

New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications

Katoomba Station Statement of Heritage Impact

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Katoomba Station Statement of Heritage Impact

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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 passengers
- facilitate the retirement of the two oldest electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity passengers.

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

- State Heritage Register (SHR) as “Katoomba Railway Station Group and yard”. SHR# 01174,
- *RailCorp Section 170 Heritage and Conservation Register* SHI# 4801008
- Heritage schedule of the *Blue Mountains Local Environmental Plan 2015* (Blue Mountains LEP), K044.

Katoomba Station is located within two heritage conservation areas of local significance:

- ‘Transport Corridor, Katoomba’, K065
- ‘Central Katoomba Urban Conservation Area’, K159.

The proposed works at Katoomba Station include the following:

- extending the eastern end of the platform 1 by four metres
- modifications to station platform edges (also known as platform coping)
- re-positioning of rail tracks (track slewing) along the length of the corridor
- signalling works to accommodate the new track position and platform modifications
- installation of new security fencing, lighting and communications equipment
- removal and replacement of one overhead wire stanchion, which is located within the area of the proposed extension to Platform 1.

Six heritage items have been identified adjacent to Katoomba Station, none of which would be adversely impacted by the Project.

An assessment of the proposed works against the heritage significance of Katoomba Station concluded that the proposed works would have a minor impact on the heritage significance of Katoomba Station.

The proposed extension of platform 1, including the relocation of fencing and stairs, would result in a minor alteration to the visual appearance of Katoomba Station when viewed from the eastern end, Goldsmith Place and possibly certain vantage points associated with the Hotel Gearin. These impacts have been assessed as being negligible.

The coping modifications would result in the loss of brickwork associated with the 1946 modifications to platform 2, while on platform 1 the impacts would likely be limited to a concrete coping which appears to have been added within the last 15 years. The coping is not original and it is considered that the removal of less than 239 millimetres (being the highest value identified) would not have a significant impact on Katoomba Station.

The track slewing, replacement of an overhead wire stanchion and installation of security fencing, communications and lighting equipment would have a negligible impact on the significance of Katoomba Station.

Mitigation measures have been provided in this report to minimise impacts to the heritage listed Katoomba Railway Station and yard group.

1 Introduction

1.1 Background

Transport for NSW (Transport for NSW) 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 passengers
- facilitate the retirement of the two oldest electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity passengers.

The Project would involve the following works within the curtilage of the Katoomba Railway Station and yard group (Katoomba Station):

- extending the Sydney (eastern) end of the platform 1 by four metres
- modifications to station platform edges (also known as platform coping)
- re-positioning of rail tracks (track slewing) along the length of the corridor
- installation of new security fencing, lighting and communications equipment
- signalling works to accommodate the new track position and platform modifications
- removal and replacement of one overhead wire stanchion, which is located within the area of the proposed extension to Platform 1.

1.2 Site location

Katoomba Station is located approximately 109 kilometres west of Central Station in the Blue Mountains, within the Blue Mountains City local government area (LGA). The station services the Blue Mountains Line and intercity trains.

The Project site encompasses Katoomba Station, which is bound by Bathurst Road and Gang Gang Street on the western and southern sides respectively and by Goldsmith Place on the northern side as shown in Figure 1.

Katoomba Railway Station and yard group is listed on the State Heritage Register (SHR) (#01174), RailCorp Section 170 Heritage and Conservation Register and the heritage schedule of *Blue Mountains Local Environmental Plan 2015 (Blue Mountains LEP)*.

The station is also located within two listings on the LEP: 'Transport Corridor' and 'Central Katoomba Urban Conservation Area'.

The SHR curtilage for the station is defined as being "formed by the railway property boundaries to the north and south, the new overbridge to the west and the disused level crossing to the east. The curtilage is shown in Figure 1. The Section 170 curtilage is the same as the SHR curtilage.



Figure 1 Location of Katoomba 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 and concept design reports
- review of the following key documents:
 - heritage register listings for Katoomba Station
 - historic plans for Katoomba Station held by the Sydney Trains Plan Room
 - previous reports and other relevant documentation provided by Transport for NSW
- background research into the historical development of Katoomba 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 to assess the existing station along with the existing character of the study area 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 Katoomba 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.

Grading	Definition
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 Susan Lampard (Senior Heritage Specialist). Chris Lewczak (Senior European 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. These would be addressed in accordance with Transport for NSW's *Unexpected Heritage Finds Guideline* (Transport for NSW, 2015). This report is based on the reference design for the Project. It is noted that during detailed design, details of the Project may change or be refined.

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 the '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. Katoomba Railway Station and Yard Group is identified as an Indicative Place on the RNE (Place ID #101364). The identified significance can be managed under State legislation (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 and Energy (DoEE). 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; and,
- it is undertaken by the Commonwealth and would have or is likely to have a significant impact.

Katoomba Railway Station and Yard Group has not been identified on the NHL or CHL, nor is it located on Commonwealth land 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 or by listing on the NSW 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. Katoomba Railway Station and Yard Group has been identified as meeting the criteria for listing on the SHR as item #01174. A small portion of the curtilage of the Carrington Hotel (SHR#00280) is located directly across Bathurst Road from the station. Consideration is given to the potential impacts to surrounding heritage items in Section 5.4.

Proposals to alter, damage, move or destroy places, buildings, works, relics, movable objects or precincts protected by an IHO or listed on the SHR 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 Katoomba Railway Station and Yard Group has been identified on the RailCorp Section 170 Heritage and Conservation Register under State Heritage Inventory database (SHI #4801008). 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 SHR 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:

- a) "any deposit, artefact, object or material evidence that:
- b) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- c) is of State or local heritage significance".

2.2.2 Environmental Planning and Assessment Act 1979

The NSW *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 (SEPP).

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 the 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). This Clause is not of relevance to the Project as the Katoomba 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

Katoomba 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 2015 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 will 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.”

Katoomba Station is a listed item of environmental heritage on Schedule 5 of the Blue Mountains LEP 2015, identified as #K044. Furthermore, Katoomba Station sits within the curtilage of ‘Transport Corridor, Katoomba’ (K065) and the ‘Central Katoomba Urban Conservation Area’ (K159), both of which have been assessed as holding State significance.

The register search was extended to 100 metres from the curtilage of the Katoomba Station to establish if there were surrounding registered items or conservation areas that may be affected by the Project. Six individual items were identified on the LEP, the locations of which are shown on Figure 1 with the details being provided in Table 2.

2.4 Heritage registers

Katoomba Station has been identified as holding State significance and is listed on the SHR, RailCorp Section 170 Heritage and Conservation Register and the Blue Mountains LEP 2015, as summarised in Table 2. The various curtilages of the identified heritage items is provided in Figure 2.

Table 2 Summary of listed heritage items within and adjacent to the 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)	Katoomba Railway Station		Nil	n/a	n/a
State Heritage Register	Katoomba Railway Station and Yard Group (SHR#01174)	State	Carrington Hotel (SHR#00280)	State	20
Sydney Trains Section 170 Heritage and Conservation Register	Katoomba Railway Station and Yard Group (SHI #4801008)	State	n/a	n/a	n/a
Blue Mountains LEP 2015	Katoomba Railway Station (K044) Transport Corridor, Katoomba (K065) Central Katoomba Urban Conservation Area (K159)	State	Hotel Gearin (K027)	Local	25
		State	The Crushers (K026)	Local	54
		State	Carrington Hotel (K032)	State	20
			James' Building (K089)	Local	40
			Niagara Café (K106)	Local	48
			Metropole (K110)	Local	27

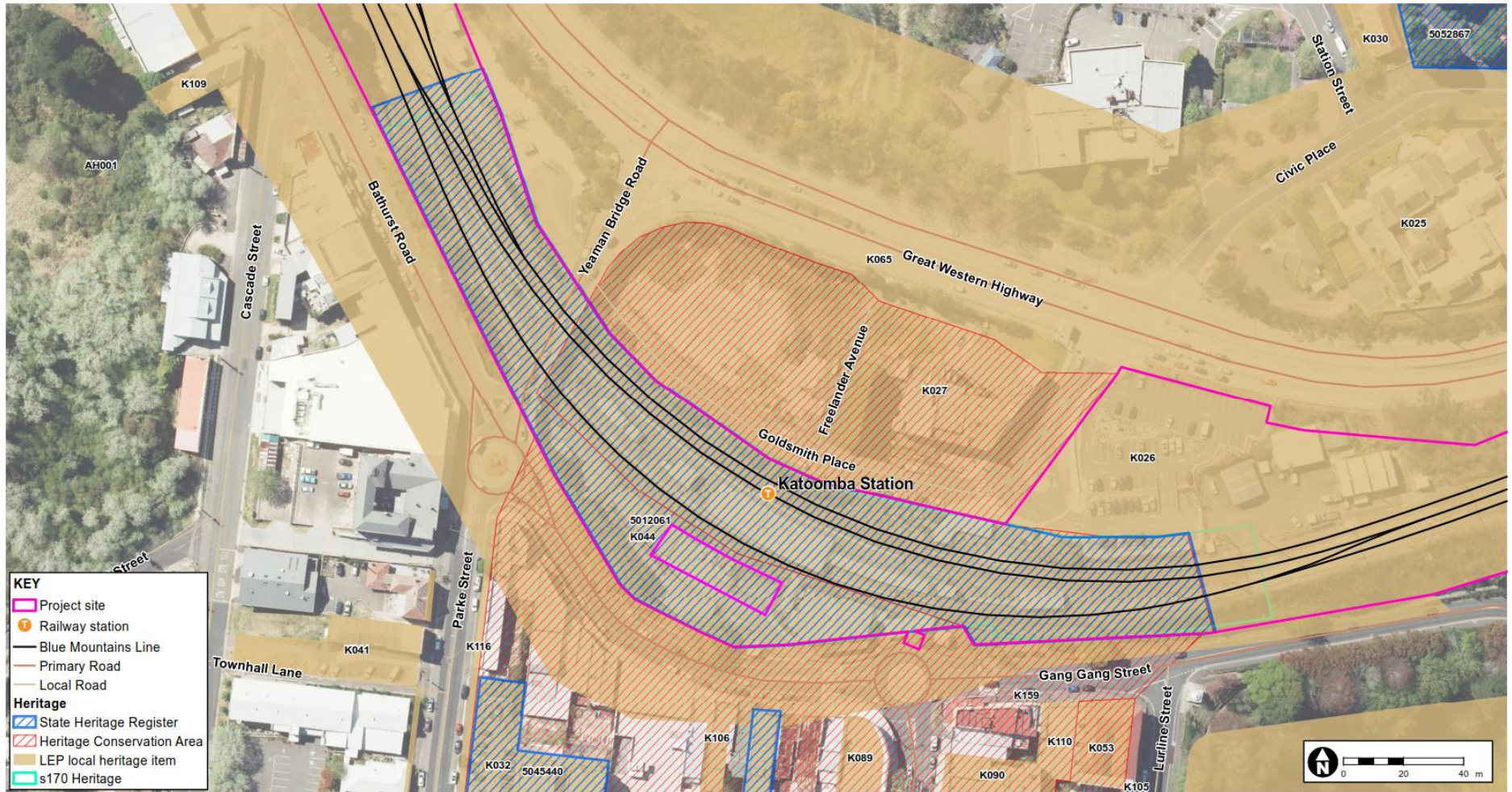


Figure 2 Heritage items within the vicinity of Katoomba Station

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.). Major Thomas Mitchell realigned the route to pass what is now Katoomba in the 1830s.

3.2 Railway development

The railway line between Wentworth Falls and Mount Victoria was opened in 1868, as it progressed towards Bathurst (NSW Heritage Branch, 2010). Unlike the Cumberland Plains, settlement did not precede the railway line and instead followed it. Consequently, the line did not initially include a station in the vicinity of what is now Katoomba, there being insufficient settlement to warrant it. In 1874, a stop was created known as 'The Crushers', to enable the loading of ballast for the construction and maintenance of the line, which was mined from a quarry just to the north east of the present day Katoomba Station. The first platform was erected in 1877, the same year in which the land to the south of the railway line, known as portion 53, was purchased by James Henry Neale (Figure 3).

Neale, a master butcher and politician (Legislative Assembly 1864-1874), constructed 'Froma' (now demolished) before selling to wool merchant Fredrick Clissold in 1881. Clissold subdivided the land, creating the street system that is still evident today (Blue Mountains City Council, 2001g).

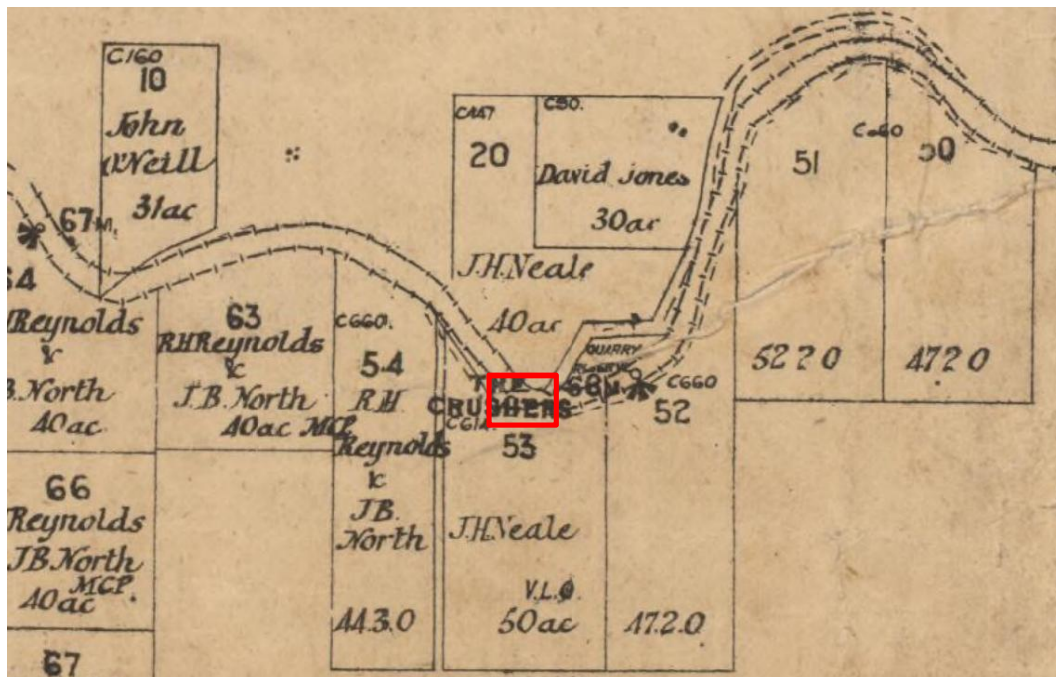


Figure 3 Excerpt from “Plan of measured land in close proximity to the western railway between Penrith & Blackheath, Parishes of Strathdon, Coomassie, Magdala, Jamieson, Megalong, Kanimbla, Blackheath, Co of Cook.” NSW Surveyor Generals Office, 1877. Source: National Library of Australia, call no. MAP RM4273.

In 1881 a new curved timber platform and station were constructed. The growth of Katoomba as a tourist and commercial centre led to the development of a goods yard to the north of the in 1883-4 (NSW Heritage Branch, 2010).

In October 1891, the 1881 station building was relocated to become a goods shed. The building was replaced with the present island platform and station building. The works included the construction of a pedestrian subway, rare outside of Sydney, (NSW Heritage Branch, 2010). The platform was extended in 1898 and again in 1901 (eastern end).

In 1902, the line was duplicated and an “out of shed” built on the platform. In the following year an elevated timber signal box was added to the platform. The western end of the platform was extended in 1907. In 1909 a two-roomed timber building was constructed on the western end of the platform for the use of the inspector and electrician. A staff meals room was appended to this structure in 1945.

The Katoomba Station underwent a number of modifications during the 1920s, including the erection of an awning between the station building and steps in 1920. In 1923, additions were made to the station building and electric lights were installed.

In 1938-9 the Progress Buildings were constructed. It was a new parcels office, with associated platform, but incorporated three shops along the Bathurst Road frontage.

Katoomba Station was recognised as being of State significance when it was added to the SHR in April 1999. Katoomba Station underwent modifications in 2009, including the installation of lifts, to facilitate easy access, and the construction of commuter car parks.

4 Physical description

4.1 Introduction

This section provides a physical description of Katoomba Station to provide an understanding of the physical elements that contribute to the station's heritage significance. The item can be divided into two parts: the station and the goods yard. The Project does not include modifications to any of the buildings and would not impact on the goods yard or associated items. Therefore, these items are not described in this report. A full description of these items can be found within the SHR listing².

The proposed works are limited to the platform and track including the removal of one overhead wire (OHW) stanchion. These items are described in the following sections.

4.2 Station platform

4.2.1 Description of platform

Katoomba Station has a single island platform, accessed via lifts and a pedestrian subway. The pedestrian subway and lifts service platform 1, on the northern side, facing the Great Western Highway and platform 2, fronting Bathurst Road. Platforms 1 and 2 are between 197 and 198 metres long and 13.5 metres wide. The platform is curved so that the orientation of the platform alters from an east-west alignment at the Sydney (eastern) end to a more north-south alignment at the Lithgow (western) end (Figure 5).

In 2009, easy access upgrades were undertaken at Katoomba Station which included an extension of the platform on the eastern end to allow the lifts to be located away from the historic platform station building. The platform extension is narrower than the historic platform, being approximately eight metres wide (Figure 4). It is constructed of a concrete deck on recessed concrete piers.

The historic portion of the platform has a battered brick-face with a concrete deck and an asphalt surface (Figure 6). The brick facing is visible on the eastern and western ends and at various sections across the face of the platform and has been laid in an English bond (alternating rows of header and stretcher bricks). Other sections of the platform face are rendered with what appears to be concrete. Conduits have been attached along the length of the face of the platform in an unsympathetic manner.

The ground surface in the proposed location for the platform extension (Sydney side of platform 1) is approximately one metre below the platform surface. There is a set of steel stairs to moderate the difference, which are secured behind a steel gate to prevent public access to the track. These stairs were part of the works associated with the easy access upgrades. The face of the platform is exposed red brick, which has been patched and repaired with concrete. It would appear that some slumping has been arrested through the installation of a piece of rail to support the brickwork (Figure 7 and Figure 8).

4.2.2 Platform coping

Katoomba Station platform was constructed in 1891 as a brick faced platform with a rounded bullnose coping (Figure 9). Alterations were made to Katoomba Station in 1902 when the Blue

² <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5012061>

Mountains Line was duplicated and again when the platform was extended in 1946. During the extension works, the platform was raised significantly with at least three courses of brick and the original bullnose coping which appears to have been removed (Figure 10). Sometime between 1946 and 1990 a concrete lip has been added to the coping of the platform, although this is not consistent, with the coping of Platform 1 being more modified than that associated with platform 2. The concrete coping has been added to the majority of the length of platform 1 (Figure 4), while this treatment is not evident on platform 2 (Figure 6). The general condition of the coping, together with the concrete, indicates it was most likely installed within the last 15 years. This assessment aligns with general upgrades undertaken at stations across the network at about this time.



Figure 4 View south west of platform 1, showing junction between the heritage platform and 2009 extension



Figure 5 View east along platform 1, showing curvature of platform. Note addition of coping to edge of the platform



Figure 6 View north of eastern end of platform 2 showing battering of brick platform face. Note lack of concrete coping



Figure 7 Eastern end of the heritage platform. Note rail used to arrest slumping



Figure 8 View of tracks near the eastern end of Platform 1. Note concrete coping projecting from edge of platform



Figure 9 View of Katoomba Railway Station 1891. Note bullnose coping. Source: State Archives & Records. Digital ID 17420_a014_a014000745



Figure 10 View of Katoomba Railway Station c1947. Note the additional courses of brickwork and the removal of the original bullnose coping. Source: State Archives & Records. Digital ID 17420_a014_a014000744

4.3 Rail corridor

The track consists of headstock, ballast and rail. The portions headstock at Katoomba Station was replaced with precast concrete headstock in 1994, during the renewal of the pedestrian subway (refer to Katoomba renewal of pedestrian subway general arrangement, plan no. CV0078381). Timber headstock is still evident on the through track, but would not be impacted by this Project. It is not anticipated that these items are not individually significant.

4.4 Overhead wire stanchion

The overhead wire stanchion proposed for removal is located approximately 500 millimetres from the eastern end of the platform. It consists of two upright beams, one on either side of the tracks, and a cross beam braced with a simple support (Figure 11 and Figure 12). The wiring hangs from a vertical post, also cross braced. The stanchion has been identified with a yellow and black plate as “SL109+838”.



Figure 11 Overview of stanchion SL109+838. View east



Figure 12 Overview of stanchion SL109+838. View north west

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 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.

Table 3 Significance assessment criteria

Criterion	Inclusions/exclusions
Criterion (a) – <i>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).</i>	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) – <i>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).</i>	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) – <i>an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).</i>	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) – <i>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.</i>	This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.
Criterion (e) – <i>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.</i>	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 Katoomba 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 Katoomba Railway Station Group and Yard Group

The SHR significance assessment for Katoomba Station is included in Table 5.

Table 5 SHR significance assessment of the Katoomba Railway Station Group and yard (NSW Heritage Branch, 2010)

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).	<p>Katoomba Station and Yard Group is of historical significance as a unique early station and yard developed around a ballast quarry demonstrating Katoomba’s growth in the 1880s and 1890s as a tourist and local commercial centre before the duplication of the Western line in 1902.</p> <p>The site of the goods yard was part of the original Katoomba station precinct dating from 1878, which was used for locomotive turning and minor servicing and stabling of trains. While fulfilling a minor railway use at present for per way maintenance using temporary buildings it contains two relatively rare items of mid-20th Century railway heritage significance, which are 1881 timber station building as its goods shed and the 1891 crane.</p>
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).	<p>The station has historical association with Commissioner Eddy due to his involvement in the design of the 1891 station building known as 'The Standard Eddy' design.</p>
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).	<p>Katoomba Railway Station is of aesthetic significance as one of few surviving timber railway station buildings known as 'The Standard Eddy' (as it was designed under Commissioner Eddy) outside of the Sydney metropolitan area including Newtown, MacDonalddtown, Ashfield, Lewisham (all demolished) and Summer Hill, Homebush and Croydon (extant). Katoomba station building features an unusual deep timber valance to the awnings and it is unique to the other examples for its curved form along the platform. The tunnel connection with its gabled roof and associated glazing makes a pleasant sheltered walkway connecting the station to the town’s commercial heart. The sandstone retaining walls to the north and south of the site are well built solutions to the perpetual problems of dealing with the Katoomba’s topography and contribute to the character of the townscape. The Progress Building contributes to the character of the commercial precinct of Katoomba with their intact shopfronts and simple weatherboards and fibro character to the rear. The signal box is also an important and integral element within the station-scape of Katoomba.</p>
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.	<p>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>
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.	<p>Katoomba Station and Yard Group is of research significance for its demonstrative ability in providing evidence of construction techniques and form of a station and yard in the 1880s and 1890s before the Western railway line duplication. The goods yard has archaeological potential in providing evidence of the first station buildings and structures as well as the operational elements of the yard.</p>
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).	<p>This item is assessed as historically rare. This item is assessed as scientifically rare. This item is assessed as arch. rare. This item is assessed as socially rare.</p>

Criterion	Assessment
<p>Criterion (g) – an item is important in demonstrating the principal characteristics of a class of NSW's (or local area's):</p> <ul style="list-style-type: none"> • cultural or natural places cultural; or • natural environments. 	<p>Katoomba Station and Yard Group is representative of Victorian era station development combining unique station buildings and yard demonstrating the close relationship between the yard and station as well as reflecting the direct relationship between the station layout and the growth of the local area.</p>

5.2.1 Statement of significance

The statement of significance reads:

Katoomba Railway Station and Yard is of state significance as a unique railway site in NSW developed around a former ballast quarry and is significant for demonstrating Katoomba's growth in the 1880s and 1890s as the first tourist and local commercial centre in the Blue Mountains, before the duplication of the Western line in 1902.

The 1891 station building is significant as one of few surviving timber railway station buildings known as 'Standard Eddy', designed under Commissioner Eddy, and demonstrating the introduction of island platform buildings in NSW. Katoomba station building is the only known example of this station type outside the inner city area and is unique to the other examples for its curved form along the platform. The adjacent signal box with its garden beds and planting is also an important and integral element within the station group and is a rare example of a timber on-platform signal box.

The site of the goods yard is of particular significance as it was part of the original Katoomba station precinct dating from 1878, which was used for locomotive turning and minor servicing and stabling of trains. While fulfilling a minor railway use at present for per way maintenance, it contains two relatively rare items, which are the former 1881 timber station building as its goods shed and the 1891 crane.

The station group comprises a homogenous collection of timber structures adding significance to the townscape and streetscape with direct relationships to both. Situated at the focal point of Katoomba, the station is connected visually and physically to the town's commercial heart by the pedestrian subway and landscaped surrounds. The adjacent Progress Buildings from part of the station group and contribute to the early 20th Century character of the commercial precinct of Katoomba with their largely intact shopfronts.

(NSW Heritage Branch, 2010)

The significance assessment and statement of significance will be used to assess whether the Project would impact on the significance of Katoomba Station in Section 6.

5.2.2 Station components significance

Table 6 includes an assessment of the components of the Katoomba Station, excluding items within the goods yard. Works associated with this Project are limited to the platform and one overhead wire stanchion and would therefore not impact on Katoomba Station Building, signal box, out of shed or former inspector/electrician's office. The impacts to the heritage significance of the platform are assessed in Section 7.2.

Table 6 Grades of significance for components of the Katoomba Station Group

Component	Description	Grading
Station Building (1891)	A unique type 10 'Standard Eddy' design, unique due to its curved form and deep valance.	Exceptional
Signal Box (1902)	Standard E type – timber with brick base	High
Out of Shed (c1902)	Timber structure on platform	Moderate
Former Inspector/electrician's Office (1909, modified 1945)	Timber structure on platform	Moderate
Island platform (1891, modified 1901, 1945 & unknown date See Section 4.2)	Refer to section 4.2	High
Overhead wire stanchion	Refer to section 4.4	Low (refer to Section 5.1.1)

5.3 Overhead wire stanchion significance assessment

The overhead wire stanchion is also assessed as an individual item to determine whether its proposed replacement will constitute a heritage impact. The overhead wire stanchion is assessed against the NSW criteria, as outlined in Table 3. The assessment of the heritage significance is provided in Table 7.

Table 7 Significance assessment criteria

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).	The overhead wire stanchion is a component associated with the monumental task undertaken by NSW in electrifying the railway network, which was completed in the 1950s. However, as an individual element, it does not meet the significance threshold at either a State or local level.
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 overhead wire stanchion does not have a strong or special association with the life or works of a person or group. The overhead wire stanchion is not of significance under this criterion at a State or local level.
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).	The overhead wire stanchion is a utilitarian item, designed to suspend the overhead wire. The design does not demonstrate a high degree of creative or technical achievement and is not aesthetically important. The overhead wire stanchion is not of significance under this criterion at a State or local level.

Criterion	Assessment
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 overhead wire stanchion is not known to have a strong or special association with a community or cultural group. As a utilitarian item, it is considered unlikely to be of import to the community. The overhead wire stanchion is not of significance under this criterion at a State or local level.
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.	The overhead wire stanchion does not have the potential to yield information that is not available from other sources. The overhead wire stanchion is not of significance under this criterion at a State or local level.
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).	There are numerous examples of identical overhead wire stanchions retained within the rail network and the Katoomba Railway Station and Yard Group curtilage. The overhead wire stanchion is not of significance under this criterion at a State or local level.
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. 	While the overhead wire stanchion is identical or similar to other overhead wire stanchions within the rail network, there is no feature that indicates this particular stanchion is a fine, influential, pivotal or highly intact example. The overhead wire stanchion is not of significance under this criterion at a State or local level.

In summation, it is determined that the overhead wire stanchion is not of heritage significance under any of the seven heritage criterion mandated in *Assessing Heritage Significance* (NSW Heritage Office, 2001). The overhead wire stanchion is not considered to be of State or local significance. However, it is acknowledged that these items are becoming increasingly rare due to the modernisation of the overhead wiring occurring across the network. The stanchions are an integral part of Katoomba Station and have a lightness and patina that contributes to the historic railway precinct. In this light, the stanchion can be considered to hold contributory significance.

5.4 Adjacent and overlapping heritage items

Section 2 identified a number of listed heritage items located within 100 metres of Katoomba Station. The statements of significance for these items are provided below, against which the impact will be assessed in Section 7.

Heritage item	Listing	Significance	Description
Carrington Hotel	The Carrington Hotel is listed on the State Heritage Register (SHR#00280) and the Blue Mountains LEP.	State	The Hotel fronts Katoomba Street, however, there is an access way from Bathurst Road, opposite Katoomba Station.
Transport Corridor, Katoomba	The Transport Corridor is listed on the Blue Mountains LEP (K065).	State	Includes Katoomba Station together with the Great Western Highway

Heritage item	Listing	Significance	Description
Central Katoomba Urban Conservation Area	The Central Katoomba Urban Conservation Area is listed on the Blue Mountains LEP (K159).	Local	Includes Katoomba Station and surrounding commercial precinct
Hotel Gearin	Hotel Gearin is listed on the Blue Mountains LEP (K027)	Local	Located directly opposite Katoomba Station to the north
The Crushers	The Crushers are listed on the Blue Mountains LEP (K026).	Local	Located to the east of Katoomba Station.
James' Building	James' Building is listed on the Blue Mountains LEP (K026)	Local	Located on the southern side of Bathurst Road, south of Katoomba Station
Niagara Café	Niagara Café is listed on the Blue Mountains LEP (K106)	Local	Located on the southern side of Bathurst Road, south of Katoomba Station
Metropole	Metropole is listed on the Blue Mountains LEP (K110)	Local	Metropole fronts Gang Gang Road to the east of Katoomba Station.

6 Archaeological assessment

Parish plans and historical images indicate that there was no development in the vicinity of Katoomba Station prior to its establishment. Figure 13 indicates no structures or development within the vicinity of the proposed platform extension. Given that the area is within the rail corridor, it is anticipated that it has been largely disturbed by activities associated with the construction and maintenance of Katoomba Station and associated tracks.

The area of the proposed temporary construction compound is shown on plans as being comprised of an accessway (Figure 14), loading docks and associated ramps and a Way and Works Office (Figure 15). The Way and Works Office appears in photographs of Katoomba Station in the period following the construction of the new platform station buildings (1891). Figure 13 indicates the Way and Works Office was demolished in 1939/1940 to make way for the Booking Office.

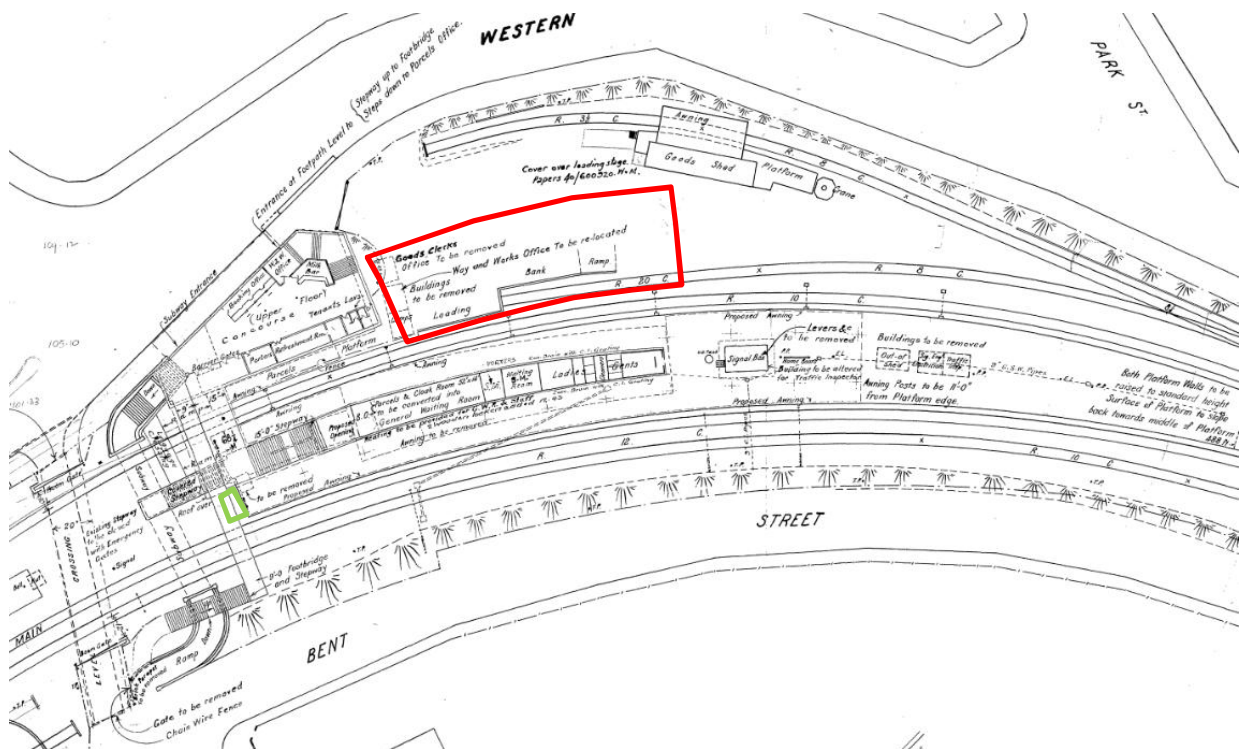


Figure 13 “Department of Railways NSW Way and Works Branch Katoomba Proposed Improvements”, 1938. Source: Sydney Trains Plan Room CV0071352. Approximate location of temporary construction compound highlighted in red. Approximate location of platform extension highlighted in green

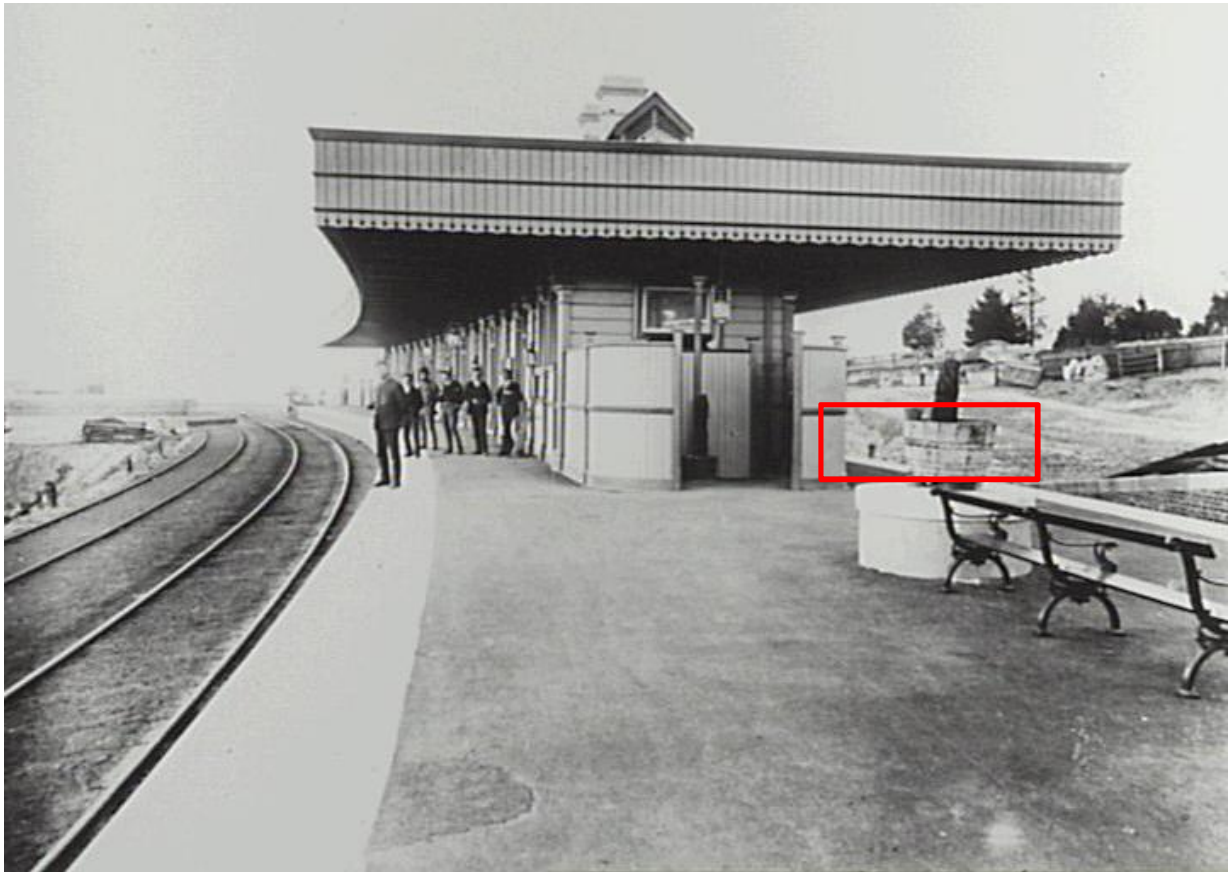


Figure 14 “Katoomba Railway Station”, about 1891. Source: Blue Mountains City Library Asset Name: LS000\000727. Approximate location of temporary construction compound highlighted



Figure 15 “Katoomba Railway Station”, about 1892. Source: Blue Mountains City Library Asset Name: LS000\000751. Approximate location of temporary construction compound highlighted

7 Impact assessment

7.1 Proposed works

7.1.1 Overview

The Project would involve the following works within the curtilage of the Katoomba Railway Station and yard group (Katoomba Station):

- extending the eastern end of the platform 1 by four metres
- modifications to station platform edges (also known as platform coping)
- re-positioning of rail tracks (track slewing) along the length of the corridor
- signalling works to accommodate the new track position and platform modifications
- removal and replacement of one overhead wire stanchion, which is located within the area of the proposed extension to platform 1.

The proposed works are shown in detail within the design package (SK-H501 and SK-H502-Katoomba Heritage Submission). The extent of the modifications the copings and track slewing are indicated in Table 8 - Table 9 and Table 10 - Table 11 as well as shown in SK-H504 in the design package. The works and methodology are outlined below.

Works associated with this Project are limited to the platform and rail corridor and would therefore not impact on Katoomba Station Building, signal box, out of shed or former inspector/electrician's office.

7.1.2 Platform extension

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. The Project includes the extension of the island platform (on the Sydney end of platform 1) by four metres and is required to ensure all customers can embark and disembark when the new trains are introduced. The proposed extension would fill in a four metre length between the eight metre wide 2009 platform and abut the heritage platform (Katoomba Heritage Submission drawings SK-H502). No platform extensions are proposed to the platform 2 side.

The methodology includes the erection of a brick retaining wall into which concrete mass would be infilled. A concrete slab would then be cast in-situ to form the platform deck with coping tiles being laid over the top and treated with tactile tiles and painted as necessary. The new brickwork would be laid in a stretcher bond in bricks of a similar colour to the existing platform face. The new mortar would be struck with a flush profile. The works would require the removal of the existing gate, safety fence and stairs and emergency phone, shown in the Katoomba Station heritage design drawings. The fencing and gate would be relocated to the end of the new extension and would match the existing (Katoomba Heritage Submission drawings SK-H502 and SK-H503).

It may be necessary to undertake some earthworks to prepare a suitable subgrade. This would involve the excavation to underlying bedrock, or other suitable depth, to support the concrete footings of the extension.

7.1.3 Platform coping modifications

Platform coping modifications are required to enable the safe passage of the New Intercity Fleet trains through Katoomba. The New Intercity Fleet trains are wider and longer than the

current fleet. The Asset Standards Authority standard requires that there is a clearance of 200 millimetres around the kinematic envelope of a fleet. The kinematic envelope is the outline of the space occupied by a fleet vehicle when in motion, allowing for tilt and sway, of the track and other relevant factors to ensure the required safety clearance margins between the train and platform, and passing trains.

The *New Intercity Fleet Enabling Works TA: Reference Design Report Route Clearance Blue Mountains Line - Springwood to Mount Victoria*.(GHD, 2017) recommended that TfNSW seeks a concession from the 200 millimetre standard and instead implement a 100 millimetre clearance. As a result, a concession request has been made to the Asset Standards Authority to reduce the safety clearance margin where a safe clearance is not achievable or would result in excessive impacts to heritage fabric. This involved an application to Asset Standards Authority to permit a reduction of the safety margin. In principle approval has been granted.

The coping modifications are therefore necessary to ensure 100 millimetre clearance between the kinematic envelope of the New Intercity Fleet and the platform.

On platform 1, the works would include the removal of up to 171 millimetres of brick coping and the addition of up to 34 millimetres of concrete to the coping. The removal of material would be limited to the 1946 brickwork. Where the surface has been identified to be cutback, these impacts would be to the 1946 brickwork and later concrete coping only. On platform 2, the works would include the removal of up to seven millimetres off the vertical face of the coping and the addition of up to 66 millimetres of coping on platform 2 (refer Table 6). The removal of brick would impact on coping added during the 1946 modifications.

The proposed coping modifications are shown in Table 9 and in Katoomba Heritage Submission drawing SK-H504. Negative values indicate where cutback is necessary (to allow the necessary clearances for the wider trains), while positive values indicate the addition of concrete (to maintain a safe gap for customers entering and alighting from the trains). All negative values will be addressed, however, where a positive value of less than five millimetres is identified, this work would not be completed. All work will be completed with a +/- 20 millimetre tolerance.

Where removal is proposed, the brickwork would be shaved or cutback with a diamond saw. Where it is necessary to extend the coping, concrete would be applied using hand tools. It may be necessary to erect formwork and pour concrete into sections where greater modifications are required. This would be identified during the detailed design.

Table 8 Proposed coping modifications to platform 1, Katoomba Station

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
109827.238	34	109930	-90
109830	-52	109940	-85
109840	-19	109950	-84
109850	-82	109960	-79
109860	-75	109970	-62
109870	-72	109980	-119
109880	-74	109990	-171
109890	-73	110000	-56

Kilometrage	Horizontal difference. negative value = coping cutback in mm	Kilometrage	Horizontal difference. negative value = coping cutback in mm
109900	-71	110010	-72
109910	-68	110020	-76
109920	-83		

Table 9 Proposed coping modifications to platform 2, Katoomba Station

Kilometrage	Horizontal difference. negative value = coping cutback in mm	Kilometrage	Horizontal difference. negative value = coping cutback in mm
109836.359	-7	109960	66
109840	2	109970	57
109850	25	109980	43
109860	33	109990	41
109870	20	110000	41
109880	16	110010	34
109890	13	110020	53
109900	19	110030	41
109910	33	110040	34
109920	38	110046.631	32
109930	20		
109940	26		
109950	44		

7.1.4 Track slewing

Track slewing refers to lateral alterations in the rail positioning to ensure adequate clearance to the platforms from passing 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 track towards Lithgow being moved up to 50 millimetres laterally. The track towards Sydney would be moved by up to 58 millimetres laterally. The extent of the proposed modifications are shown in Table 10 and Table 11. The extents would be refined during detailed design.

Table 10 Proposed track slewing to platform 2

Trackwork (slewing)			
Kilometrage	Horizontal Difference. Positive value = pull to down	Kilometrage	Horizontal Difference. Positive value = pull to down
109836.359	27	109950	45
109840	16	109960	51
109850	14	109970	50
109860	22	109980	33
109870	4	109990	22
109880	3	110000	10
109890	6	110010	6
109900	7	110020	-2
109910	19	110030	-5
109920	31	110040	0
109930	41	110046.631	5
109940	41		

Table 11 Proposed track slewing to platform 1

Trackwork (slewing)			
Kilometrage	Horizontal Difference. Positive value = pull to down	Kilometrage	Horizontal Difference. Positive value = pull to down
109827.238	2	109930	58
109830	8	109940	49
109840	22	109950	46
109850	35	109960	36
109860	35	109970	31
109870	21	109980	32
109880	18	109990	45
109890	18	110000	48
109900	16	110010	52
109910	27	110020	46
109920	47		

7.1.5 Installation of platform security, communications and lighting

Modifications to the lighting, CCTV and public announcement systems would also be required. These works would be limited to the fixing of a new light and CCTV to awning erected in 2009 and modifications to the existing electrical conduits, electrical distribution boards and CCTV racks. Modifications to the existing conduits, electrical boards and CCTV racks would use existing conduits, and would not result in the addition of electrical boards or CCTV racks within the platform buildings.

As such, no impact on the heritage buildings or other heritage fabric is anticipated in association with these upgrades. The proposed works are shown in drawings (Katoomba Heritage Submission drawings SK-H502, SK-H505, SK-H507).



Figure 16 View of gate, stairs and fence proposed for removal at the Sydney end of platform 1

7.1.6 Overhead wire stanchion

The overhead wire stanchion (SL109+838) which is located approximately 500 millimetres from the end of platform 1 would need to be removed and relocated due to the platform extension. The proposed work includes the disconnection of services to the stanchion, cutting the stanchion off at ground level and removal from site. Section 5.3 contains a significance assessment, which determined the stanchion, as an individual element within the Katoomba Station, is not of heritage significance.

A single mast cantilever style stanchion would replace the overhead wire stanchion and would be located about two metres from the existing location (towards Sydney) as shown in the attached GHD Katoomba Station heritage design drawings (Katoomba Heritage Submission drawings SK-H508). The replacement stanchion consists of a single vertical pole, supporting a horizontal mast from which the overhead wires are suspended.

7.1.7 Temporary construction compound

A temporary construction compound would be established in the commuter car park located to the south of Katoomba Station (refer Figure 2). The temporary construction compound would cover a portion of the bituminised disabled parking and a portion of the compacted gravel staff parking area. The temporary construction compound is located within the State Heritage Register curtilage for Katoomba Station and the curtilage for the locally listed Transport Corridor, Katoomba (K065) and the Central Katoomba Urban Conservation Area (K159). Additionally, a small temporary laydown area would 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. Relics or deposits associated with the former Ways and Works building may be present beneath the bitumen (refer to Section 6), however, as the bitumen will remain intact, it will protect the any archaeology and it is therefore considered that there will be no archaeological impacts. As such the impacts associated with the temporary construction compound are limited to the temporary interruption of visual sightlines towards Katoomba Station from the car park. This impact is considered negligible due to its temporary nature.

Similarly, the temporary storage area on the platform would not involve disturbance of the platform surface and represents a transient adjustment to the aesthetic significance. The on-platform temporary storage area is also considered to pose a negligible impact to the significance of Katoomba Station 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 will 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 including an increase in the total 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	<p>The slewing of track would not impact heritage significant fabric or heritage significant views of Katoomba Station. This would result in neutral physical and visual impacts to the platform coping at Katoomba Station.</p> <p>This option was discounted because widespread track slewing would result in significant readjustments of existing overhead wiring structure configurations throughout the Blue Mountains Line.</p>
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 Katoomba 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	<p>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.</p> <p>As described in Section 7.4, this option would result in a minor physical and minor visual impacts to the heritage significance of Katoomba Station.</p>
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 Proposal.

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).

7.2.3 Katoomba Station platform extension options assessment

The Katoomba Station platform requires extension to allow customers and staff to alight from the new longer trains. As such, the ‘do nothing option would not be feasible as it would be

inconsistent with NSW Government objectives of enhancing rail passenger services for longer distance travel outside of the Sydney suburban areas.

There was the option to extend the platform at either end, however the preferred option has nominated the platform extensions at the eastern end for Katoomba Station in an area where the platform has already been modified, and would best suit operational requirements.

The proposed extension of the platform would necessitate the removal of one stanchion. It is not possible to retain the stanchion within the platform area because the distance from the platform edge to the face of the structure would be too small and present an unacceptable safety hazard. Additionally, existing structure does not meet current standards and requires replacing.

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 Project are strategies 1, 2, 3, 5, 7, 8, 9, 11 and 12. Due to the minor nature of the Project some of these strategies are not applicable.

Overall, it is considered that the platform extension design, by matching the brickwork, form and bulk of the existing platform, conforms to the strategies laid out in *Heritage Platforms Conservation Management Strategy*. Section 9 provides some recommendations to ensure compliance with the strategy.

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

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 Katoomba Station as a whole. 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 the heritage canopy associated with the platform building. Conversely, track slewing only may have resulted in impacts to overhead wiring structures throughout Katoomba Station. 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>The vertical brick platform retaining wall with corbelled brick courses is not considered a rare or unusual type of heritage platform design. There are 285 existing vertical profile brick platform edges of similar type in NSW, the largest of any type (Australian Museum Business Services 2014:14). This design is typical of platform construction types during the expansion of the rail network and there a large number of other examples of this platform type still extant in NSW.</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 and nine additional stations listed on the Sydney Trains Section 170 Heritage and Conservation Register. 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>

Strategy	Comment
<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. The upper courses of corbelled brick coping have been added to the platform at a later date following the station's construction, with a modern asphalt platform surface and coping on top. While the lower portions of original fabric of the platform are in a good state of intactness, the integrity of the overall platform has been reduced by these later changes to the platform height. The Katoomba Station platform is considered a common typology among platform types in NSW (there are approximately 285 existing platforms of the same type). Due to the heritage platform's reduced degree of intactness, as well as the common typology of platform design, the platform at Katoomba Station is not considered one of the more significant or intact heritage platforms in NSW.</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 Katoomba Station environment due to the fabric and surface treatments.</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 non-original platform detailing, subject to detailed design. While these are not identified as specifically contributing to the heritage significance, the modifications would result in the removal of fabric. This is unavoidable as leaving the copings intact may have resulted in greater impacts to other aspects of the stations, including the replacement of stanchions and modifications to heritage canopies.</p>
<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>The planning process considered the heritage significance of Katoomba 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 platform building and the necessity of replacing a greater number of stanchions. The integrated planning process included consultation with Sydney Trains and NSW TrainLink.</p>
<p>Strategy 9: <i>Where a new platform or platform addition is required, the new design, form, fabric and surface treatments should be compatible with the existing heritage character of the place, but still be readily identifiable as new work</i></p>	<p>The brick face, as a compatible fabric and surface treatment, works to fulfil this strategy, as will the overall design and form of the platform, which has been kept to a minimum in terms of length. The heritage section was constructed in an English Bond, while the new section would be in stretcher bond. This subtle distinction would make the two phases of construction discernible only upon close inspection. The design fulfils Articles 22.1 and 22.2 of <i>The Burra Charter</i> (Australia ICOMOS, 2013), which recommends new works do not distort or obscure the cultural significance of a place or detract from its interpretation or appreciation and that new work should be readily identifiable. It is recommended that measures be put in place during detailed design to ensure there is no damage at the junction between the heritage platform and the proposed extension.</p>
<p>Strategy 11: <i>Heritage opportunities and constraints should be carefully considered throughout the options analysis and design process</i></p>	<p>Heritage constraints of Katoomba Station have been carefully considered, with the option selected that minimises impacts to fabric, setting and the layout of station arrangements. See Section 7.2.</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

Table 14 assesses the impact of the proposed works against each of the heritage criterion from the SHR listing. This assessment also encompasses potential impacts to the other listings covering Katoomba Station, being the Section 170 Heritage and Conservation Register listing for Katoomba Station and the LEP listings of the Transport Corridor and the Central Katoomba Conservation Area.

Table 14 Assessment of heritage impact of project against SHR criterion for the Katoomba Railway Station Group and Yard

Criterion	Platform extension	Coping modifications	Track slewing	Overhead wire stanchion
<p>a) Historical significance: Katoomba Station and Yard Group is of historical significance as a unique early station and yard developed around a ballast quarry demonstrating Katoomba's growth in the 1880s and 1890s as a tourist and local commercial centre before the duplication of the Western line in 1902.</p> <p>The site of the goods yard was part of the original Katoomba station precinct dating from 1878, which was used for locomotive turning and minor servicing and stabling of trains. While fulfilling a minor railway use at present for per way maintenance using temporary buildings it contains two relatively rare items of mid-20th Century railway heritage significance, which are 1881 timber station building as its goods shed and the 1891 crane.</p>	<p>The platform extension does not impact on the uniqueness of Katoomba Station's development around the ballast quarry and would not directly result in impacts to the station building and crane. The platform extension therefore does not impact on the historical significance of Katoomba Station, it demonstrates the next chapter in the growth of Katoomba as a tourist centre.</p>	<p>The modifications to the coping would not impact on the historical significance of Katoomba Station. The works would be limited to non-original brickwork associated with the 1946 modifications of the platform.</p>	<p>The track slewing would not impact on the historical significance of Katoomba Station as it would be largely unnoticeable and it is considered likely that the tracks have been slewed during previous replacements.</p>	<p>The stanchion has been assessed as holding no heritage significance as an individual item, it does hold contributory significance to the overall Katoomba Station precinct. The removal and replacement of the stanchion would not impact on the historical significance of Katoomba Station as the proposed work would not result in an alteration to the historical context.</p>
<p>b) Associative significance The station has historical association with Commissioner Eddy due to his involvement in the design of the 1891 station building known as 'The Standard Eddy' design.</p>	<p>No impacts to Katoomba Station building are proposed and therefore the significance under this criterion would not be impacted.</p>			
<p>c) Aesthetic significance Katoomba Railway Station is of aesthetic significance as one of few surviving timber railway station buildings known as 'The Standard Eddy' (as it was designed under Commissioner Eddy) outside of the Sydney metropolitan area including Newtown, MacDonalddown, Ashfield, Lewisham (all demolished) and Summer Hill, Homebush and Croydon (extant). Katoomba station building features an unusual deep timber valance to the</p>	<p>The proposed works do not impact on Katoomba Station building, including the awning and timber valance, the subway, sandstone retaining walls, Progress Building or signal box.</p>	<p>It is acknowledged that the cutting back of the coping and addition of concrete will 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</p>	<p>The relocation of the tracks are considered to be minor. It is anticipated that the relocation of tracks would largely be unnoticeable and would not impact on the aesthetic significance of</p>	<p>The single cantilever replacement stanchion would be different to the double stanchions retained within the balance of Katoomba Station precinct. While being a point of difference, it is not anticipated that the</p>

Criterion	Platform extension	Coping modifications	Track slewing	Overhead wire stanchion
<p>awnings and it is unique to the other examples for its curved form along the platform. The tunnel connection with its gabled roof and associated glazing makes a pleasant sheltered walkway connecting the station to the town's commercial heart. The sandstone retaining walls to the north and south of the site are well built solutions to the perpetual problems of dealing with the Katoomba's topography and contribute to the character of the townscape. The Progress Building contributes to the character of the commercial precinct of Katoomba with their intact shopfronts and simple weatherboards and fibro character to the rear. The signal box is also an important and integral element within the station-scape of Katoomba.</p>	<p>The platform extension, with a brick face, has been designed to minimise the visual impact and to blend with the existing brick face heritage platform. It is anticipated that once the brickwork has gained a patina with age that the new section will only be discernible on closer inspection, as recommended under Article 22.2 of the <i>Burra Charter</i> (Australia ICOMOS, 2013). Likewise, the platform extension does not distort or obscure the significance of Katoomba Station and therefore is consistent under Article 22.1 of the <i>Burra Charter</i> (Australia ICOMOS, 2013).</p> <p>The gate, safety fence and stairs proposed for removal were installed in 2009 and are not considered to be of heritage or aesthetic significance.</p>	<p>consistent presentation. With this mitigation measure, 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 Katoomba Station.</p>	<p>Katoomba Station.</p>	<p>overall aesthetic significance of Katoomba Station would be adversely impacted.</p>

Criterion	Platform extension	Coping modifications	Track slewing	Overhead wire stanchion
<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 due to the nature and scale of the works.</p>			
<p>e) Research significance. Katoomba Station and Yard Group is of research significance for its demonstrative ability in providing evidence of construction techniques and form of a station and yard in the 1880s and 1890s before the Western railway line duplication. The goods yard has archaeological potential in providing evidence of the first station buildings and structures as well as the operational elements of the yard.</p>	<p>The extension to the platform would involve minimal earthworks. It is not anticipated that there are archaeological deposits or relics in the vicinity of the platform extension. A review of historical plans and based on the previous disturbance of the area associated with the construction and maintenance of Katoomba Station, no archaeological potential has been identified within this area. No earthworks would be undertaken in the goods yard.</p>	<p>The modifications to the coping would not alter the ability of Katoomba Station to demonstrate construction techniques. It is considered that the coping proposed for modification has been added in the last 15 years and is therefore not of research significance.</p>	<p>The proposed track slewing works would not impact on the research significance of Katoomba Station.</p>	<p>The removal and replacement of the stanchion would not impact on the research potential of Katoomba Station in that the stanchion is not associated with the form of Katoomba Station prior to the line duplication. It is assumed that the stanchion was been renewed within the last 20 years.</p>
<p>f) Rarity significance. This item is assessed as historically rare. This item is assessed as scientifically rare. This item is assessed as arch. rare. This item is assessed as socially rare.</p>	<p>The proposed works would not impact on the assessed rarity.</p>			

Criterion	Platform extension	Coping modifications	Track slewing	Overhead wire stanchion
<p>g) Representative significance. Katoomba Station and Yard Group is representative of Victorian era station development combining unique station buildings and yard demonstrating the close relationship between the yard and station as well as reflecting the direct relationship between the station layout and the growth of the local area.</p>	<p>The proposed works would not impact on the relationship between the yard and station. The platform extension does not represent an alteration to the layout of Katoomba Station in that it will not alter the way in which the station is used to any significant degree and would therefore not impact on the representative significance. The platform extension supports the continued growth of the local area.</p>	<p>The coping modifications will not remove an element from the identified combination of unique station buildings and their relationship to the yard. The coping modifications will also not reduce the ability of customers or tourists to appreciate the relationship between Katoomba Station and the local area. As neither of these points identified as holding representative significance will be impacted, it is considered that the representative significance will not be impacted.</p>	<p>The track slewing would not impact on the representative value of Katoomba Station as it is considered that the works will not be discernible and are not being undertaken on an element identified as contributing to the representative significance.</p>	<p>The removal and replacement of the stanchion would not impact on the representative significance as the stanchion has not been identified as contributing to the representative significance of Katoomba Station.</p>

7.4.2 Impacts to archaeological resources

The significance assessment for Katoomba indicates that the goods yard has archaeological potential, but no archaeological significance or potential is identified for Katoomba Station itself (NSW Heritage Branch, 2010). No impacts are proposed to the goods yard.

An examination of the plans held by Sydney Trains, early parish plans, historical photographs (see Figure 3 and Section 6) does not indicate earlier structures or features within the bounds of the balance of Katoomba Station. Section 7.1.7 identified the temporary construction compound encompasses the location of the former Ways and Works Office, demolished in around 1939/1940. It is possible that the demolition was incomplete and footings or other material associated with the building remains in situ. However, this area is sealed beneath bitumen and it is not proposed that the bitumen will be removed. As such, any archaeology that may be present will be preserved and will not be impacted by the temporary construction compound. It is therefore considered that the archaeological potential of the platform extension area and temporary construction compound is low.

7.5 Overlapping heritage items

The works are located within two conservation areas identified on the Blue Mountains LEP, being the Transport Corridor, Katoomba (K065) and the Central Katoomba Urban Conservation Area (K159). It is considered that the works are of such a minor nature that there would be no overall impacts to the significance identified within these two listings. With regard to the Transport Corridor, it is considered that the Project is consistent with the significance, which identifies the on-going provision of transport via road and rail. The Project would allow the continuing provision of rail transport through the corridor.

7.6 Adjacent heritage items

Section 5.2 identified heritage items within 100 metres of Katoomba Station. In reviewing the works, it is clear that items located on the southern side of Katoomba Station, the Carrington Hotel, James' Building, Niagara Café and the Metropole, would have no visibility of the Project. No impact to the heritage significance of these items is identified.

The platform extension may be visible from some rooms of the Hotel Gearin, however it is not anticipated that this small change would impact on the heritage significance of the item. The coping modifications and track slewing is unlikely to be noticeable from the Hotel Gearin.

7.7 Cumulative impact assessment

While this document assesses the impacts of the New Intercity Fleet works on Katoomba 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	Yes

Station	SHR?	Station	SHR?
Hazelbrook	No	Bell	No
Lawson	Yes	Newnes Junction (not in use)	No
Bullaburra	No	Eskbank (not in use)	Yes
Wentworth Falls	No	Lithgow – the subject of this assessment	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.

7.8 Summary of heritage impacts

In summary, it is concluded that the proposed works would have a minor impact on the heritage significance of Katoomba Station. The proposed extension of platform 1 would result in a minor alteration to the visual appearance of Katoomba Station when viewed from the eastern end, Goldsmith Place and possibly certain vantage points associated with the Hotel Gearin.

The coping modifications would result in the loss of brickwork associated with the 1946 modifications to platform 2, while on platform 1 the impacts may be limited to a concrete coping which appears to have been added within the last 15 years. The extent of the impact would be confirmed during detailed design and would be influenced by the existing overhang of the coping, which could not be measured during the site inspection. The coping is not original on either platform 1 or platform 2 and it is considered that the removal of less than 239 millimetres (being the highest value identified) would not have a significant impact on the heritage values of Katoomba Station. With the implementation of the recommendation to render the corbelled coping on the completion of the cutback works, it is considered that the coping modifications would not be noticeable.

The track slewing and installation of security, communications and lighting equipment would have a negligible impact on the heritage significance of Katoomba Station.

Table 16 Summary of heritage impacts

Proposed work	Impact to fabric	Visual impact	Impact to archaeological remains	Impacts to adjacent heritage items
Extension of platform 1	Minor – confined to the junction between the existing platform and the proposed extension	Minor	Neutral	Negligible
Modification of platform coping	Minor	Minor	Neutral	Neutral
Slewing of track within the rail corridor	Negligible	Negligible	Neutral	Neutral
Installation of security, communications and lighting equipment	Negligible	Negligible	Neutral	Neutral

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, track slewing, an extension to platform 1 and replacement of an overhead wiring stanchion. The guideline suggests the following questions be used to direct discussion in relation to these two modification types: minor partial demolition, relating to the removal of the stanchion, and minor additions, relating to the platform extension.

These questions are addressed, based on the impacts to the heritage significance of Katoomba Station, as outlined in Section 7.2.

Table 17 Statement of heritage impact for Katoomba Railway Station Group

Development	Discussion
	<p>The impact of the Project on the heritage significance of Katoomba Station is negligible. It is considered that the addition of four metres of platform is sympathetic in terms of proportions and scale. Following the options analysis, it was determined the impact could be reduced by placing the proposed platform extension adjacent to the 2009 platform extension. By grouping the extensions, it allows the northern end of the platform to retain its heritage character. In addition, the impact has been minimised by extending the platform only by the length necessary to allow customers to enter or alight from the New Intercity Fleet. Additionally, the impacts have been minimised by applying the relevant strategies from the <i>Heritage Platforms Conservation Management Strategy</i> (Australian Museum Consulting, 2015), as outlined in Section 7.3.</p>
<p>What aspects of the Proposal respect or enhance the heritage significance of the study area?</p>	<p>The use of face brick in a similar colour to the existing is considered a sympathetic material that will in time blend in to the Katoomba Station environment. The brick would be visible when approaching Katoomba Station on a train and also when viewing the platform from Goldsmith Place. Enclosing the concrete mass filling from all viewing angles is a sympathetic design solution that minimises the aesthetic impacts to the significance of Katoomba Station. The choice of brick is additionally supported by the <i>Heritage Platforms Conservation Management Strategy</i> (Australian Museum Consulting, 2015), which encourages new work to be compatible in design, form, fabric and surface treatment to the adjacent heritage component.</p> <p>There are no known or suspected archaeological deposits in the working area. There are no known previous structures in the vicinity of the platform extension and the area has been previously disturbed for electrical conduits and other services.</p>

Development**Discussion**

What aspects of the Proposal could have a detrimental impact on the heritage significance of the study area?

It is necessary to remove the overhead wiring stanchion in order to facilitate the construction of the platform extension. It is not possible to retain the overhead wire stanchion within the platform area because the distance from the platform edge to the face of the structure would be too small and present an unacceptable safety hazard. The removal of the stanchion would have a neutral impact on the heritage significance of Katoomba Station and is necessary to ensure the safe operation of trains. It is considered that the removal and replacement would largely go unnoticed by passengers.

The stanchion is not considered to be an important or integral feature to the heritage significance of Katoomba Station, as demonstrated by the significance assessment undertaken in Section 5.3. It is acknowledged that the stanchion is a contributory item to the overall significance of Katoomba Station. However, the double stanchions will be preserved throughout the balance of Katoomba Station precinct.

In turn, the platform extension has been necessitated by the introduction of new, longer trains. Consideration was given to extending the platform at the northern end, however this was discounted for a number of reasons. While extending the platform at the northern end would not require the removal of a stanchion, it would impact on an area that maintains its historical integrity. By positioning the extension adjacent to the 2009 platform extension, it limits the impacts to a small corner of Katoomba Station. In addition, the additional platform space is located adjacent to the lift and subway access.

Have more sympathetic options been considered and discounted?

Due to the nature of platforms, they must be in close proximity to the carriage. It is therefore not possible to use the existing platform addition constructed in 2009, as this is located too far from the trains.

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:

- slewing only
- coping modifications only
- combination of both slewing and coping modifications (with ASA concessions)
- do nothing.

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.

9 Conclusion and recommendations

Katoomba Railway Station has been identified as holding State significance and is listed on the SHR (#01174), RailCorp Section 170 Heritage and Conservation Register and the Blue Mountains LEP 2015. Additionally, Katoomba Station sits within two listings on the LEP: 'Transport Corridor' and 'Central Katoomba Urban Conservation Area'.

An assessment of the proposed works against the heritage significance of Katoomba Station concluded that the proposed works would have a minor impact on the heritage significance of Katoomba Station.

The proposed extension of platform 1 would result in a minor alteration to the visual appearance of Katoomba Station when viewed from the Sydney end, Goldsmith Place and possibly certain vantage points associated with the locally significant Hotel Gearin. The visual impacts have been limited by selecting a brick facing to cover the concrete mass of the platform. The brickwork would be in a colour similar to the adjacent heritage brickwork and it is anticipated that with time it would develop a patina that would make the two phases of construction discernible only upon close inspection. The design fulfils Articles 22.1 and 22.2 of *The Burra Charter* (Australia ICOMOS, 2013), which recommends new works do not distort or obscure the cultural significance of a place or detract from its interpretation or appreciation and that new work should be readily identifiable.

The coping modifications would result in the loss of brickwork associated with the 1946 modifications to platform 2, while on platform 1 the impacts may be limited to a concrete coping which appears to have been added within the last 15 years. The coping is not original and it is considered that the removal of less than 239 millimetres (being the highest value identified) would have a minor impact on the heritage significance of Katoomba Station.

The track slewing and installation of security, communications and lighting equipment would have a negligible impact on the significance of Katoomba Station. The ancillary works will be largely undiscernible and will be limited to the 2009 platform extension associated with the lift. It would involve the minor refurbishment of electrical distribution boards and CCTV racks located within the heritage platform buildings and the addition of wires within existing conduits. It is considered that these works are negligible and present no negative impact on the significance of Katoomba Station.

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 Katoomba Railway Station and yard 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 conservation 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.
- The length of the corbeled brickwork is recommended to be rendered to create a consistent presentation.
- The current bitumen platform surface should be extended over the proposed platform extension to present a uniform surface.
- The existing platform retaining wall would be archivally recorded prior to works. Archival recording of elements of Katoomba 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.

- Material finishes for the new platform extension brickwork, particularly brick colour and texture, would be selected to be sympathetic to the existing platform retaining wall brickwork. New brickwork constructed adjacent to original brickwork should be visually separated at the join in order to delineate old and new fabric.
- A physical membrane should be installed between the heritage platform and the proposed extension to ensure the protection of the heritage brickwork.
- 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) should include stop work procedures in accordance with Transport for NSW'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.

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