

New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications

Blackheath Station Statement of Heritage Impact

New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications

Blackheath Station Statement of Heritage Impact

Client: Transport for New South Wales
ABN: 18 804 239 602

Prepared by

AECOM Australia Pty Ltd
Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia
T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com
ABN 20 093 846 925

31-Jul-2017

Job No: 60538110

AECOM in Australia and New Zealand is certified to the latest version of 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 New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications
Ref 60538110
Date 31-Jul-17
Prepared by Chris Lewczak
Reviewed by Dr Susan Lampard; Richard Farmer

Revision History

Revision	Revision Date	Details	Authorised Name/Position	Signature
1	29-Jun-2017	Draft Report	Richard Farmer Project Manager	Signed in original
2	20-July-2017	Incorporation of TfNSW and Sydney Trains comments	Richard Farmer Project Manager	Signed in original
3	25-Jul-2017	Incorporation of TfNSW comments	Richard Farmer Project Manager	Signed in original
4	31-Jul-2017	Incorporation of additional Sydney Trains comments	Richard Farmer Project Manager	

Contents

Executive summary	7
1 Introduction	8
1.1 Background	8
1.2 Site location	8
1.3 Report methodology	10
1.4 Report limitations	11
2 Statutory context	12
2.1 Commonwealth legislation	12
2.2 State legislation	12
2.3 Local government	13
2.4 Heritage registers	14
3 Historical context	17
3.1 European crossing of the Blue Mountains	17
3.2 Railway development	17
4 Physical description	21
4.1 Introduction	21
4.2 Station platform	21
4.3 Rail corridor	24
5 Significance assessment	25
5.1 Assessment criteria	25
5.2 Assessment of significance for Blackheath Railway Station Group	27
5.3 Adjacent and overlapping heritage items	29
6 Archaeological assessment	30
7 Impact assessment	31
7.1 Proposed works	31
7.2 Project justification and options	34
7.3 Heritage Platforms Conservation Management Strategy	36
7.4 Heritage impact assessment	37
7.5 Adjacent heritage items	40
7.6 Cumulative impact assessment	40
7.7 Summary of heritage impacts	41
8 Statement of Heritage Impact	42
9 Conclusion and recommendations	43
References	44

Figures

Figure 1 Location of Blackheath Station	9
Figure 2 Heritage items within the vicinity of Blackheath Station.....	16
Figure 3 “Blackheath Railway Station” (n.d. - prior to 1898). (Source Blue Mountains City Library)	18
Figure 4 “Looking along Main Street, Blackheath, from the Railway Station” (1907 postcard). Source: National Museum of Australia. Item Id 1986.0117.4666.....	18
Figure 5: Portion of Plan Number CV0070903 Sydney Trains Plan Room “N.S.W.R. Proposed Extension of Platform at Blackheath (c.1902)” showing first proposed extension of the northern (country) end.....	19
Figure 6: Portion of Plan Number 869-41.453:“Blackheath Proposed Extension of Platform (1955)” showing proposed extension of Blackheath Station.....	20
Figure 7 View north of 1898 section of platform 1 showing two courses of brick additions above the original.....	22
Figure 8: Profile of the original 1898 platform 1 coping (looking west)	22
Figure 9 View (looking west) of junction between 1898 platform and 1902 platform extension (right of image)	23
Figure 10 View (looking west) of junction between 1902 platform extension and 1955 platform extension (right of image)	23
Figure 11 View (looking west) of junction between 1902 platform extension and 1955 platform extension (right of image)	24
Figure 12 View south of tracks (platform 2). Note concrete sleepers	24

Tables

Table 1: Terminology for assessing the magnitude of heritage impact.....	10
Table 2 Summary of listed heritage items within Project site.....	15
Table 3 Significance assessment criteria	25
Table 4 Grading of significance. Source: NSW Heritage Office, 2001	26
Table 5 State Heritage Register significance assessment of the Blackheath Railway Station Group (NSW Heritage Division, 2013).....	27
Table 6 Grades of significance of components of Blackheath Station	28
Table 7 Adjacent and overlapping heritage items at Blackheath Station	29
Table 8 Proposed coping modifications to platform 1	32
Table 9 Proposed coping modifications to platform 2	32
Table 10 Proposed track slewing to platform 1	33
Table 11 Proposed track slewing to platform 2.....	34
Table 12 Summary of width clearance design options	35

Table 13 Assessment of Project against the Heritage Platforms Conservation Strategy (Blackheath)36

Table 14 Assessment of heritage impact of Project against State Heritage Register criterion for the Blackheath Station Group.....38

Table 15: Stations included in the New Intercity Fleet project40

Table 16 Summary of heritage impacts41

Table 17 Statement of heritage impact for Blackheath Railway Station Group42

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 New Intercity Fleet - Springwood to Lithgow Rail Corridor Modifications (the Project).

In May 2014, the NSW Government announced it is delivering the New Intercity Fleet, to replace trains carrying customers from Sydney to the Central Coast, Newcastle, Blue Mountains and the South Coast. The introduction of the New Intercity Fleet would allow for the replacement of the older electric train fleets currently used to provide intercity services.

The New Intercity Fleet would:

- provide a more consistent and improved level of customer service for intercity customers
- facilitate the retirement of the two oldest electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity customers.

The Project would involve works within the curtilage of the Blackheath Railway Station Group (Blackheath Station). Blackheath Station is listed on the following registers as State Significant:

- State Heritage Register (SHR) as “Blackheath Railway Station Group”. SHR# 01088
- *RailCorp Section 170 Heritage and Conservation Register* SHI# 4801010
- Heritage schedule of the *Blue Mountains Local Environmental Plan 2015* (Blue Mountains LEP), BH029.

The proposed works at Blackheath Station would include the following:

- modifications to station platforms including adding to and cutting back platform copings (coping modifications) of up to 25 centimetres
- re-positioning of rail tracks (track slewing) in order to accommodate increased loadings and distance to platforms, and ensuring adequate passing distance between trains
- relocation of services where required, and installing additional support where cables are removed from the platform coping overhang
- reinstate finishes such as tactile pavers and/or yellow and white line markers as required at all stations.

An assessment of the Project against the heritage significance of Blackheath Station concluded that the proposed works would have a minor impact on the heritage significance of the station. The coping modifications would result in a variation in treatment along the face. However, with the implementation of appropriate mitigation measures, it is anticipated that the coping modifications would largely be unnoticeable and would not impact on the aesthetic significance of Blackheath Station. It is anticipated that the track slewing would be largely unnoticeable and would not impact on fabric of heritage significance.

Mitigation measures have been provided in this report to ensure the heritage significance of Blackheath Station is preserved during the works.

1 Introduction

1.1 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 New Intercity Fleet - Springwood to Lithgow Rail Corridor Modifications (the Project).

In May 2014, the NSW Government announced it is delivering the New Intercity Fleet, to replace trains carrying customers from Sydney to the Central Coast, Newcastle, Blue Mountains and the South Coast. The introduction of the New Intercity Fleet would allow for the replacement of the older electric train fleets currently used to provide intercity services.

The New Intercity Fleet would:

- provide a more consistent and improved level of customer service for intercity customers
- facilitate the retirement of the two oldest electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity customers.

The Project would involve the following works within the curtilage of the Blackheath Railway Station Group (Blackheath Station):

- modifications to station platforms including adding to and cutting back platform copings (coping modifications) of up to 25 centimetres
- re-positioning of rail tracks (track slewing) in order to accommodate increased loadings and distance to platforms, and ensuring adequate passing distance between trains
- relocation of services where required, and installing additional support where cables are removed from the platform coping overhang
- reinstate finishes such as tactile pavers and/or yellow and white line markers as required at all stations.

1.2 Site location

Blackheath Station is located approximately 120 kilometres west of Central Station in the Blue Mountains, within the Blue Mountains City local government area. Blackheath Station services the Blue Mountains Line and intercity trains.

The Project site encompasses Blackheath Station, which is bound by Station Street to the west and by the Great Western Highway to the east, as shown in Figure 1.

The State Heritage Register curtilage for Blackheath Station is defined as being:

“West: RailCorp property boundary to properties at 141A Station St & 2 Murri St, and along Station Street including landscaped area; East: RailCorp property parallel to Great Western Highway (excluding Shops and Relay Hut); North: 5 metres from the end of platform; South: 5 metres from the Footbridge.”

(NSW Heritage Office, 2008)



Figure 1 Location of Blackheath Station

1.3 Report methodology

This heritage assessment has been undertaken in accordance with the NSW Heritage Division guidelines *Assessing Heritage Significance* (NSW Heritage Office, 2001) and *Statements of Heritage Impact* (NSW Heritage Office, 2002) and includes:

- desktop searches of relevant heritage registers
- review of Project drawings, concept design reports and the following key documents:
 - heritage register listings for Blackheath Station
 - historic plans for Blackheath Station held by the Sydney Trains Plans Room.
- background research into the historical development of Blackheath Station using the historic plans, historical photographs, newspapers and other primary and secondary historical sources as relevant and referenced in Section 3.
- site inspection on 7 April 2017 by AECOM staff assessing the existing Blackheath Station along with the existing character of the Project site and surrounding land uses. Note: all photographs within this report were taken during the site inspection unless otherwise stated
- assessment of the Project against the heritage significance of Blackheath Station. The assessment has been undertaken in light of the conservation processes and principles found in *The Burra Charter: The Australian ICOMOS Charter for Places of Cultural Significance* (2013). *The Burra Charter* is considered to be the pre-eminent guidance document for the management of change for places of heritage significance within Australia
- the Project has also been assessed against the Sydney Trains document *Heritage Platforms Conservation Management Strategy*, as the most relevant management document.

1.3.1 Impact assessment

In order to consistently identify the potential impact of the proposed works, the terminology contained in Table 1 has been referenced throughout this document.

Table 1: Terminology for assessing the magnitude of heritage impact

Grading	Definition
Major	Actions that would have a long-term and substantial impact on the significance of a heritage item. Actions that would remove key historic building elements, key historic landscape features, or significant archaeological materials, thereby resulting in a change of historic character, or altering of a historical resource. These actions cannot be fully mitigated.
Moderate	Actions involving the modification of a heritage item, including altering the setting of a heritage item or landscape, partially removing archaeological resources, or the alteration of significant elements of fabric from historic structures. The impacts arising from such actions may be able to be partially mitigated.
Minor	Actions that would result in the slight alteration of heritage buildings, archaeological resources, or the setting of an historical item. The impacts arising from such actions can usually be mitigated.
Negligible	Actions that would result in very minor changes to heritage items and no significant alteration of its heritage values.
Neutral	Actions that would have no heritage impact.

1.3.2 Sydney Trains Heritage Platforms Conservation Management Strategy

A conservation management strategy (CMS) for heritage platforms managed and maintained by Sydney Trains was prepared by Australian Museum Consulting on behalf of Sydney Trains in 2015¹. This heritage strategy was produced in order to effectively and consistently manage modifications to heritage significant station platforms throughout NSW. The report provides an overview of historic station platforms, a comparative analysis of station platform materials, and produces strategic recommendations for future works at stations to provide consistent responses to heritage management of those stations.

Specific strategic recommendations pertinent to the proposed works are discussed in Section 7.3 of this report.

1.3.3 Report authorship and acknowledgements

This report has been prepared by Chris Lewczak (Senior European Heritage Specialist). Dr Susan Lampard (Senior Heritage Specialist) provided a technical review of the content.

1.4 Report limitations

The purpose of this report is to identify and assess historic heritage and archaeological potential which might be impacted by the Project. Predictions have been made within this report about the probability of subsurface archaeological materials occurring within the site, based on surface indications and environmental contexts. However, it is possible that materials may occur in areas without surface indications and in any environmental context. Any unexpected finds would be managed in accordance with TfNSW's *Unexpected Heritage Finds Guideline* (Transport for NSW, 2015). This report is based on a reference design for the Project.

A summary of the statutory requirements regarding historical heritage is provided in Section 2. The summary is provided based on the experience of the authors with the heritage system in Australia and does not purport to be legal advice. It should be noted that legislation, regulations and guidelines change over time and users of the report should satisfy themselves that the statutory requirements have not changed since the report was written.

¹ Australian Museum Consulting, 2015. *Heritage Platforms Conservation Management Strategy*. Prepared for Sydney Trains.

2 Statutory context

2.1 Commonwealth legislation

2.1.1 Environmental 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 Aboriginal and non-Aboriginal historic cultural heritage items. Under the EPBC Act, protected heritage items are listed on the National Heritage List (NHL) (items of significance to the nation) or the Commonwealth Heritage List (CHL) (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. Blackheath Railway Station Group is identified on the RNE (Indicative Place ID 101177). Any significance ascribed under the listing would be protected under the State Heritage Register listing (refer to Section 2.2.1).

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 EPBC Act), may only progress with approval of the Commonwealth Minister for the Department of the Environment (DotE). An action is defined as a project, development, undertaking, activity (or series of activities), or alteration. An action would also require approval if:

- it is undertaken on Commonwealth land and would have or is likely to have a significant impact on the environment on Commonwealth land
- it is undertaken by the Commonwealth and would have or is likely to have a significant impact.

Blackheath Station has not been identified on the NHL or CHL and therefore the Project would not require a referral under the EPBC Act with respect to heritage.

2.2 State legislation

2.2.1 Heritage Act 1977

The NSW *Heritage Act 1977* (as amended) was enacted to conserve the environmental heritage of NSW. Under Section 32, places, buildings, works, relics, movable 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. Items that are assessed as having State heritage significance can be listed on the State Heritage Register by the Minister on the recommendation of the NSW Heritage Council. Blackheath Railway Station Group has been identified as meeting the criteria for listing on the State Heritage Register as item #01088.

Projects to alter, damage, move or destroy places, buildings, works, relics, movable objects or precincts protected by an IHO or listed on the State Heritage Register require an approval under Section 60. 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 60 of the *Heritage Act 1977*, or an Archaeological Exemption.

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.

The Blackheath Railway Station Group has been identified on the RailCorp Section 170 Heritage and Conservation Register under State Heritage Inventory database (SHI #4801010). 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. Listing on the State Heritage Register overrides this requirement as approval under Section 60 is required.

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

2.2.2 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 gazettal of State Environmental Planning Policies (SEPPs).

2.2.3 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 Project.

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. This Clause is not of relevance to the Project as the Blackheath Station is an item of State heritage and approval under Section 60 of the *Heritage Act 1977* (refer Section 2.2.1) is deemed to adequately protect the heritage significance.

2.3 Local government

Blackheath Station is located within the Blue Mountains City local government area.

2.3.1 Blue Mountains Local Environmental Plan 2015

Part 5, Section 5.10 of the Blue Mountains LEP deals with heritage conservation within the area covered by this LEP. All heritage items listed on the LEP are included in Schedule 5. The Blue Mountains LEP states:

- (1) The objectives of this clause are as follows:
 - a. to conserve the environmental heritage of the Blue Mountains

- b. to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- c. to conserve archaeological sites,
- d. to conserve Aboriginal objects and Aboriginal places of heritage significance.

(2) Development consent is required for any of the following:

- a. demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):
 - i. a heritage item,
 - ii. an Aboriginal object,
 - iii. a building, work, relic or tree within a heritage conservation area,
- b. altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,
- c. disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation would or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- d. disturbing or excavating an Aboriginal place of heritage significance,
- e. erecting a building on land:
 - i. on which a heritage item is located or that is within a heritage conservation area, or
 - ii. on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- f. subdividing land:
 - i. on which a heritage item is located or that is within a heritage conservation area, or
 - ii. on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

Blackheath Railway Station is a listed item of environmental heritage on Schedule 5 of the Blue Mountains LEP, identified as #BH029.

2.4 Heritage registers

Blackheath Station has been identified as holding State significance and is listed on the State Heritage Register, RailCorp Section 170 Heritage and Conservation Register and the Blue Mountains LEP.

Table 2 Summary of listed heritage items within Project site

Heritage list	Items within the Project site	Level of significance	Items adjacent to the Project site	Level of significance	Distance to Project site (metres)
World Heritage List	Nil	n/a	Nil	n/a	n/a
National Heritage List	Nil	n/a	Nil	n/a	n/a
Commonwealth Heritage List	Nil	n/a	Nil	n/a	n/a
Register of the National Estate (non-statutory)	Nil	n/a	Nil	n/a	n/a
State Heritage Register	Blackheath Railway Station Group (State Heritage Register #01188)	State			
Sydney Trains Section 170 Heritage and Conservation Register	Blackheath Bath Railway Station Group (SHI #4801010)	State	n/a	n/a	n/a
Blue Mountains LEP 2015	Blackheath Railway Station (BH029)	State	Station Master's House (BH067) California bungalow (BH146) Bungalow (BH181) Macquarie Monument (BH030) The Gardens War Memorial (BH123) Shops adjacent to the station (BH173) Gardners Inn (BH027) Blackheath Memorial Gardens (BH206)	Local Local Local Local Local Local Local Local Local	20 77 50 30 35 20 78 55



Figure 2 Heritage items within the vicinity of Blackheath Station

3 Historical context

3.1 European crossing of the Blue Mountains

For 25 years the Blue Mountains formed an impenetrable barrier to the expansion of the New South Wales Colony. Convicts seeking to escape were the first to attempt the crossing, but the strategy to following creeks or rivers upstream was unsuccessful when falls or rapids were met. Gregory Blaxland, William Lawson and William Charles Wentworth made the first real head way with their expedition in May 1813 (State Library of New South Wales, 2014). Later that same year, surveyor George Evans found a way through to Bathurst (National Museum of Australia, n.d.). Captain William Cox was tasked by Governor Lachlan Macquarie to form a road along this line, which was to become the basis for the Great Western Highway.

3.2 Railway development

Settlement in the area commenced in 1831 when Andrew Gardiner established the “Scottish Thistle Inn” as a rest stop for travellers. A convict stockade and barracks were erected in the same area in 1840s, but development of a township did not commence until the railway line over the Blue Mountains opened in 1868 (Rickwood, 2008).

A temporary terminus was opened at Blackheath in 1866 to assist with the construction of the railway line. The site was chosen due to the generally level ground and good water supply. The temporary stop was not used for long, but a station was built in 1868 as a ‘halt’ and a platform was constructed in 1869 (NSW Heritage Division, 2012).

The original station consisted of a weatherboard station building, an Out Of shed built on brick platform. To the south of the platform, a weatherboard goods shed was also constructed with access via Station Street. The terminus and siding was constructed on the eastern side of the station alongside the Great Western Highway along with the water tower (Figure 3).

The duplication of the railway line in 1902 saw the construction of a new line on the western side of the existing platform, converting the platform into an island. The platform was lengthened at the northern end (NSW Heritage Division, 2012). The extension of the platform also saw the raising of the platform surface. No plans of this extension have been located to date, but early images of the island platform indicate that it had a gravelled surface with a concrete deck (Figure 4). The 1902 extension was a setback brick vertical wall with a brick corbel (overhang).

Due to the increase in train movements along the Blue Mountains Line, the pedestrian level crossing that was original used to access the platform at the southern end of the station was replaced with a new overhead pedestrian footbridge in 1911 (NSW Heritage Division, 2012).

In 1933, plans were drawn up to extend the platform at the northern end to 650 feet. The plans were not acted on and a new set were prepared and approved in 1955. The extension widened the western side of the existing platform to the north of the station platform building. The extension was constructed from cast *in-situ* concrete with steel reinforcing that supported a concrete deck.

Track, signalling and overhead wiring changes occurred at the station in both 1938 and in 1955. Track works included track slewing to accommodate the platform extension and the moving of track diamonds. Signalling and the overhead wiring along the outside of the rail lines was also relocated to accommodate these changes.



Figure 3 “Blackheath Railway Station” (n.d. - prior to 1898). (Source Blue Mountains City Library)



Figure 4 “Looking along Main Street, Blackheath, from the Railway Station” (1907 postcard). Source: National Museum of Australia. Item Id 1986.0117.4666

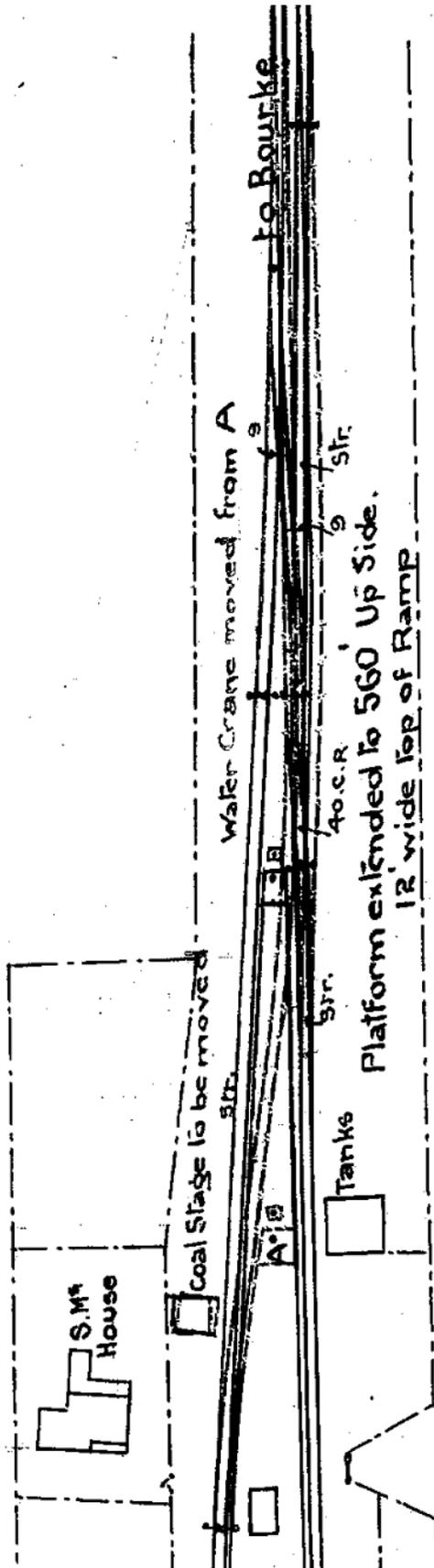


Figure 5 Portion of Plan Number CV0070903 Sydney Trains Plan Room "N.S.W.R. Proposed Extension of Platform at Blackheath (c.1902)" showing first proposed extension of the northern (country) end.

4 Physical description

4.1 Introduction

This section provides a physical description of Blackheath Station to provide an understanding of the physical elements that contribute to Blackheath Station's heritage significance. The Project does not include modifications to any of the buildings. Therefore, these items are not described here. A full description of these items can be found within the SHR listing².

4.2 Station platform

4.2.1 Description of platform

Blackheath Station has a single island platform, accessed via both a level crossing and pedestrian footbridge at the platform's southern end. The platform contains only one building, the weatherboard station building (1898). This building would not be impacted by the proposed works. The Station platform services platform 1 on the eastern side facing the Great Western Highway and platform 2, fronting Station Street. Platforms 1 and 2 are between 197 and 198 metres long and ten metres wide.

4.2.2 Platform coping

There are three main coping types present at Blackheath Station:

- The original 1899 portion of the platform is constructed of a straight vertical brick coping wall profile with no overhang (Figure 7 and Figure 8).
- The platform was extended at the northern end in 1902 with a setback brick faced coping and a stepped out vertical brick overhang that finished flush with the width of the original brick coping (Figure 9).
- Another extension was added to the far northern end and the southern end of the station in 1955 (Figure 10). The platform at the northern end is an in-situ cast concrete retaining wall set back from the outside of the platform. The deck of the platform appears to be a series of precast concrete panels supported by an iron frame. The height of the platform deck appears to have been raised by two courses of brick at the same time the first brick platform extension undertaken in 1902.

A sketch showing the locations of the platform coping types is presented in Figure 11.

² <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5012100>.



Figure 7 View north of 1898 section of platform 1 showing two courses of brick additions above the original



Figure 8 Profile of the original 1898 platform 1 coping (looking west)



Figure 9 View (looking west) of junction between 1898 platform and 1902 platform extension (right of image)



Figure 10 View (looking west) of junction between 1902 platform extension and 1955 platform extension (right of image)



Figure 11 Plan sketch showing the changes in platform coping types (1898, 1902 and 1955)

4.3 Rail corridor

The track consists of sleepers, ballast and rail (Figure 12). It is noted that the sleepers are concrete throughout the Blackheath Station precinct, indicating they have been replaced as the initial construction of the line would have been on wooden sleepers. It is anticipated that these items are not individually or collectively significant, having undergone extensive modifications and replacements since the lines were laid in 1898.



Figure 12 View south of tracks (platform 2). Note concrete sleepers

5 Significance assessment

5.1 Assessment criteria

5.1.1 Significance assessment criteria

In order to understand how a development would 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. The process of assessing heritage significance is outlined in the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001) which is 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.

A heritage item can be identified as being 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 the guideline *Assessing Heritage Significance*, an item would be considered to be of State significance if it meets two or more criteria at a State level, or of local heritage significance if it meets one or more of the criteria outlined in Table 3. The Heritage Council requires 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.

Table 3 Significance assessment criteria

Criterion	Inclusions/exclusions
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 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	Inclusions/exclusions
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).	An item is excluded if it is not rare or if it is numerous, but under threat. The item must demonstrate a process, custom or other human activity that is in danger of being lost, is the only example of its type or demonstrates designs or techniques of interest.
Criterion (g) – an item is important in demonstrating the principal characteristics of a class of NSW’s (or local area’s): <ul style="list-style-type: none"> • cultural or natural places 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.

5.1.2 Significance grading

This report includes an assessment of the relative contributions of individual components of Blackheath Station to its overall heritage value. Components are assessed according to the grading in Table 4.

Table 4 Grading of significance. Source: NSW Heritage Office, 2001

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
Low	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

5.2 Assessment of significance for Blackheath Railway Station Group

The State Heritage Register significance assessment for Blackheath Station is included in Table 5.

Table 5 State Heritage Register significance assessment of the Blackheath Railway Station Group (NSW Heritage Division, 2013)

Criterion	Assessment
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).	Blackheath Railway Station is of historical significance as part of the early construction phase of railway line duplication on the upper Blue Mountains demonstrating the technological and engineering achievements in the railway construction at the end of the 19th century.
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).	No assessment provided against this criterion.
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).	Blackheath Railway Station is a good representative example of a Federation free classical railway station. The building predates the issue of standard plans, but is similar to a standard design known as Type 11 (standard A8-A10) island platform buildings. It is one of only two timber railway stations in the Blue Mountains and adapts the standard elements found in other Blue Mountains island platforms such as the wide cantilevered awning supported on steel brackets to a timber construction.
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.	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.
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.	Blackheath Railway Station has limited research potential due to its partial reconstruction and being an example of well documented type of railway structures from this period.
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).	Blackheath Station building is a rare timber 'type 11' station building, and is one of two timber railway stations in the Blue Mountains, the other is Katoomba.
Criterion (g) – an item is important in demonstrating the principal characteristics of a class of NSW's (or local area's): <ul style="list-style-type: none"> • cultural or natural places cultural; or • natural environments. 	The Station is a representative example of a group of stations associated with the construction and duplication of the railway across the Blue Mountains. The footbridge is also a representative example of a standard steel beam structure with trestle supports dating from the early 1900s.

5.2.1 Statement of significance

The statement of significance reads:

“Blackheath Railway Station is of state significance as part of the early construction phase of railway line duplication on the upper Blue Mountains, demonstrating the technological and engineering achievements in railway construction at the end of the 19th century. The building is significant for its contribution to the scenic qualities of the Blue Mountains railway landscape, forming part of a cohesive group of intact stations along the line. The platform building at Blackheath station is an excellent representative example of a standard Federation era railway building and is one of only two timber railway buildings along the Blue Mountains line. Partial reconstruction of the building following a fire in 1985, together with the restoration of Mortuary station, marked the beginning of heritage management in the NSW railways. The place is also significant for its local setting within well landscaped gardens and adjacent to the historic town centre.

The Blackheath Railway Station Shops have historical significance as an important and distinctive component of the precinct around Blackheath Railway Station. The buildings have some aesthetic significance as small Federation-era buildings with similarities in scale, detail, and form and are important elements in the local townscape. The buildings are also of significance for their associations with the prominent and influential identity Tomas Rodriguez, former Station Master at Blackheath Railway Station.”

(NSW Heritage Division, 2012)

The significance assessment and statement of significance will be used to assess whether the Project would impact on the significance of Blackheath Station in Section 7.

5.2.2 Station components significance

Table 6 includes an assessment of the relative contributions of individual components of Blackheath Station to its overall heritage value.

Table 6 Grades of significance of components of Blackheath Station

Grading	Component
Exceptional	Station building (1898) Island platform (1898) – including the 1902 extension and excluding 1955 modifications
High	Footbridge (1911, 1990)
Moderate	Island platform – 1955 modifications
Low	Platform landscape plantings
Intrusive	Nil

5.3 Adjacent and overlapping heritage items

Section 2 identified a number of listed heritage items located within 50 metres of Blackheath Station. The statements of significance for these items are provided in Table 7 below, against which the impact will be assessed in Section 7.

Table 7 Adjacent and overlapping heritage items at Blackheath Station

Heritage item	Listing	Significance	Description
Station Master's House	The Station Master's House is listed on the Blue Mountains LEP (BH067)	Local	The Stationmaster's cottage, Blackheath is associated with the construction of the railway across the Blue Mountains and village.
California bungalow	This California bungalow is listed on the Blue Mountains LEP (BH146)	Local	This house is listed as a representative example of an Inter War style building and contributes to Station Street.
Bungalow	The Bungalow is listed on the Blue Mountains LEP (BH181)	Local	This house is associated with the Byron Family, which has been well known and active in Blackheath since 1920s. The house is largely intact and original.
Macquarie Monument	The Macquarie Monument is listed on the Blue Mountains LEP (BH015)	Local	The Macquarie monument has historic significance at the local level as a reminder of one of the earliest events in the European history of Blackheath.
The Gardens War Memorial	The Gardens War memorial listed on the Blue Mountains LEP (BH123)	Local	The Blackheath War Memorial is a finely proportioned example of an Inter War Stripped Classical monument that was designed by the significant architect and soldier Sir Charles Rosenthal which has been well adapted to provide memorials to later wars.
Shops adjacent to the station	The Shops adjacent to the Blackheath Station are listed on the Blue Mountains LEP (BH173)	Local	Two building that may have association with promoting Blackheath as a tourist destination and association with local identify Tomas Rodriguez.
Gardners Inn	The Gardners Inn is listed on the Blue Mountains LEP (BH027)	Local	Gardner's Inn is a good example of the Inter War Mediterranean style, which is relatively uncommon in the architecture of Inter War hotels.
Blackheath Memorial Gardens	The Blackheath Memorial Gardens are listed on the Blue Mountains LEP (206)	Local	Blackheath Memorial Gardens is a local community resource comprising of six land parcels or reserved crown land and covers approximately 11 hectares. The Park is made up mostly of landscaped parkland, some bushland and the camping area attached to the Caravan park.
Community Centre	The Blackheath Community Centre is listed on the Blue Mountains LEP (BH171)	Local	The Community Centre has been an important community facility, as a focus of learning and place of recreation and gathering in Blackheath for nearly a century.

6 Archaeological assessment

The significance assessment associated with the State Heritage Register listing does not identify Blackheath Station as holding archaeological significance or potential. In addition, the works at Blackheath Station would be limited to platform coping modifications, track slewing and the use of a temporary construction compound (located outside of the State Heritage Register curtilage). These works would not require any excavations or ground disturbing activities and therefore further analysis of the archaeological significance or potential is not warranted at this time.

7 Impact assessment

7.1 Proposed works

7.1.1 Overview

The proposed works within the curtilage of Blackheath Station would include the following:

- modifications to station platforms including adding to and cutting back platform copings (coping modifications) of up to 25 centimetres
- re-positioning of rail tracks (track slewing) in order to accommodate increased loadings and distance to platforms, and ensuring adequate passing distance between trains
- relocation of services where required, and installing additional support where cables are removed from the platform coping overhang
- reinstate finishes such as tactile pavers and/or yellow and white line markers.

The proposed works are shown in drawing SK-H1101 (Rev B) and SK-H1102 (Rev A). The extent of the modifications the platform copings and track slewing are indicated in Table 8 to Table 9 and Table 10 to Table 11 respectively.

7.1.2 Platform coping modifications

To enable the passage of the New Intercity Fleet through Blackheath Station and maintain a safe gap, modifications to the coping (the edge of the platform) have been identified as necessary.

Platform coping cutbacks would be undertaken using a road saw or a demolition saw. The type of saw would depend on the depth of cut (roads saws have a larger blade so can cut deeper), and the safety controls that the contractor selects. The process for both saw types would be the same:

- alignment of cut to be marked out on the platform
- any services that may be under the platform coping cantilever (overhang) would need to be removed, and the surplus coping supported to prevent uncontrolled fall
- using one of the above saws, the concrete/brick would be cut along this alignment
- any locations where the new coping edge has imperfections or exposed reinforcement, will need to be treated with a thin grout / epoxy.

In some instance it would be necessary to extend the coping to reduce the gap between the trains and platform. It may be necessary to erect formwork and pour concrete into sections where greater modifications are required. The process would involve:

- cut back the existing edge by about 50 millimetres
- application of a corrosive inhibiting compound to the existing exposed cut steel
- drilling of holes for anchors, surveying and marking coping set-out
- installation of temporary timber framework and the use of packers as required to ensure formwork does not project past the coping edge
- installation of new galvanised steel plates and anchors
- installation of infill repair mortar

- trowelling a 15 millimetre deep joint in the new repair mortar as a continuation of the existing platform slab joints
- installation of tactiles and painting.

The works include the removal of up to 44 millimetres off the face of the corbelled coping and the addition of up to 71 millimetres to the coping on platform 1. On platform 2, up to 21 millimetres of coping is proposed to be removed and the coping would need to be extended by up to 92 millimetres. The proposed coping modifications are shown in Table 8 and Table 9. Negative values indicate where cutback is necessary, while positive values indicate the addition of concrete.

There is a +/- 20 millimetre variance associated with coping modifications, however, where a positive value of less than five millimetres is identified, this work may not be completed. All values would be confirmed during detailed design and may be subject to change.

Table 8 Proposed coping modifications to platform 1

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
120616	71	120720	15
120620	40	120730	5
120630	3	120740	-5
120640	0	120750	12
120650	2	120760	13
120660	18	120770	30
120670	28	120780	5
120680	33	120790	4
120690	31	120800	-44
120700	24	120810	-2
120710	17	120820	60

Table 9 Proposed coping modifications to platform 2

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
120630	92	120740	8
120640	8	120750	15
120650	4	120760	23
120660	23	120770	24
120670	16	120780	23
120680	23	120790	21

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
120690	20	120800	11
120700	22	120810	0
120710	-3	120820	-18
120720	10	120822	-21
120730	16		

7.1.3 Track slewing

Track slewing refers to horizontal alterations in the rail positioning to ensure adequate distance to platforms, and passing distance between trains. The works would include the temporary disconnection of signalling and communications infrastructure, re-positioning of the tracks and the replacement of ballast, headstock and other items as required. The works would result in the track associated with platform 1 been moved up to 105 millimetres. The works to the track associated with platform 2 would involve the movement of the tracks by up to 78 millimetres. The extent of the modifications are shown in Table 10 and Table 11.

Table 10 Proposed track slewing to platform 1

Kilometerage	Horizontal difference. Positive value = pull away from platform	Kilometerage	Horizontal difference. Positive value = pull away from platform
120616	100	120720	102
120620	94	120730	99
120630	92	120740	88
120640	89	120750	77
120650	90	120760	79
120660	90	120770	84
120670	87	120780	90
120680	90	120790	92
120690	88	120800	95
120700	92	120810	103
120710	89	120820	105

Table 11 Proposed track slewing to platform 2

Kilometrage	Horizontal difference. Positive value = pull away from platform	Kilometrage	Horizontal difference. Positive value = pull away from platform
120617	25	120720	68
120620	31	120730	68
120630	51	120740	69
120640	74	120750	72
120650	67	120760	72
120660	75	120770	71
120670	60	120780	66
120680	67	120790	65
120690	78	120800	65
120700	78	120810	62
120710	75	120820	67

7.1.4 Temporary construction compound

A temporary construction compound would be established in the commuter car park located to the south of Blackheath Station (refer Figure 2). The temporary construction compound would cover a portion of the bituminised parking. The temporary construction compound is located outside of the State Heritage Register curtilage for Blackheath Station. Additionally, a small temporary laydown area may be required on the platform during works. The laydown area would consist of temporary fencing covered in a neutral hoarding material.

Activities within the temporary construction compound would not involve disturbance of the existing bitumen or gravel surfaces. As such the impacts associated with the temporary construction compound are limited to the temporary interruption of visual sightlines towards Blackheath Station. This impact is considered negligible due to its temporary nature.

7.2 Project justification and options

7.2.1 Justification

Improving transport customer experience is a focus of the NSW Government's transport initiatives. Trains are an important component of the transport system and, as such, play a critical role in shaping the customer's experience and perception of public transport. The introduction of the New Intercity Fleet would allow for the replacement of the existing intercity trains that are approaching the end of their service life and are experiencing a number of adverse operational impacts including declining reliability, lower availability (due to maintenance and failures), higher maintenance costs and lower customer amenity. The New Intercity Fleet would provide a better experience for public transport customers by delivering an accessible, modern, safe and comfortable travel experience.

The NSW Government's decision to introduce the New Intercity Fleet would result in a number of changes from the existing fleet increasing the length of the trains up to 205 metres and an increased train width to cater for growing customer patronage and improved customer comfort.

Modifications to existing rail infrastructure are essential to accommodate and operate the new trains while meeting appropriate safety and design standards. It should be noted that a number of existing trains cannot run on the Blue Mountains Line and work to standardise the line is needed, regardless of the New Intercity Fleet.

The Project includes essential enabling works that would facilitate the safe and reliable operation of New Intercity Fleet between Springwood and Lithgow on the Blue Mountains Line. The Project would also allow the Blue Mountains Line to be compatible with the existing electrified rail network.

7.2.2 Project options to achieve necessary width clearances

TfNSW commissioned the development of a series of design reports for the early development of the Project. The outcomes of these assessments then informed the scope of works needed to allow for the safe operation of the New Intercity Fleet along the Blue Mountains Line. Options for enabling the safe and efficient operation of the New Intercity Fleet on the Blue Mountains Line were developed following a succession of workshops with TfNSW, relevant stakeholders (including Sydney Trains and NSW TrainLink) and the project team.

TfNSW assessed four options to achieve necessary width clearances for the Proposal. These options are provided in Table 12.

Table 12 Summary of width clearance design options

Option	Design detail	Options discussion
1 – Track slewing only	Movement of rail laterally within the rail corridor to provide necessary clearances from nearby objects	The slewing of track would not impact heritage significant fabric or heritage significant views of Blackheath Station. This would result in neutral physical and visual impacts to the platform coping at Blackheath Station. This option was discounted because widespread track slewing would result in significant readjustments of existing overhead wiring structure configurations throughout the Blue Mountains Line.
2 –Coping modification only	Leaving existing track in its present configuration and ensuring necessary clearances by reducing platform width. Also involves the removal of intervening or overhanging objects (specifically, the canopies of platform buildings)	This option would involve a greater amount of removal of existing platforms and station buildings than the preferred option (Option 3). This option would result in the trimming of the canopies of the island platform station building at Blackheath Station, which would result in greater heritage impacts.
3 – Combination of track slewing and coping modification (the preferred option)	Design detail for this option has been provided in Section 7.1	This option presents a balanced approach between potentially deep platform and building excisions in Option 2, and the necessity to readjust overhead wiring structures implicit in Option 1. As described in Section 7.4, this option would result in a minor physical and minor visual impact to the heritage significance of Blackheath Station.
4 – Do nothing option	No modifications to platform edges or existing track configuration	Due to the larger size of the New Intercity Fleet, the do nothing option would fail to meet safety and operational standards for the introduction of the new fleet. This option would fail to meet the objectives of the Project.

Further details regarding the need for the project, the design development and project options are provided in Section 2 of the *New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications Review of Environmental Factors* (AECOM 2017).

7.3 Heritage Platforms Conservation Management Strategy

The works have been assessed against the *Heritage Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015). This document is considered to replace *Conservation Guide: Railway Station Platforms* (Office of Rail Heritage, 2013). The strategy was developed in order to protect heritage platforms from incremental changes and works associated with large scale renewals. An assessment against the relevant strategies is provided in Table 13. Of relevance to the current Project are strategies 1, 2, 3, 5, 7, 8, 11 and 12,. Due to the minor nature of the Project some of these strategies are not applicable.

Section 9 provides some recommendations to ensure compliance with the Heritage Platforms Conservation Management Strategy.

Table 13 Assessment of Project against the Heritage Platforms Conservation Strategy (Blackheath)

Strategy	Comment
<p>Strategy 1: <i>Manage and operate heritage platforms in a way that recognises the heritage values of each place. This includes the heritage value of each platform, its associated elements, and the overall heritage value of its station or place</i></p>	<p>The heritage value of the platform has been recognised through the design process and by limiting the impacts to the Blackheath Station. Track slewing has been used to minimise the extent of the coping modifications. Reliance on coping modifications alone to achieve the required width clearance may have resulted to impacts to additional heritage items, such as to awnings associated with the station platform buildings. As discussed in Section 7.2, the implementation of both track slewing and coping modifications achieves the necessary width clearances, while reducing the level of impact to heritage fabric and the need to relocate other structures, principally overhead wiring stanchions, along the rail corridor..</p>
<p>Strategy 2: <i>Conserve a representative sample of principal platform types, and other key aspects of heritage platform design and arrangement in use within the Sydney Trains managed railway network</i></p>	<p>It is acknowledged that the New Intercity Fleet Project as a whole would result in alterations to six stations listed on the State Heritage Register (Katoomba, Lithgow, Medlow Bath, Eskbank, Blackheath and Lawson) and nine stations listed on the Sydney Trains Section 170 Heritage and Conservation Register (Bell, Bullaburra, Falconbridge, Hazelbrook, Leura, Linden, Newnes Junction, Wentworth Falls and Woodford Stations). Within the context of the 626 platforms identified within the Heritage Platforms Conservation Management Strategy, it is considered that there would remain a representative sample of unmodified principal platform types.</p>
<p>Strategy 3: <i>Where there are numerous, good representative examples of a type, more significant heritage platforms with good integrity should be prioritised for proactive conservation</i></p>	<p>The Project does not include proactive conservation and it is therefore considered that this strategy is not relevant.</p>
<p>Strategy 5: <i>Conserve and manage the fabric of heritage platforms in accordance with statutory requirements and heritage best practice</i></p>	<p>The impacts have been minimised by limiting the works to the coping through the implementation of a combination of slewing the tracks and coping modifications. The proposed works would blend into the Blackheath Station environment due to the fabric and surface treatments, as discussed below.</p>
<p>Strategy 7: <i>Retain and conserve original or other historic platform detailing and surface features where these contribute to the heritage significance of the platform and the station precinct</i></p>	<p>The modification of the coping would remove both original and non-original platform detailing, subject to detailed design. The brick coping is considered to be significance fabric associated with the island platforms, and the modifications would result in a loss. This is unavoidable as leaving the copings intact may have resulted in greater impacts to other aspects of the stations, modifications to awnings associated with the significant station building.</p>

Strategy	Comment
<p>Strategy 8: <i>Major change should be managed through an integrated planning process, which considers measures to avoid, minimise, or mitigate adverse impacts on the heritage significance of the platform and the broader place at each stage of the process</i></p>	<p>As discussed in Section 7.2, the planning process considered the heritage significance of Blackheath Station and a combination of track slewing and coping modification was implemented, which avoided potentially greater adverse impacts, such as modifications to the awning of the station associated with the significant station building. The integrated planning process included consultation with Sydney Trains and NSW TrainLink.</p>
<p>Strategy 11: <i>Heritage opportunities and constraints should be carefully considered throughout the options analysis and design process</i> <i>Consultants'</i></p>	<p>As discussed in Section 7.2, the heritage constraints of Blackheath Station has been carefully considered, with the option selected that minimises impacts to fabric. It is considered that the Project fulfils this strategy.</p>
<p>Strategy 12: <i>Make a record of existing structural designs, fabric, and uses before changes are made</i></p>	<p>An archival recording would be prepared in accordance with guidelines <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (NSW Heritage Office, 2006) prior to the commencement of works associated with the Project.</p>

7.4 Heritage impact assessment

7.4.1 Impacts to significance

Blackheath Station has been identified as holding State significance. The assessed significance has been outlined in Section 5.1.2. Table 14 assesses the impact against each of the criterion.

Table 14 Assessment of heritage impact of Project against State Heritage Register criterion for the Blackheath Station Group

Criterion	Coping modifications	Track slewing
<p>a) – Historical significance: Blackheath Railway Station is of historical significance as part of the early construction phase of railway line duplication on the upper Blue Mountains demonstrating the technological and engineering achievements in the railway construction at the end of the 19th century.</p>	<p>The modifications to the coping would not impact on the historical significance of Blackheath Station as it is anticipated that the Project would mainly require minor additions to the platform coping with only minimal cutting required. Cutting would be required in the section of 1955 platform of up to 44mm (subject to detailed design) which is of moderate significance. Cutting requirements in the 1898 platform section would be limited to 5mm (subject to detailed design); and no cutting is anticipated in the 1902 section of platform. While the 1898 platform is considered to be of exceptional heritage significance, this change would be very small and is considered to be a minor change.</p>	<p>It is considered that the historical significance is held in the extant 1898 structures at Blackheath Station. Therefore the track slewing would not impact on the historical significance as the tracks have previously been replaced and slewed and therefore no longer reflect the early construction phases associated with the duplication of the Blue Mountains Line.</p>
<p>b) – Associative significance: No assessment provided against this criterion.</p>	<p>The Project would not result in any impacts against criterion b, as no associative significance has been identified at Blackheath Station.</p>	
<p>c) – Aesthetic significance: Blackheath Railway Station is a good representative example of a Federation free classical railway station. The building predates the issue of standard plans, but is similar to a standard design known as Type 11 (standard A8-A10) island platform buildings. It is one of only two timber railway stations in the Blue Mountains and adapts the standard elements found in other Blue Mountains island platforms such as the wide cantilevered awning supported on steel brackets to a timber construction. The place is also significant for its local setting within well landscaped gardens and adjacent to the historic town centre.</p>	<p>The modifications to the coping are considered to be minor. It is anticipated that they would largely be unnoticeable and would not impact on the aesthetic significance of Blackheath Station. It is acknowledged that the cutting back of the coping and addition of concrete would result in a variation in treatment along the face. It is therefore recommended that the length of the corbeled brickwork be rendered with concrete to create a consistent presentation.</p>	<p>The relocation of the tracks are negligible. It is anticipated that they would be unnoticeable to the general public and by their nature could not impact on the aesthetic significance of Blackheath Station, being indiscernible.</p>
<p>d) – Social significance: 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.</p>	<p>The proposed works are unlikely to reduce the local community's sense of place or reduce their connection to the past as it is considered they would largely go unnoticed and would not attenuate the use of Blackheath Station as a means of public transport.</p>	

Criterion	Coping modifications	Track slewing
<p>e) – Research: Blackheath Railway Station has limited research potential due to its partial reconstruction and being an example of well documented type of railway structures from this period.</p>	<p>The proposed works are unlikely to reduce the research ability of the Blackheath Station. It has previously been recognised the current station is an example of a station that is well documented.</p>	
<p>f) – Rarity: Blackheath Station building is a rare timber 'type 11' station building, and is one of two timber railway stations in the Blue Mountains, the other is Katoomba.</p>	<p>The proposed works would not impact on the assessed rarity of Blackheath Station as the Project would not alter the element identified as being rare, i.e. the 'type 11' station building.</p>	
<p>g) – Representative: The Station is a representative example of a group of stations associated with the construction and duplication of the railway across the Blue Mountains. The footbridge is also a representative example of a standard steel beam structure with trestle supports dating from the early 1900s.</p>	<p>The modification to the coping and track slewing would not have an impact on the station building or the footbridge, elements identified as holding representative significance. It is therefore considered that the coping modifications would not impact on the assessed significance under this criterion.</p>	

7.5 Adjacent heritage items

Section 2 identified heritage items within 50 metres of Blackheath Station. In reviewing the works, it is clear that there would be no noticeable visual impacts from the works to the adjacent heritage items. Therefore, there will be no impact to the heritage significance of these items.

7.6 Cumulative impact assessment

While this document assesses the impacts of the New Intercity Fleet works on Blackheath Station in isolation, it is recognised that works will be necessary at other stations along the Blue Mountains Line, which are listed in Table 15.

All of these stations are listed on the RailCorp Section 170 Heritage and Conservation Register, with six stations also listed on the State Heritage Register.

Table 15: Stations included in the New Intercity Fleet project

Station	SHR?	Station	SHR?
Faulconbridge	No	Katoomba	Yes
Linden	No	Medlow Bath	Yes
Woodford	No	Blackheath – subject to this assessment	Yes
Hazelbrook	No	Bell	No
Lawson	Yes	Newnes Junction (not in use)	No
Bullaburra	No	Eskbank (not in use)	Yes
Wentworth Falls	No	Lithgow	Yes
Leura	No		

The original development of the Blue Mountains Line out to Lithgow was largely undertaken in the 1860's. Stations were developed and added at later dates in response to ongoing residential development and the expansion of businesses. Many of the original timber items have since been replaced with brick and concrete structures, however there are a number of elements within each curtilage that retain their original heritage value and any works along the length of the line has the potential for cumulative impacts.

Since there original construction there has been a number of alterations and modifications to each station within the Project site. The Project would result in coping impacts (both cutbacks and addition) to every station along lengths of both the original fabric as well as fabric that has been previously modified. Where works are required, it has been recommended that the bricks show the original arrangement and give a clean outer appearance. As a result, the overall visual appearance and fabric arrangement would largely be retained, minimising any cumulative impacts. Through an assessment of the works, impacts to the heritage settings have been determined to be negligible to minor.

In the case of platform extensions at Katoomba Station and Lithgow Station, the works are unlikely to have a substantial cumulative impact as the design has located the extensions along sections of the platform that have been previously modified and are relatively minor in

length when compared to the platform as a whole. As a result, the cumulative impacts from the platform extensions are anticipated to be negligible to minor.

Track slewing, overhead wiring system modification, signalling works and earthworks have been assessed as not contributing to the heritage of each of the station areas and as a result, no cumulative impacts would result from these works.

The additional elements that largely characterise the Blue Mountains Line (station buildings, signalling boxes, stabling yards and other structures that form part of the listing) would not be impacted as a result of the Project. The nature and visual character of the stations within the context of the greater Blue Mountains would be retained and any impacts would be largely temporary. As a result, given the nature of the works, the extent of physical impacts and mitigation measures proposed, cumulative impacts as a result of the Project are not anticipated.

Stations are active heritage sites that need to be adapted and modified to meet modern customer expectations. It is a balancing act to meet these expectations while preserving the fabric that contributes to the heritage significance of the stations.

7.7 Summary of heritage impacts

In summary, it is concluded that the proposed works would have a negligible impact on the heritage significance of Blackheath Station. It is acknowledged that the cutting back of the coping and addition of concrete would result in a variation in treatment along the face. It is therefore recommended that the length of the corbeled brickwork be rendered to create a consistent presentation. With this mitigation measure, it is anticipated that the coping modifications would largely be unnoticeable and would not impact on the aesthetic significance of Blackheath Station. It is anticipated that the track slewing would be largely unnoticeable and would not impact on fabric of heritage significance.

While limited impacts to the heritage significance of Blackheath Station have been identified, a Statement of Heritage Impact has been prepared and can be found in Section 8. It is considered that this heritage assessment clearly demonstrates there would be minimal impacts to the significance of Blackheath Station associated with the Project.

Table 16 Summary of heritage impacts

Proposed work	Impact to fabric	Visual impact	Impact to archaeological remains	Impacts to adjacent heritage items
Modification of platform coping	Minor	Negligible	Nil	Nil
Slewing of track within the rail corridor	Negligible	Negligible	Nil	Nil

8 Statement of Heritage Impact

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

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 based on the type of Project. The Project involves minor modifications to the coping and track slewing. The guideline suggests the following questions be used to direct discussion in relation to these two modification types: minor partial demolition, relating to the impact to coping and track slewing.

These questions are addressed, based on the impacts to the heritage significance of Blackheath Station, as outlined in Section 7.

Table 17 Statement of heritage impact for Blackheath Railway Station Group

Development	Discussion
<p>What aspects of the Proposal respect or enhance the heritage significance of the study area?</p>	<p>The impact of the Project on the heritage significance of Blackheath Station is negligible to minor. The option to use both track slewing and coping modifications to achieve the required width clearances is considered to respect the heritage significance of the study area in that it avoided potential additional impacts to the platform station building awnings.</p>
<p>What aspects of the Proposal could have a detrimental impact on the heritage significance of the study area?</p>	<p>The coping modifications would result in a patched appearance along the length of the coping. This has been mitigated by recommending the entire length of the coping be rendered to present a consistent appearance.</p>
<p>Have more sympathetic options been considered and discounted?</p>	<p>Due to the nature of platforms, they must be in close proximity to the carriage. TfNSW commissioned the development of a series of design reports for the early development of the Project. The outcomes of these assessments then informed the scope of works needed to allow for the safe operation of the New Intercity Fleet along the Blue Mountains Line. Options for enabling the safe and efficient operation of the New Intercity Fleet on the Blue Mountains Line were developed following a succession of workshops with TfNSW, relevant stakeholders (including Sydney Trains and NSW TrainLink) and the project team. The following options were considered to obtain the required width clearances:</p> <ul style="list-style-type: none"> • slewing only • coping modifications only • combination of both slewing and coping modifications (with ASA concessions) • do nothing. <p>The Project includes essential enabling works that would facilitate the safe and reliable operation of New Intercity Fleet between Springwood and Lithgow on the Blue Mountains Line. The Project would also allow the Blue Mountains Line to be compatible with the existing electrified rail network</p>

9 Conclusion and recommendations

Blackheath Station has been identified as holding State significance and is listed on the State Heritage Register (#01180), RailCorp Section 170 Heritage and Conservation Register and the Blue Mountains LEP.

An assessment of the Project against the heritage significance of Blackheath Station concluded that the proposed works would have a minor impact on the heritage significance of the station. The coping modifications would result in a variation in treatment along the face. However, with the implementation of appropriate mitigation measures, it is anticipated that the coping modifications would largely be unnoticeable and would not impact on the aesthetic significance of Blackheath Station. It is anticipated that the track slewing would be largely unnoticeable and would not impact on fabric of heritage significance.

The following are recommendations for the Project:

- A Section 60 permit under the *NSW Heritage Act 1977* would be required prior to impacts occurring within the Blackheath Railway Station Group curtilage.
- A heritage conservation architect should provide ongoing heritage and conservation advice throughout detailed design and any subsequent relevant design modifications. The nominated heritage architect should provide advice regarding the scope of works and ensure that the final design adheres to the *Sydney Trains Heritage Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015).
- The nominated heritage conservation architect would be responsible for ensuring that material finishes and heritage recommendations provided in this Statement of Heritage Impact are enacted during detailed design and construction works.
- It is not anticipated the works would weaken or undermine the integrity of the platform. Further structure integrity investigations will be undertaken as part of the detailed design process. The results of the integrity investigations should be reviewed by the heritage conservation architect.
- It is recommended that the length of the corbeled brickwork coping be rendered, as appropriate and advised by the heritage conservation architect, to create a consistent presentation.
- The existing platform retaining wall would be archivally recorded prior to works. Archival recording of elements of Blackheath Station that would be impacted would be undertaken in accordance with the relevant NSW Heritage Council guidelines. These archival records and design plans for the proposed works would be lodged with Sydney Trains and Heritage Division for their records.
- The materials used should be compatible with the heritage brickwork and concrete and not adversely impact the material.
- The concrete coping of the proposed platform extensions and the mortar associated with the brick facade used in the works should adhere to Strategy 7 of the *Heritage Platforms Conservation Management Strategy*.
- The Construction Environmental Management Plan (CEMP) must include stop work procedures in accordance with TfNSW's Unexpected Heritage Finds Guideline (Transport for NSW, 2015) to manage activities in the unlikely event that intact archaeological relics or deposits are encountered.
- A heritage induction should be provided to all on-site staff and contractors involved in the Project. The induction should clearly describe the heritage constraints of the site.

References

- AECOM. (2017). *New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications Project Review of Environmental Factors*
- Australian Museum Business Services. (2015). *Heritage Platforms Conservation Management Strategy*
- Blue Mountains City Library (n.d.). Blackheath Railway Station. Retrieved from https://library.bmcc.nsw.gov.au/client/en_AU/search/asset/1011913/0
- ICOMOS (Australia). (2013). *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (Report)*. Burwood, Victoria: Australia ICOMOS. Retrieved from <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>
- National Museum of Australia. (n.d.). Blue Mountains crossing. Retrieved April 21, 2017, from http://www.nma.gov.au/online_features/defining_moments/featured/blue_mountains
- NSW Heritage Division. (2012). Blackheath Railway Station Group. Retrieved June 26, 2017, from <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5011931>
- NSW Heritage Office. (2001). *Assessing Heritage Significance (Guidelines)*. Parramatta. Retrieved from <http://www.heritage.nsw.gov.au/docs/assessingheritagesignificance.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
- Rickwood, P. (2008). Blackheath, *Dictionary of Sydney*. Retrieved June 26, 2017, from <http://dictionaryofsydney.org/entry/blackheath>
- State Library of New South Wales. (2014). *Crossing the Blue Mountains*. Retrieved April 20, 2017, from http://www2.sl.nsw.gov.au/archive/discover_collections/history_nation/exploration/blue_mountains/
- Transport for NSW. (2015). *Unexpected Heritage Finds Guideline*. Sydney, Australia: Transport for NSW