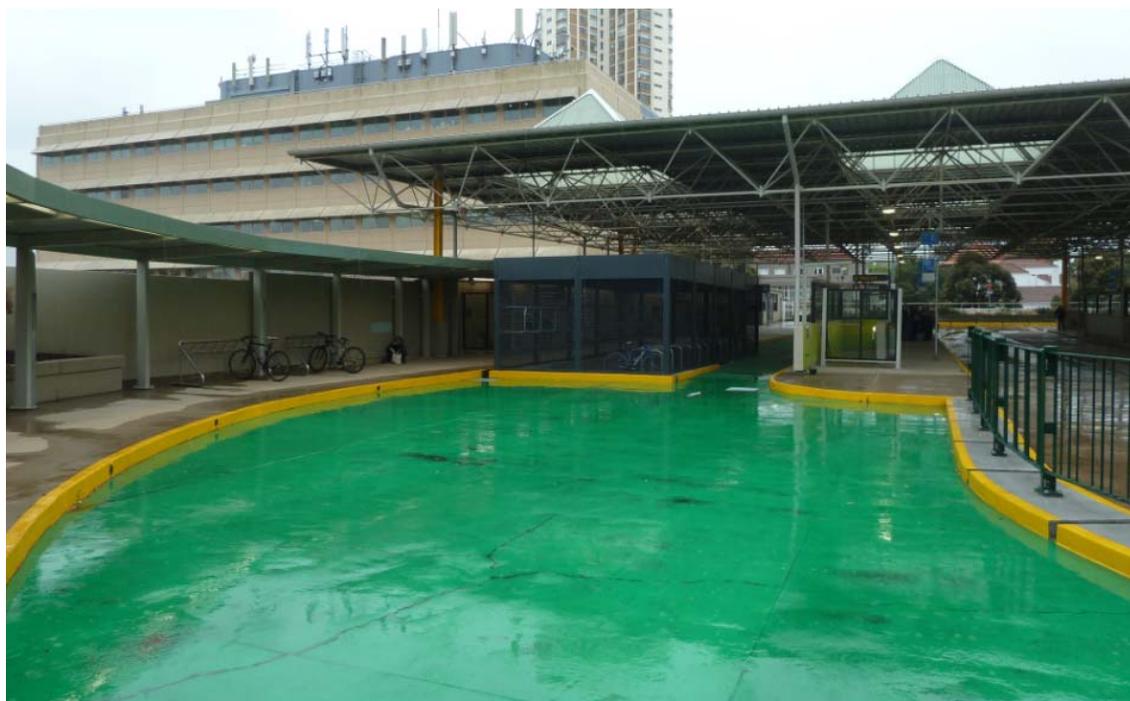


Figure 5 Edgecliff bus interchange, showing bus platforms, cycle path, roadway and roof

4.2.2 Gallery level

The gallery level serves as a pedestrian link between the bus interchange above, and the concourse and station platforms below, as well as providing some waiting and retail areas. The gallery retains its original terrazzo flooring, and possibly the concrete render walls, but timber-finished columns replace the original blue tiled columns, and the plywood ceilings have been replaced with flat panels (Figure 6).



Figure 6 Edgecliff gallery showing original terrazzo floors and replacement columns and ceiling

4.2.3 Concourse level

The concourse level acts as the main entry for the station, providing pedestrian access from New South Head Road and New McLean Street, through the ticket barriers, and down to the station platforms via two banks of escalators (total of four escalators). The western end of the concourse level contains a number of shops and kiosks, while the northern and eastern walls feature a number of offices, plant rooms and public toilets.

The flooring throughout the public areas is the original terrazzo with carborundum strips, and the ceiling is the original moulded plywood. The stairs are also of original terrazzo with carborundum strips, and feature the original anodised aluminium handrails. The escalators are clad in stainless steel, a material that is used for other fixtures and fittings, including ticket barriers, ticket machines and kick boards on doors. The original barrier box remains *in situ*, and is also partly clad in stainless steel, with the curved end of the cladding reflecting the rounded corners of the plywood ceiling and of the box itself. The original ticket windows remain in front of the barrier box, with their wide, rounded surrounds painted blue. The original phone booths remain near the southern entrance to the station, but the formerly tiled and rendered eastern and northern walls outside of the toilets have been clad in stainless steel (Figure 7), a replacement that likely occurred during the 2010 renovations (NSW Heritage Division, 2009b). The remainder of the walls are the original aggregate render, with decorative blue tile on structural columns (see example on platform in Figure 10).



Figure 7 Concourse at Edgecliff Railway Station, showing moulded plywood ceiling, terrazzo floors, aggregate render walls, and stainless steel cladding

4.2.4 Platform level

The platforms are accessed from the concourse via two banks of stainless steel clad escalators (total of four escalators). As with the concourse level, the ceiling above the escalators and above the platform is moulded plywood, and the walls are aggregate render with decorative blue tile on columns (Figure 8). There are also panels of decorative tile at the end of the platform, surrounding the tri-level station name (Figure 9). The decorative tile has been removed in places to install modern services (Figure 10). Platform furniture includes the original free standing concrete column water fountains, and metal benches that replaced the original plastic. The floor is finished with a grey ceramic tile that replaced the original asphalt.

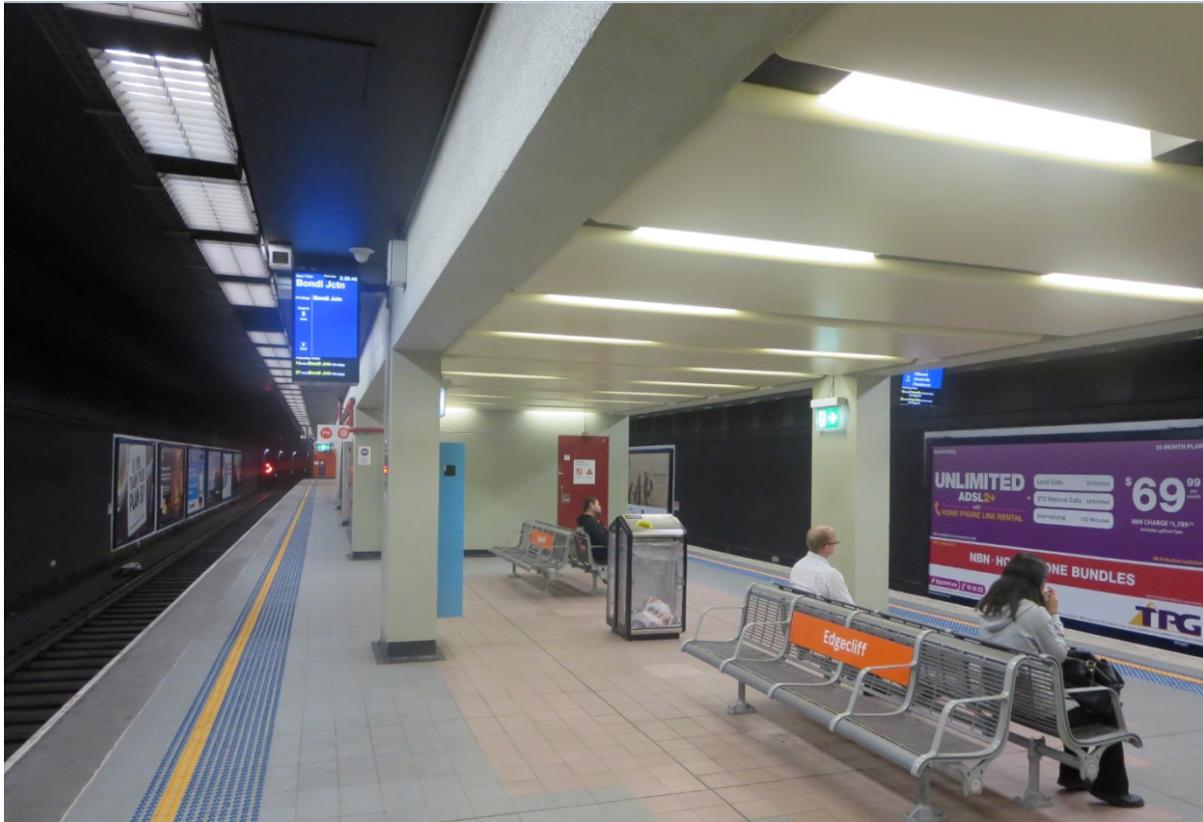


Figure 8 Platform at Edgecliff Railway Station, showing moulded plywood ceiling, tile floors and aggregate render walls

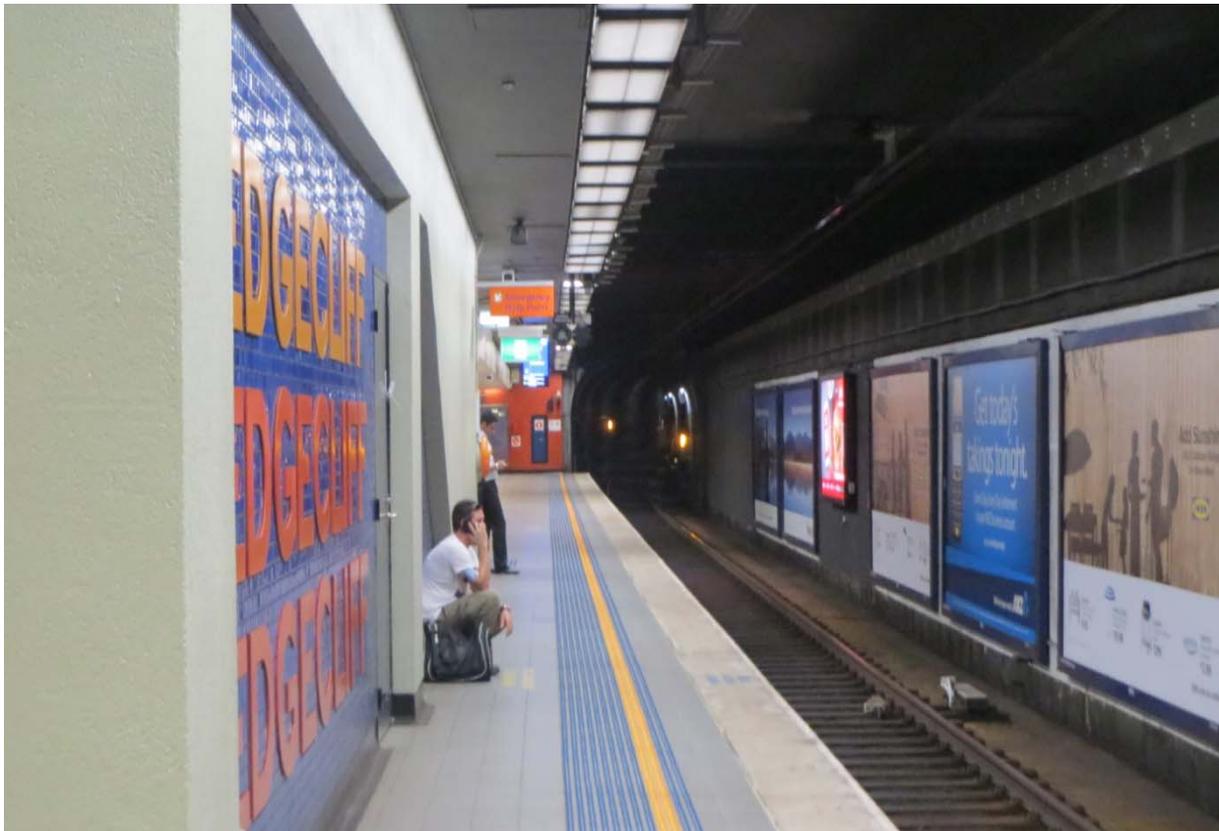


Figure 9 Platform at Edgecliff Railway Station, showing decorative blue tile around tri-level station sign



Figure 10 Decorative blue tile removed for installation of fire hose

5.0 Significance Assessment

5.1 Introduction

In order to understand how a development will impact on a heritage item it is essential to understand why an item is significant. An assessment of significance is undertaken to explain why a particular item is important and to enable the appropriate site management and curtilage to be determined. Cultural significance is defined in *The Australia ICOMOS Charter for Places of Cultural Significance 2013* (ICOMOS (Australia), 2013) as meaning 'aesthetic, historic, scientific, social or spiritual value for past, present or future generations' (Article 1.2). Cultural significance may be derived from a place's fabric, association with a person or event, or for its research potential. The significance of a place is not fixed for all time, and what is of significance to us now may change as similar items are located, more historical research is undertaken and community tastes change.

The process of linking this assessment with an item's historical context has been developed through the NSW Heritage Management System and is outlined in the guideline *Assessing Heritage Significance*, part of the NSW Heritage Manual (Heritage Branch, Department of Planning). The *Assessing Heritage Significance* guidelines establish seven evaluation criteria (which reflect four categories of significance and whether a place is rare or representative) under which a place can be evaluated in the context of State or local historical themes. Similarly, a heritage item can be significant at a local level (i.e. to the people living in the vicinity of the site), at a State level (i.e. to all people living within NSW) or be significant to the country as a whole and be of National or Commonwealth significance.

In accordance with in the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001a), an item will be considered to be of State significance if it meets two or more criteria at a State level, or local heritage significance if it meets one or more of the following criteria:

Criterion (a) – *an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The site must show evidence of significant human activity or maintains or shows the continuity of historical process or activity. An item is excluded if it has been so altered that it can no longer provide evidence of association.

Criterion (b) – *an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local to area).*

The site must show evidence of significant human occupation. An item is excluded if it has been so altered that it can no longer provide evidence of association.

Criterion (c) – *an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).*

An item can be excluded on the grounds that it has lost its design or technical integrity or its landmark qualities have been more than temporarily degraded.

Criterion (d) – *an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.

Criterion (e) – *an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). Significance under this criterion must have the potential to yield new or further substantial information.*

Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.

Criterion (f) – *an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). The site must show evidence of the element/function etc proposed to be rare.*

Criterion (g) – *an item is important in demonstrating the principal characteristics of a class of NSW's (or local area's):*

- Cultural or natural places; or
- Cultural or natural environments.

An item is excluded under this criterion if it is a poor example or has lost the range of characteristics of a type.

The Heritage Council require the summation of the significance assessment into a succinct paragraph, known as a Statement of Significance. The Statement of Significance is the foundation for future management and impact assessment.

5.2 Significance Assessment

The Sydney Trains S170 Heritage and Conservation Register contains a significance assessment of Edgecliff Station based on the Heritage Division guidelines (NSW Heritage Office, 2001a). Table 2 provides the significance assessment, taken from the listing (NSW Heritage Division, 2009b).

Table 2 Section 170 significance assessment

Significance Criteria	Application of Criteria
Historical significance SHR criteria (a)	Edgecliff Railway Station has historical significance as part of the ESR [Eastern Suburbs Railway], part of the first major railway extension in Sydney since the 1950s.
Historical association significance SHR criteria (b)	No assessment provided.
Aesthetic significance SHR criteria (c)	Edgecliff Station has aesthetic significance through its distinctive 1970s design displayed through its colour schemes, layout and use of materials and remains largely intact as displayed in the bright blue glazed tile columns, the tri-level station name signage, plywood ceilings and long escalators. The station design is a continuation of the earlier 1920s subway design of the city underground in a modern format.
Social significance SHR criteria (d)	The place has the potential to contribute to the local community's sense of place, and can provide a connection to the local community's past.
Technical/Research significance SHR criteria (e)	Edgecliff Station has technical significance for its design features and for the engineering techniques used during its construction.
Rarity SHR criteria (f)	No assessment provided.
Representativeness SHR criteria (g)	Edgecliff Station is representative of 1970s underground station design and layout as one of seven stations completed for the ESR.
Integrity/Intactness	Edgecliff Station retains a number of original features and is largely intact compared to other stations on the Eastern Suburbs Railway.

Statement of Significance:

The Sydney Trains S170 Heritage and Conservation Register contains the following statement for the Station:

Edgecliff Station is of local significance as one of a group of stations that make up the Eastern Suburbs Railway (ESR) line, one of the largest and most contentious post-war rail projects undertaken in the Sydney system. The stations were designed as part of a collection but with individual design and colour styles to differentiate them within it. They represent a continuation of the design principles of the underground system as first displayed in the Museum and St James stations and also represent the latest in construction and design technology at the time.

5.3 Comparative Analysis

As discussed in Section 3.0, Edgecliff is one of four underground stations constructed for the ESR. These stations - Edgecliff, Martin Place, Bondi Junction and Kings Cross – all share common design elements, including the use of exposed concrete aggregate, coloured tile, moulded plywood and stainless steel for construction materials, as well as the employment of distinctive, tri-level station names, and banks of long escalators for platform access (NSW Heritage Division, 2009b). The stations were given a distinct identity through the use of colour, notably coloured tile.

All of the ESR stations are still in operation, and have undergone varying degrees of remodelling and refurbishment. A review of the Sydney Trains S170 Heritage and Conservation Register for each of the stations suggests that all stations retain at least some elements of their original design, including the tri-level signage, moulded ceilings, and coloured tile (NSW Heritage Division, 2009a, 2009b, 2009c, 2014). In the case of Kings Cross, however, much of this tile has been painted-over. The original platform layout appears to have been preserved at all stations, but the concourse at Bondi Junction has been significantly altered by renovation. Overall, the most intact station would appear to be Martin Place, which retains both layout and significant design elements (NSW Heritage Division, 2009c), followed by Edgecliff, which has undergone some degree of alteration (NSW Heritage Division, 2009b).

5.4 Significance Grading

As different elements of an item can have a different contribution to its heritage significance, it is sometimes useful to define which elements are of significance and which may detract from its significance. The NSW Heritage Branch (NSW Heritage Office, 2001:11) use the grading criteria provided in Table 3.

Table 3 Grading of significance criteria (from NSW Heritage Office, 2001:11)

Grading	Justification	Status
Exceptional	Rare or outstanding element directly contributing to an item's local and State significance.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance	Does not fulfil criteria for local or State listing.

An assessment of the elements of Edgecliff Railway Station according to these criteria is provided in Table 4.

Table 4 Edgecliff Railway Station grading of fabric

Grading	Element meeting criteria
Exceptional	<ul style="list-style-type: none"> • Terrazzo flooring • Blue tiling • Plywood ceilings • Tri-level signage • Long escalators

Grading	Element meeting criteria
	<ul style="list-style-type: none">• Barrier box• Ticketing windows
High	<ul style="list-style-type: none">• Drinking fountains on platform• Aluminium stair handrails• Telephone booths
Moderate	Nil
Little	<ul style="list-style-type: none">• Replacement ticket barriers and ticket machines• Stainless steel cladding• Replacement tile flooring• Replacement seating
Intrusive	<ul style="list-style-type: none">• New services where installation has damaged original fabric

6.0 Proposal Description and Impacts

6.1 Project Drivers

The Proposal is part of the Transport Access Program which is a NSW Government initiative to provide a better experience for public transport customers by delivering accessible, modern, secure and integrated transport infrastructure. Assessments of the Station by TfNSW, AECOM and independent review by Novo Rail Alliance have identified a number of upgrades that are required to improve customer experience and ensure compliance with legislative and safety requirements (AECOM Australia Pty Ltd, 2017; Novo Rail Alliance, 2017).

6.2 Options Selection

In 2015, AECOM undertook an options design and analysis process, during which three options for the Station upgrades were considered (AECOM Australia Pty Ltd, 2015b). Following the options analysis and a multi-criteria analysis (MCA), it was determined that Option B2 was the preferred option, and a Statement of Heritage Impact was prepared for this design (AECOM Australia Pty Ltd, 2015a). Option B2 has now been revised in response to stakeholder comments and further design development and is the subject of this SoHI.

6.3 The Proposal

The following section summarises the proposed upgrades, focussing on those works planned for those areas with heritage significance – the platform and concourse levels.

6.3.1 Lifts

The proposed works include the installation of two new lifts, both of which would feature clear glazed lift shafts and stainless steel doors and other fittings.

The first lift (lift 1) would provide access between the concourse and platform levels. On the concourse level, the lift shaft would be located in between the two sets of escalators (Escalator 1 and 2 to the west and Escalator 3 and 4 to the east) that provide access to the station platform (Figure 11, Figure 12). This would require the cutting of a hole in the terrazzo flooring and underlying concrete, as well as the removal of the plywood ceiling in the vicinity of the lift. There may also be some impact to the tiled column adjacent to the proposed concourse lift location, and some alterations to internal walls to create a secondary egress route.

On the platform level, the shaft for lift 1 would be installed in the middle of the platform, between the escalator structures. This would require the cutting of a hole in the concrete floor of the level above, and through the plywood ceiling, as well as the removal of the seating and floor tiling in this area.

A second lift (lift 2) would be installed at the western end of the concourse to link the station concourse and the bus interchange (Figure 11, Figure 12). This would require the cutting of a hole in the concourse floor, as well as in the ceiling. While the floor is the original terrazzo at this point, the ceilings are a later, flat sheeting material rather than the original moulded plywood.

6.3.2 Stairs

A new set of fire stairs will be installed next to lift 1, to provide an egress route from the platform to the ground level carpark (Figure 11, Figure 12). At the platform level, this stairwell will occupy much of the waiting area between the escalators, and will require the cutting of a hole in the concrete floor of the level above, and through the plywood ceiling, as well as the removal of the seating and floor tiling. On the concourse level, stair installation and egress routes will require the removal of the existing access doors and some sections of wall, and the addition of new walls and new door. These changes will impact on adjacent areas of terrazzo floor and skirting.

6.3.3 Escalators

In order to accommodate the new lift and fire stairs, the current escalators will need to be replaced. The new escalators will be sympathetic to the originals, retaining their aesthetic sense of length. However, these new escalators will require structural alterations to provide the required head height

clearance, which may require the removal or alteration of the original plywood ceilings (Figure 11, Figure 12).

6.3.4 Passing Bays

Passing bays need to be created on either side of the escalators on the platform level to provide safe access paths for pedestrians, prams, and people in wheelchairs. It is proposed that these bays be created by demolishing part of the walls below the escalators, creating a corridor underneath (Figure 11, Figure 12). This will require the removal of sections of original tiled wall, but will leave the tri-level station signage in place.

6.3.5 Ticket barriers

The ticket barriers will be moved approximately 5 metres into the unpaid concourse, requiring the creation of penetrations in the terrazzo floor at the new location, and the patching of existing penetrations in the existing position. The barrier box, will remain in its original location (Figure 11).

6.3.6 Access ramp

The current ramp and balustrade accessing New McLean Street would be retained, but a new accessible entry ramp and stair meeting compliance standards would be built partially over the existing structure. A tree will need to be removed to facilitate this work, but no change is proposed to the existing ramp providing access from New South Head Road.

6.3.7 Bin Storage

In order to prevent the potential fire hazard caused by bins being stored in corridors, a dedicated bin store will be created opposite the new lift 2, in the telephone area (Figure 11). This work will require the removal of approximately half of the original telephone booths (Figure 3, Figure 11).

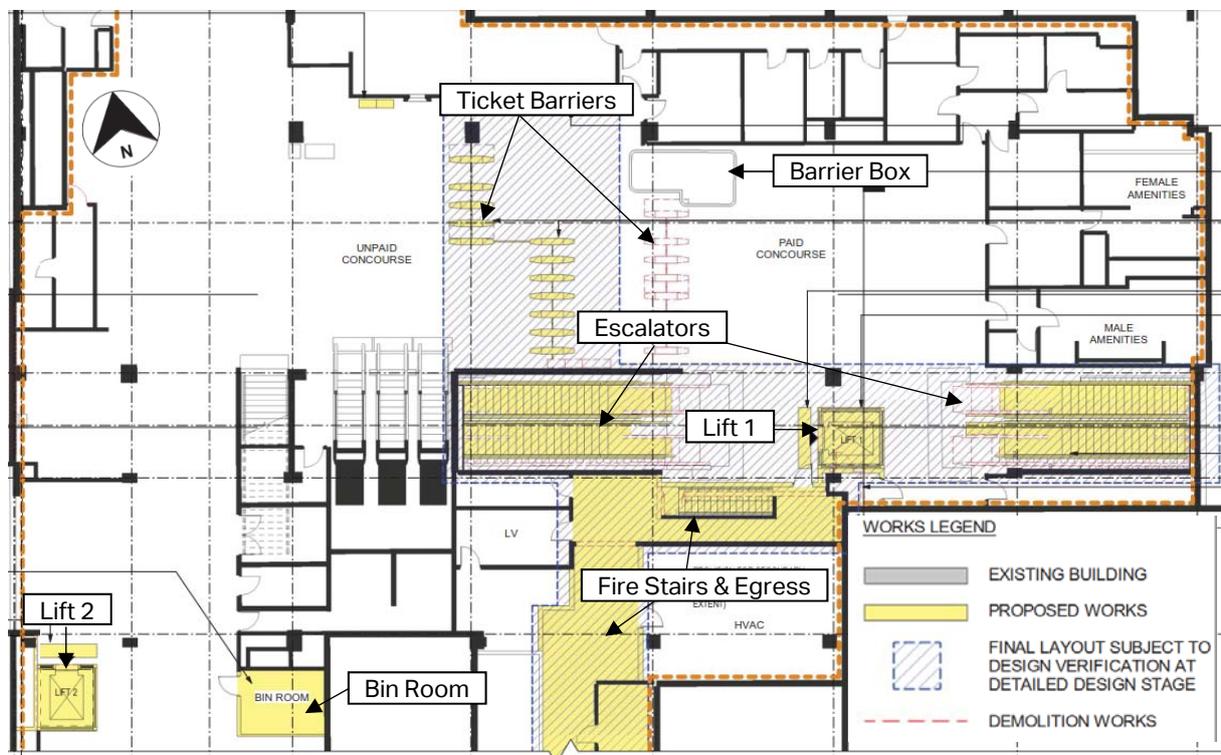


Figure 11 Plan of concourse indicating proposed location of lifts, escalators, stairs, bin room and gate line

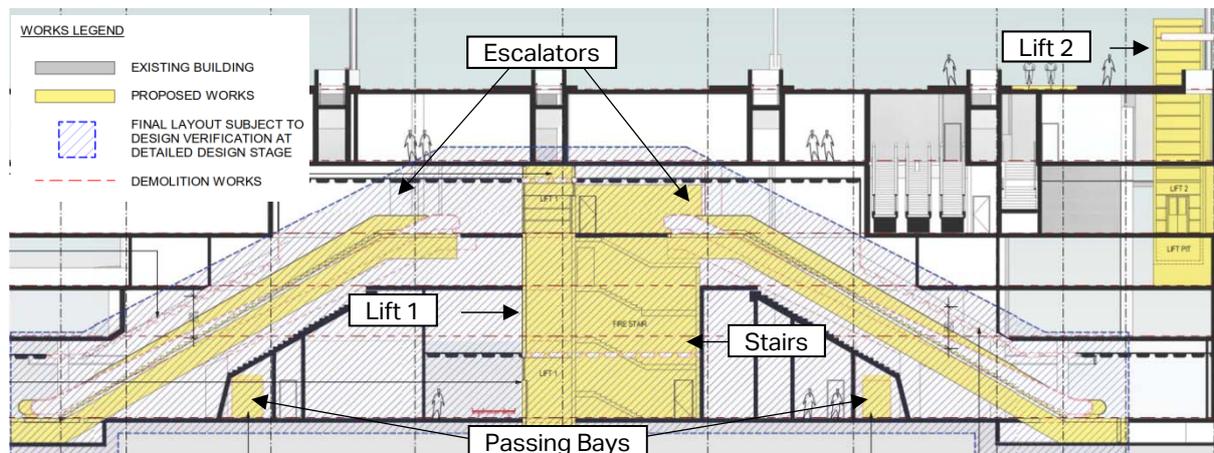


Figure 12 Elevation showing proposed lifts, stairs, passing bays and escalators

6.3.8 Ancillary Works

In addition to the main refurbishment works, there are a range of minor ancillary or enabling works proposed for the Station. These include electrical and lighting upgrades on the platform which will require the temporary removal of original ceiling panels, and the relocation of CCTV and wayfinding signage that will require additional penetrations in the floors and walls at the new location, and the patching of existing penetrations in the existing position. Temporary structures including construction compounds and laydown areas will also be required on the platform, at the location of the phone booths, and outside New McLean Street access ramp.

6.3.9 Moveable Heritage

There is no known moveable heritage at Edgecliff station.

6.3.10 Archaeological Heritage

Edgecliff station has no known archaeological potential.

6.4 Potential Impacts to Heritage Fabric and Significance

The proposed works will impact on some of the main heritage features of the station, requiring substantial alterations to the plywood ceilings and terrazzo floors to allow for the insertion of the two lift shafts and the new escalators, as well as the removal of some of the original telephone booths to create a bin store. The creation of the passing bays will also require the demolition of the sections of original tiled wall, and the construction of both the stair well and lift 1 will substantially alter the overall layout and appearance of the platform. A summary of how these changes might impact the heritage significance of the station is provided in Table 5

Table 5 Assessment of impacts to the heritage significance of Edgecliff Station

Action	Impact to Heritage Significance
Historical significance SHR criteria (a)	Edgecliff Railway Station has historical significance as part of the ESR [Eastern Suburbs Railway], part of the first major railway extension in Sydney since the 1950s.
Demolition	The demolition of sections of tiles wall, terrazzo floor, plywood ceilings and telephone booths will impact fabric identified as being of heritage significance. These elements all speak to the period of Station construction, and their removal will lessen the legibility of the 1970s design. However, examples of all these elements will be retained during the refurbishment and will continue to demonstrate the station aesthetic.
Construction	The construction of the fire stairs, bin room and lifts will alter the original layout and appearance of the station. However, this will be mitigated wherever possible by the integration of design elements that reference the station aesthetic, or that are visually recessive.
Temporary and Enabling Works	The temporary and enabling works will not impact the historical significance of the station.
Historical association significance SHR criteria (b)	No assessment provided.
N/A	
Aesthetic significance SHR criteria (c)	Edgecliff Station has aesthetic significance through its distinctive 1970s design displayed through its colour schemes, layout and use of materials and remains largely intact as displayed in the bright blue glazed tile columns, the tri-level station name signage, plywood ceilings and long escalators. The station design is a continuation of the earlier 1920s subway design of the city underground in a modern format.
Demolition	The demolition of sections of tiled wall, terrazzo floor, plywood ceilings and telephone booths, as well as the replacement of the escalators will impact fabric identified as being of heritage significance. These elements all speak to the period in which the station was constructed, and their removal will lessen the legibility of the 1970s design. However, examples of wall tiles, terrazzo floor and plywood ceilings will be retained during the refurbishment, and will continue to demonstrate the station aesthetic. The impact will also be mitigated by the retention of other iconic station elements, such as the barrier box and the tri-level sign.
Construction	The construction of the fire stairs, bin room and lifts will alter the original layout and appearance of the station. However, this will be mitigated where possible by the integration of design elements that reference the station aesthetic, or that are visually recessive. Efforts will be made to salvage and reinstate original fabric removed during the works, and where this is not possible, like for like replacements or sympathetic alternatives will be used.
Temporary and Enabling Works	The temporary laydown areas and electrical upgrades will not impact the aesthetic significance of the station. The upgrades to the CCTV may have a minor impact on some significant fabric, such as the plywood ceilings, but this will be mitigated by the use of sympathetic materials for installation or repair.

Action	Impact to Heritage Significance
Social significance SHR criteria (d)	The place has the potential to contribute to the local community's sense of place, and can provide a connection to the local community's past.
Demolition	It is unknown whether the individual elements to be removed have a particular social significance. However, any impact is likely to be offset by the retention of other iconic station elements, such as the barrier box and the tri-level sign.
Construction	The construction of the proposed lifts will enable the elderly and those requiring equitable access to use and therefore appreciate the heritage significance of the station. It is anticipated that the construction will have a positive impact on the local community's identification with the station.
Temporary and Enabling Works	While the rearrangement of the facilities may temporarily inconvenience some local users, this will not, in the long-term, effect the social significance of the station to the community.
Technical/Research significance SHR criteria (e)	Edgecliff Station has technical significance for its design features and for the engineering techniques used during its construction.
Demolition	The demolition of sections of tiled wall, terrazzo floor, plywood ceilings and telephone booths will impact fabric identified as being of heritage significance. These elements all speak to the period in which the station was constructed, and their removal will lessen the legibility of the 1970s design. However, examples of all these elements will be retained during the refurbishment and will continue to demonstrate the station aesthetic.
Construction	The construction of the fire stairs, bin room and lifts will alter the original layout and appearance of the station. However, this will be mitigated wherever possible by the integration of design elements that reference the station aesthetic, or that are visually recessive.
Temporary and Enabling Works	The temporary and enabling works will not impact the heritage significance of the station.
Rarity SHR criteria (f)	No assessment provided.
N/A	
Representativeness SHR criteria (g)	Edgecliff Station is representative of 1970s underground station design and layout as one of seven stations completed for the ESR.
Demolition	The demolition of sections of tiled wall, terrazzo floor, plywood ceilings and telephone booths, as well as the replacement of the escalators will impact fabric identified as being of heritage significance. These elements all speak to the period in which the station was constructed, and their removal will lessen the legibility of the 1970s design. However, examples of wall tiles, terrazzo floor and plywood ceilings will be retained during the refurbishment, and will continue to demonstrate the station aesthetic.
Construction	The construction of the fire stairs, bin room and lifts will alter the original layout and appearance of the station. However, this will be mitigated where possible by the integration of design elements that reference the station aesthetic, or that are visually recessive. Efforts will be made to salvage and reinstate original fabric removed during the works, and where this is not possible, like for like replacements or sympathetic alternatives will be used.
Temporary and Enabling Works	The temporary and enabling works will not impact the representativeness of the station.

7.0 Statement of Heritage Impact

7.1 Introduction

The objective of a Statement of Heritage Impact (SoHI) is to evaluate and explain how the proposed development, rehabilitation or land use change will affect the heritage value of the site and/or place. A SoHI should also address how the heritage value of the site/place can be conserved or maintained, or preferably enhanced by the proposed works.

This report has been prepared in accordance with the NSW Heritage Office & Department of Urban Affairs and Planning *NSW Heritage Manual* (1996) and NSW Heritage Office *Statements of Heritage Impact* (NSW Heritage Office, 2002). The guidelines pose a series of questions as prompts to aid in the consideration of impacts due to the Proposal. The questions in the guidelines do not adequately capture the potential impacts of the current proposal. In such an instance, the guidelines allow for the development of relevant questions. The following questions have been developed to address the potential impacts arising from the proposed upgrade works:

1. How is the impact of the proposed works on the heritage significance of the item to be minimised?
2. Will the new works visually dominate the heritage item?
3. Are important features of the item affected by the proposal?
4. Is the proposal sympathetic to the heritage item? In what way?

7.2 Heritage Impact Assessment

1. How is the impact of the proposed works on the heritage significance of the item to be minimised?

Wherever possible, design consideration has been given to minimising the impact on significant heritage fabric. This includes, for example, leaving the barrier box in place rather than relocating it as originally proposed (AECOM Australia Pty Ltd, 2015a, 2015b). Similarly, while the creation of the passing bays will require the removal of sections of original tiled wall, the areas of demolition have been chosen to avoid the tri-level station signage.

Other mitigations to be implemented include the salvage, wherever possible, of removed original tile or plywood fabric for re-installation. Where original fabric cannot be reused, like-for-like replacements or sympathetic alternatives will be chosen, including plywood and satin finish stainless steel. Design consideration should also be given to integrating important shapes – such as rounded corners – into new or altered features.

2. Will the new works visually dominate the heritage item?

The installation of the lifts will alter the appearance of the concourse level, however lifts have become a common and accepted feature of modern railway stations and as such are not considered out of place or intrusive for a station of this era. Moreover, the visual impact of the lifts will be mitigated by the salvaging and reinstatement of the plywood ceilings surrounding the shaft, and the use of sympathetic new materials such as satin (or brushed) finish stainless steel. The overall bulk and scale of the lift structures will also be minimised by the use of clear glazing for the shafts.

The stairwell will significantly alter the appearance of the platform level, infilling what is now an open waiting area beneath the escalators. However, given the narrowness of the platform, and the limited points at which the upper levels of the station may be accessed, there are no feasible alternatives for the location of the fire stairs. Design consideration should be given to reducing the visual impact of the stairwell by integrating elements of the station aesthetic, such as the accent tiling and rounded corners.

3. Are important features of the item affected by the proposal?

The proposed insertion of the lifts will require alteration to the terrazzo floor and plywood ceilings on the concourse level, and the plywood ceilings above the escalators will need to be removed or modified when the new plant is installed. Temporary removal of the ceilings on the platform level will

also be required during electrical upgrades, and minor changes will likely be required on the concourse level ceilings for the CCTV upgrades.

The proposed construction of the bin store area will require the removal of some of the original phone booths, and may also require alterations to original floors and ceilings.

The creation of the passing bays on the platform will require the partial demolition of sections of original tiled wall. Minor changes to the concourse terrazzo floor and skirting will also be required for the relocation of the ticket barriers, and the construction of the new fire stairs and egress routes.

4. Is the proposal sympathetic to the heritage item? In what way?

The project has been designed to avoid impact to significant fabric wherever possible, for example by retaining the barrier box and tri-level signage in place. Where impacts cannot be avoided, such as the changes to the original terrazzo floor and plywood ceilings associated with the lift and escalator installation, it will be mitigated through the reuse of salvaged material where possible, or through like-for-like replacements or sympathetic alternatives. Where new work is required, such as the fire stairs on the platforms, design consideration should be given to reducing the visual impact of the stairwell by integrating elements of the station aesthetic.

7.3 Statement of Heritage Impact

The impacts identified above are summarised in Table 6.

Table 6 Summary of the nature of the impacts

Impact Type	Impact
Major negative impacts (substantially affects fabric or values of state significance)	None.
Moderate negative impacts (irreversible loss of fabric or values of local significance; minor impacts on State significance)	The proposed works will result in loss of original fabric, being areas of the moulded plywood ceilings, terrazzo floors, tiled walls and phone booths. These impacts can be mitigated through reuse of salvaged material where possible, or through like-for-like replacements or sympathetic alternatives. The appearance and layout of the platform level will also be significantly altered by the addition of the fire stairs, and design consideration should be given to reducing the visual impact of the stairwell by integrating elements of the station aesthetic.
Minor negative impacts (reversible loss of local significance fabric or where mitigation retrieves some value of significance; loss of fabric not of significance but which supports or buffers local significance values)	None.
Negligible or no impacts (does not affect heritage values either negatively or positively)	None.
Minor positive impacts (enhances access to, understanding or conservation of fabric or values of local significance)	The upgrades would improve safety and accessibility, and the station would be enhanced following its refurbishment. The construction of the new lifts would enable access to and appreciation of the station by a wider demographic.
Major positive impacts (enhances access to, understanding or conservation of fabric or values of state significance)	None.

8.0 Recommendations & Mitigation Measures

The following recommendations and mitigation measures are proposed to reduce potential negative heritage impacts resulting from the Proposal (Table 7).

Table 7 Proposed recommendations and mitigation measures

Component	Recommendations & Mitigation Measures
Design Detail Recommendations	<ol style="list-style-type: none"> 1. The detailed design should reference and respect the 1970s aesthetic, including the moulded plywood ceilings and the terrazzo flooring, which is a key aspect of the item's listing on the Sydney Trains Section 170 Heritage Register. 2. Consideration should be given to ensuring the juncture between the lift shaft and surrounding plywood ceilings maintains the existing pattern formed by the curved panels. 3. Consideration should be given to reducing the visual impact of the platform fire stairs by integrating elements of the station aesthetic to the structure, such as the accent tiling and rounded corners. 4. Demolition of tiled wall should be kept to a minimum and should retain the angles and symmetry of the concrete surrounds. 5. A suitably qualified heritage consultant should be engaged to guide this detailed design to ensure heritage impacts are appropriately managed and resolved, in consultation with TfNSW and Sydney Trains
Consultation	<ol style="list-style-type: none"> 6. As the station is listed on Sydney Trains Section 170 Heritage and Conservation Register, Sydney Trains will need to be consulted.
Onsite Management Plans	<ol style="list-style-type: none"> 7. The Construction Management Plan should identify significant fabric (plywood ceilings, terrazzo floors and areas of blue tile), and measures to preserve these elements during construction. This should include the careful removal of plywood panels around lift shafts (for future reinstatement), and installation of protective paper or matting to floors and walls around areas of work, as required. This should be undertaken in consultation with a suitability qualified heritage consultant.
Materials Salvage/Reuse	<ol style="list-style-type: none"> 8. During detailed design, thought should be given to whether any of the plywood ceiling panels or tiles identified for impact can be salvaged or modified and incorporated into the new structure.
Archival Recording	<ol style="list-style-type: none"> 9. Archival photographic recording of the station as a whole prior to the commencement of construction following NSW Heritage Division guidelines <i>Photographic recording of heritage items using film or digital capture</i> (NSW Heritage Office, 2006). Copies should be provided to TfNSW, and the local library for future reference. 10. Recording should focus on areas of significant fabric that will be impacted during the works, such as: <ol style="list-style-type: none"> a. Tiled walls on platform b. Plywood ceiling on concourse and platform c. Escalators d. Phone booths e. Terrazzo floors
Notification to NSW Heritage Division	<ol style="list-style-type: none"> 11. Section 170 notification to the Heritage Division is required for major alteration including demolition of elements within a

Component	Recommendations & Mitigation Measures
	Section 170 listed precinct.
Update of Section 170 Heritage and Conservation Register listing	12. Following completion of works, the Section 170 Heritage and Conservation Register listing description and historical context should be updated to reflect the new works and elements within the precinct.
Heritage Induction	13. A heritage induction should be provided to all on-site staff and contractors involved in the Proposal. The induction should clearly describe the heritage constraints of the site.

9.0 References

- AECOM Australia Pty Ltd. (2015a). *Edgecliff Railway Station Group Upgrade - Statement of Heritage Impact*. Unpublished Report to TfNSW.
- AECOM Australia Pty Ltd. (2015b). *Heritage Assessment: Edgecliff Railway Station*. Sydney, Australia: Prepared for Transport for NSW.
- AECOM Australia Pty Ltd. (2017). *Edgecliff Station Precinct - Accessibility Upgrade Preliminary Design Investigation*. Unpublished Report to TfNSW.
- Apperly, R., Irving, R., & Reynolds, P. (1994). *A Pictorial Guide to Identifying Australian Architecture: Styles and Terms from 1788 to the Present*. Sydney, Australia: Angus & Robertson.
- Australian Heritage Commission. (2001). *Australian Historic Themes*. Retrieved from <http://www.environment.gov.au/heritage/ahc/publications/commission/books/pubs/australian-historic-themes-framework.pdf>
- Black, J. (2007). Transport. In T. Bramston (Ed.), *The Wran Era* (pp. 134–142). Sydney, Australia: Federation Press.
- Bradfield, J. J. C. (1916). *Proposed Electric Railways for the City of Sydney*. Sydney, Australia.
- ICOMOS (Australia). (2013). *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*. Burwood, Victoria: Australia ICOMOS. Retrieved from <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>
- McKillop, R. F. (2009). *Thematic History of the NSW Railways*. Sydney, Australia: Prepared for the Office of Rail Heritage (RailCorp). Retrieved from <http://www.transportheritagensw.com.au/#!/thematic-history/c1jyt>
- Novo Rail Alliance. (2017). *Edgecliff Station Easy Access Peer Review Report*. Unpublished report to AECOM.
- NSW Government. (2010). Bradfield - a vision for Sydney Transport. Retrieved April 9, 2015, from <http://sydney-harbour-bridge.bos.nsw.edu.au/building-the-bridge/bradfield-vision.php>
- NSW Heritage Division. (2009a). Bondi Junction Railway Station. Retrieved November 2, 2017, from <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4801156>
- NSW Heritage Division. (2009b). Edgecliff Railway Station. Retrieved April 9, 2015, from <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4801167>
- NSW Heritage Division. (2009c). Martin Place Railway Station. Retrieved November 2, 2017, from <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4801162>
- NSW Heritage Division. (2014). Kings Cross Railway Station Group. Retrieved November 2, 2017, from <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5062515>
- NSW Heritage Office. (2001a). *Assessing Heritage Significance*. Parramatta. Retrieved from <http://www.heritage.nsw.gov.au/docs/assessingheritagesignificance.pdf>
- NSW Heritage Office. (2001b). *New South Wales Historical Themes*. Parramatta. Retrieved from <http://www.heritage.nsw.gov.au/docs/themes2006.pdf>
- NSW Heritage Office. (2002). *Statements of Heritage Impact*. Parramatta: Heritage Office. Retrieved from http://www.heritage.nsw.gov.au/03_index.htm#S-U
- NSW Heritage Office. (2006). *Photographic recording of heritage items using film or digital capture*. Parramatta: Heritage Office. Retrieved from http://www.heritage.nsw.gov.au/docs/info_photographicrecording2006.pdf
- NSW Heritage Office, & NSW Department of Urban Affairs and Planning. (1996). *NSW Heritage Manual*. Parramatta: Heritage Office & Department of Urban Affairs & Planning. Retrieved from http://www.heritage.nsw.gov.au/03_index.htm#M-O
- Sydney Architecture. (2015). Subterranean Sydney. Retrieved April 9, 2015, from <http://www.sydneyarchitecture.com/SUB/SUB-07.htm>