

New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications

Lawson Station Statement of Heritage Impact

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Client: Transport for New South Wales
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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 customers
- facilitate the retirement of the two oldest electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity customers.

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

- State Heritage Register (SHR) as “Lawson Railway Station Group”. SHR# 01177
- *RailCorp Section 170 Heritage and Conservation Register*, SHI#4801023
- Heritage schedule of the *Blue Mountains Local Environmental Plan 2015* (Blue Mountains LEP), LN010.

The proposed works at Lawson Station would include the following:

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

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

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

1 Introduction

1.1 Background

Transport for NSW (TfNSW) is the government agency responsible for the delivery of major transport infrastructure projects in NSW and is the proponent for the New Intercity Fleet - Springwood to Lithgow Rail Corridor Modifications (the Project).

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

The New Intercity Fleet would:

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

The Project, within and adjacent to the curtilage of the Lawson Station would include the following key elements:

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

1.2 Site location

Lawson Station is located approximately 96 kilometres west of Central Station, within the Blue Mountains City local government area. Lawson Station services the Blue Mountains Line and intercity trains. The Project site encompasses Lawson Station, which is bound by Loftus Street and San Jose Avenue on the northern and eastern sides respectively and by the Great Western Highway to the south, as shown on Figure 1.

Lawson Railway Station and yard group is listed on the State Heritage Register (#01177), RailCorp Section 170 Heritage and Conservation Register and the heritage schedule of *Blue Mountains Local Environmental Plan 2015* (Blue Mountains LEP). The State Heritage Register curtilage for Lawson Station is defined as being:

“RailCorp property boundary to Great Western Highway; West: 10m from end of platform; East: western edge of San Jose Avenue overbridge (excluding bridge). DEPOT: North: RailCorp property boundary to Loftus Street, extending to 10m north of substation; South: Up Line; West: 10m west of substation; East: property boundary to Loftus St carpark.” (NSW Heritage Office, 2008)



Figure 1 Location of Lawson 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, reference design reports and the following key documents:
 - heritage register listings for Lawson Station
 - historic plans for Lawson Station held by the Sydney Trains Plan Room
 - previous reports and other relevant documentation provided by TfNSW, specifically, the *Lawson Railway Station and Yard Precinct Conservation Management Plan* (Australian Museum Business Services, 2013).
- background research into the historical development of Lawson Station using the historic plans, historical photographs, newspapers and other primary and secondary historical sources as relevant and referenced in Section 3.
- site inspection on 7 April 2017 by AECOM staff assessing the existing Lawson Station along with the existing character of the Project site and surrounding land uses. Note: all photographs within this report were taken during the site inspection unless otherwise stated
- assessment of the Project against the heritage significance of Lawson 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 7.4 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. Any unexpected finds would be managed in accordance with TfNSW's *Unexpected Heritage Finds Guideline* (Transport for NSW, 2015). This report is based on a reference design for the Project.

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

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

2 Statutory context

2.1 Commonwealth legislation

2.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) defines 'environment' as both natural and cultural environments and therefore includes Aboriginal and non-Aboriginal historic cultural heritage items. Under the EPBC Act, protected heritage items are listed on the National Heritage List (NHL) (items of significance to the nation) or the Commonwealth Heritage List (CHL) (items belonging to the Commonwealth or its agencies). These two lists replaced the Register of the National Estate (RNE). The RNE has been suspended and is no longer a statutory list; however, it remains as an archive. Lawson Station is not identified on the RNE.

Under Part 9 of the EPBC Act, any action that is likely to have a significant impact on a matter of National Environmental Significance (known as a controlled action under the EPBC Act), may only progress with approval of the Commonwealth Minister for the Department of the Environment (DotE). An action is defined as a project, development, undertaking, activity (or series of activities), or alteration. An action would also require approval if:

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

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

2.2 State Legislation

2.2.1 Heritage Act 1977

The NSW Heritage Act 1977 (as amended) was enacted to conserve the environmental heritage of NSW. Under Section 32, places, buildings, works, relics, movable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the NSW State Heritage Register. Items that are assessed as having State heritage significance can be listed on the State Heritage Register by the Minister on the recommendation of the NSW Heritage Council. Lawson Railway Station Group has been identified as meeting the criteria for listing on the State Heritage Register as item #01177.

Projects to alter, damage, move or destroy places, buildings, works, relics, movable objects or precincts protected by an IHO or listed on the State Heritage Register require an approval under Section 60. The 'relics provision' requires that no archaeological relics be disturbed or destroyed without prior consent from the Heritage Council of NSW. Therefore, no ground disturbance works may proceed in areas identified as having archaeological potential without first obtaining an Excavation Permit pursuant to Section 60 of the *Heritage Act 1977*, or an Archaeological Exemption.

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

The Lawson Railway Station Group has been identified on the RailCorp Section 170 Heritage and Conservation Register under State Heritage Inventory database (SHI #4801023). Under

Section 170A(1)(c) Sydney Trains must provide the Heritage Division with written notice prior to demolition of any place, building or work entered in its register. Listing on the State Heritage Register overrides this requirement as approval under Section 60 is required.

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

any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- (b) is of State or local heritage significance.

Approval is required under Section 60 if the item is listed on the State Heritage Register. For all other items or areas, approval to disturb an area that may contain relics must be obtained under Section 140.

2.2.2 Environmental Planning and Assessment Act 1979

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

2.2.3 State Environmental Planning Policy (Infrastructure) 2007

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

Clause 14 of ISEPP 2007 applies to infrastructure developments carried out by, or on behalf of, a public authority if the development is likely to impact a local heritage item or heritage conservation area (other than a heritage item that is also a State heritage item). Under ISEPP 2007, a public authority, or person/s acting on behalf of a public authority, must not carry out a development to which this clause applies, unless an assessment of the proposed impact has been prepared and forwarded to the local government of the area for comment. Comments received within 21 days must be taken into consideration. This Clause is not of relevance to the Project as the Lawson 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

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

2.3.1 Blue Mountains Local Environmental Plan 2015

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

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

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

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

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

Lawson Railway Station is a listed item of environmental heritage on Schedule 5 of the Blue Mountains LEP, identified as #Ln010.

2.4 Heritage registers

Lawson Station has been identified as holding State significance and is listed on the State Heritage Register, RailCorp Section 170 Heritage and Conservation Register and the Blue Mountains LEP 2015.

Table 2 Summary of listed heritage items within Project site

Heritage list	Items within the Project site	Level of significance	Items adjacent to the Project site	Level of significance	Distance to Project site (metres)
World Heritage List	Nil	n/a	Nil	n/a	n/a
National Heritage List	Nil	n/a	Nil	n/a	n/a

Heritage list	Items within the Project site	Level of significance	Items adjacent to the Project site	Level of significance	Distance to Project site (metres)
Commonwealth Heritage List	Nil	n/a	Nil	n/a	n/a
Register of the National Estate (non-statutory)	Nil	n/a	Nil	n/a	n/a
State Heritage Register	Lawson Railway Station Group (State Heritage Register #01177)	State			
RailCorp Section 170 Heritage and Conservation Register	Lawson Railway Station, Residence and Yard Group (SHI #4801023)	State	n/a	n/a	n/a
Blue Mountains LEP 2015	Lawson Railway Station (LN010)	State	Former Railway Reservoir (LN026)	Local	25
			Grand Hotel archaeological site (LN078)	Local	61
			Entry Arch to Bellevue Park (LN049)	Local	80
			Explorers Centenary Lamp (LN042)	Local	116
			Horse trough (LN016)		76
			Honour Gardens Conservation Area (LN014)	Local	85
			Gardners Inn (BH027)	Local	105
			Blue Mountains Hotel (LN080)		58
			Staples Store Group (LN077)	Local	85
				Local	
				Local	
				Local	

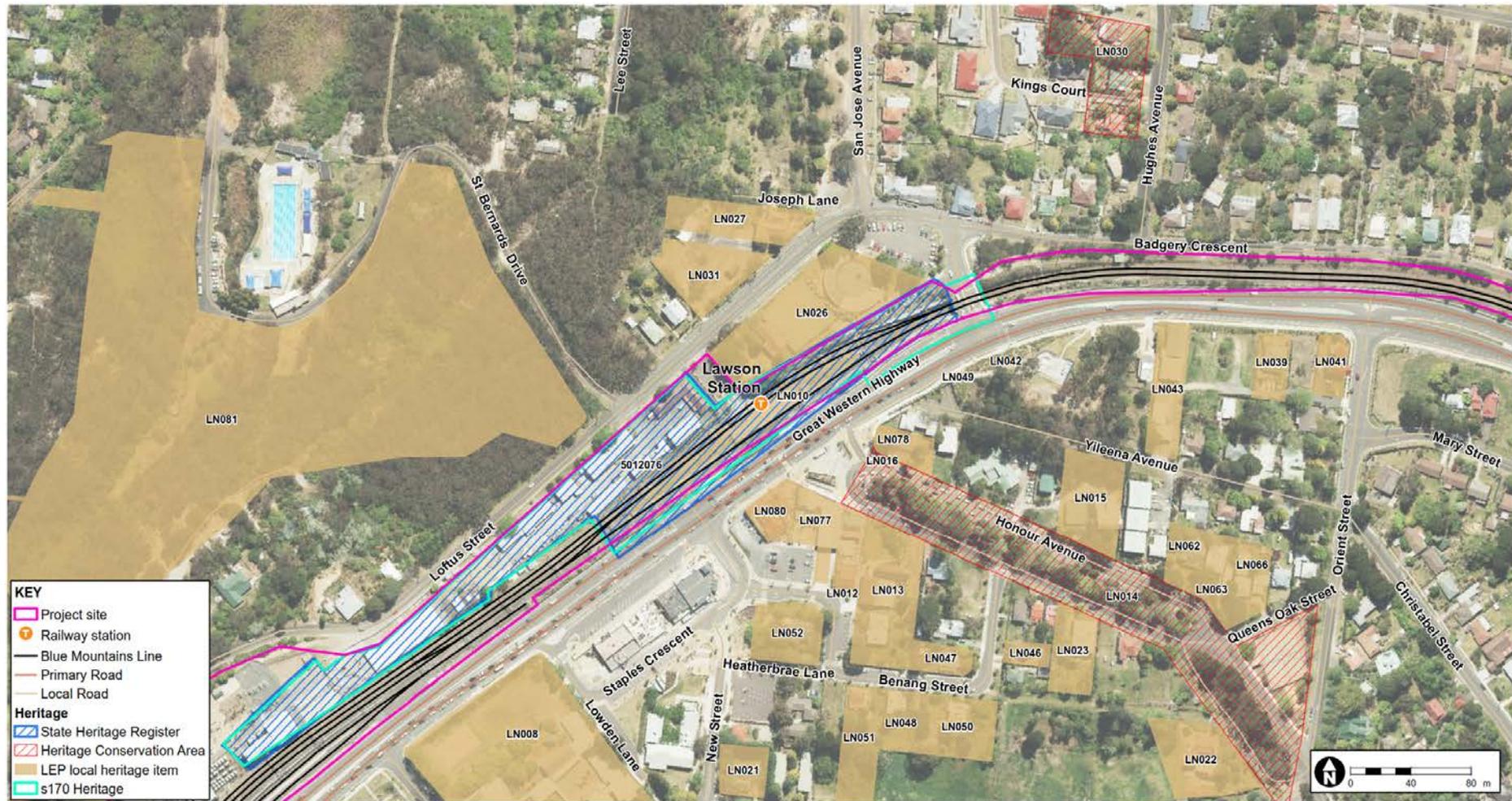


Figure 2 Heritage items within the vicinity of Lawson

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 of 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 headway with their expedition in May 1813 (State Library of New South Wales, 2014). Later that same year, surveyor George Evans found a way through to Bathurst (National Museum of Australia, n.d.). Captain William Cox was tasked by Governor Lachlan Macquarie to form a road along this line, which was to become the basis for the Great Western Highway.

3.2 Railway development

The railway line reached Lawson in 1867, with Lawson Station being located a mile east of Wilson's Blue Mountains Inn and Lawson Station was originally referred to as Blue Mountains after the Inn. Lawson Station was strategically located to enable locomotives to take on water prior to their ascent up Mount Victoria – a water reserve was established to the north of the railway line. This was achieved by constructing an earthen wall across a gully to form a holding dam, fed by a local creek and natural springs. It was the water supply that was to see Lawson Station become a hub (Australian Museum Business Services, 2013:12).

A timber platform and waiting shed were built at an early date. The waiting shed was replaced by a brick platform building in 1879. The first residence was constructed on the northern side of the line close to the location of the current carpark. At the same time, the station name was changed to Lawson, honouring William Lawson (see Section 3.1).

The existing siding platform was extended in 1879 and a new brick station building was added to the existing timber siding platform. At this time a new residence building was built. The second Station Master's residence was built c1880 on the northern side of the existing station, further to the south. A third Station Master's residence was built in 1896 in preparation of the expansion of the railway through the Blue Mountains (Australian Museum Business Services, 2013:15).

The duplication of the line in 1902 saw the construction of a new brick-faced island platform and a standard brick platform building containing a general waiting room, ladies' waiting room, ladies' toilet, men's toilets and urinals, booking and parcels' office. Lawson Station was supplied with a pedestrian subway from Bathurst Road (now Great Western Highway) and this was extended to include access from Loftus Street in 1926. In 1946, the platform was extended by 600 feet (183 metres) (Australian Museum Business Services, 2013:16).

The line was electrified in 1957, which made many of the services provided at Lawson Station redundant. This included the water tanks and columns and de-ashing pits.

In 1994, new canopies were added to the platform, together with security grills. Around this time the Station Master's Residence became vacant.

3.3 Station platform

The island platform was constructed in 1902, when the line was duplicated. It was constructed of unreinforced concrete walls and a concrete deck, as were several of the island platforms associated with the duplication of the Blue Mountains line. Photographs of Lawson Station from 1908 and 1910 (Figure 3 and Figure 4) indicate the concrete coping to have a square edge along the majority of the length, with a rounded profile evident on the north eastern end.



Figure 3 Lawson Station 1908 from the south-west . Note squared edge to coping. Source: ARHS Railway Resource Centre, 0000628 in AMBS 2013:22



Figure 4 Lawson Station c.1910 from the north-east. Note rounded edge to coping. Source: NSW State Archives and Records Authority, digital id 17420_a014_a014000736

The platform was extended in 1946 to its current length of 600 feet (183 metres). The extension was completed in red brick and at the same time the 1902 section of the platform was raised through the addition of two courses of bricks. It would appear that the original coping, constructed in 1902, was removed and replaced at this time. There does not appear to have been modifications to the platform or coping since 1946, other than the painting of the platform surface and the installation of tactile markings within the last ten years. Figure 5 is a photograph of Lawson Station taken in 1984, which shows coping in an extant configuration.



**Figure 5 Lawson Station 1984, view from the west. Note coping appears to have extant configuration.
Source: ARHS Railway Resource Centre, 0000628 in AMBS 2013:29**

In 1994 upgrades were undertaken to the platform services, including the construction of a canopy and the replacement of the fence around the subway entrance.

4 Physical description

4.1 Introduction

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

4.2 Station platform and coping

4.2.1 Description of platform

Lawson Station has a single island platform, accessed via a pedestrian subway. On the platform stands a station building containing ticketing office, toilets, waiting room and store rooms. An out of shed (formerly used to unload parcels when the parcels office was closed) sits adjacent to the platform building and is now used for storage. These buildings would not be impacted by the Project.

The station platform services platform 1, on the northern side facing the Great Western Highway and platform 2, fronting Loftus Street. Platforms 1 and 2 are between 182 and 183 metres long and nine metres wide.

4.2.2 Platform coping

The 1902 portion of the platform is constructed of unreinforced concrete, cast *in-situ* with a concrete deck (Figure 6). The cast *in-situ* concrete coping had a vertical profile, and stepped or flared foot and in most cases a projecting moulded coping. The platform was extended in 1946 to the current length, with the extension built out of brick with a corbelled brick coping. The height of the 1902 concrete deck was raised at this time by adding two courses of brick on top of the original concrete coping (Figure 6). The new brick coping aligns with the concrete deck so that there is no additional overhang.

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



Figure 6 View of 1902 section of the platform showing brick additions above the original concrete coping



Figure 7 View of 1946 brick extension to platform

4.3 Rail corridor

The track consists of sleepers, ballast and rail (Figure 8). It is noted that the sleepers are concrete throughout the Lawson Station precinct. It is anticipated that these items are not individually or collectively significant, having undergone extensive modifications and replacements since the lines were laid in 1902.



Figure 8 View north of tracks showing concrete sleepers

5 Significance assessment

5.1 Assessment criteria

5.1.1 Significance assessment criteria

In order to understand how a development would impact on a heritage item, it is essential to understand why an item is significant. An assessment of significance is undertaken to explain why a particular item is important and to enable the appropriate site management and curtilage to be determined. The process of assessing heritage significance is outlined in the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001) which is part of the *NSW Heritage Manual* (Heritage Branch, Department of Planning). The *Assessing Heritage Significance* guidelines establish seven evaluation criteria which reflect four categories of significance and whether a place is rare or representative.

A heritage item can be identified as being significant at a local level (i.e. to the people living in the vicinity of the site), at a State level (i.e. to all people living within NSW) or be significant to the country as a whole and be of National or Commonwealth significance. In accordance with the guideline *Assessing Heritage Significance*, an item would be considered to be of State significance if it meets two or more criteria at a State level, or of local heritage significance if it meets one or more of the criteria outlined in Table 3. The Heritage Council 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) – an item is important in the course, or pattern, of NSW’s cultural or natural history (or the cultural or natural history of the local area).	The site must show evidence of significant human activity or maintains or shows the continuity of historical process or activity. An item is excluded if it has been so altered that it can no longer provide evidence of association.
Criterion (b) – an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history (or the cultural or natural history of the local to area).	The site must show evidence of significant human occupation. An item is excluded if it has been so altered that it can no longer provide evidence of association.
Criterion (c) – an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).	An item can be excluded on the grounds that it has lost its design or technical integrity or its landmark qualities have been more than temporarily degraded.
Criterion (d) – an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.	This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.
Criterion (e) – an item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history (or the cultural or natural history of the local area). Significance under this criterion must have the potential to yield new or further substantial information.	Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.

Criterion	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 Lawson 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 Lawson Railway Station Group

5.2.1 State Heritage Register significance assessment

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

Table 5 State Heritage Register significance assessment of the Lawson Railway Station Group and yard (NSW Heritage Office, 2008)

Criterion	Assessment
<p>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>	<p>Lawson Station Group is historically significant as part of the early station buildings built during the duplication of the Western rail line across the Blue Mountains combining a standard 1902 Federation style design station building and matching detached shed. It demonstrates the technological and engineering achievements in the early 1900s and is an important part of the townscape of the Lawson historic village and is highly visible from the main road.</p> <p>The site has further historical significance due to its continued rail use since 1880, with the Station Master's cottage demonstrating the custom of providing accommodation for railway staff and the importance of the station as a key terminus for locomotive facilities with its large number of water columns and tanks. The Electrical Depot site demonstrates another major phase in the historical development of Lawson Station precinct featuring buildings built in the 1950's as part of the electrification of the railway to Lithgow. The substation is the last major rail electric substation built for the Sydney metropolitan network and the largest such building on the Main Western line between Penrith and Lithgow.</p>
<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>	<p>No assessment provided against this criterion.</p>
<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>	<p>Lawson Station Group is of aesthetic significance as a representative example of an intact Federation free classical style railway station, which has retained its former lamp building (Out of Shed) which is designed in the same style as the main station building. It is one of a group of stations built to the same pattern across the Blue Mountains following the duplication of the railway line.</p> <p>The Station Master's residence has an unusual architectural style as it does not conform to any standard design although has similarities to a standard 'J3' design. The buildings of the Electrical Depot including the former District Engineer's office and the associated stores and sheds collectively form a cohesive character within the landscape of the station precinct. The substation is a landmark in the precinct and rail corridor as well as the Great Western Highway.</p> <p>The depot buildings have limited aesthetic or architectural value due to there [sic] utilitarian design.</p>
<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>	<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 history.</p>
<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>	<p>Lawson Station Group has research potential for its combination of buildings and structures that would provide information on the elements of the equipment contemporary with the electrification of the Main Western line over the Blue Mountains. The Electrical Depot contains a number of technically important electrical engineering equipment such as the large rectifier. The area along the Great Western Highway has potential for surviving remnants of the former goods yard and the former Down side platform and siding.</p>

Criterion	Assessment
<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>	<p>The Electrical Depot site is rare in the railway network, which includes the substation, one of a small number of such building and one of the largest remaining on the system.</p>
<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>Lawson Station Group is a representative example of a standard design larger station building group demonstrating the construction techniques and characteristics of commonly used railway designs.</p> <p>The Station Master’s residence is a representative example of simple architectural forms of other similar railway residences.</p> <p>The substation is a good example of rail substations built in Sydney after 1926 including Hurstville, Lewisham, Sutherland, Hornsby and Belmore.</p>

5.2.2 Statement of significance

“The Statement of significance reads:

Lawson Railway Station Group is of state significance as an important railway location along the Main Western Line and is significant for its important historical role associated with locomotive servicing facilities and the change to electric traction power supply at this steepest part of the Blue Mountains. The place is unique and has research potential for its combination of buildings and structures that demonstrate a large railway complex of railway station, accommodation, service, depot and administration facilities.

The station building demonstrates the period of line duplication across the Blue Mountains and is a good example of a standard 1902 Federation style design station building with matching detached shed. The Lawson Station Master’s residence is significant for its ability in demonstrating the custom of providing accommodation for railway staff, and is a representative example of the simple architectural forms employed in other railway residences in NSW.

The buildings of the Electrical Depot including the former District Engineer’s office and the associated stores and sheds have historical and research significance to demonstrate the former administration and railway electrical supply facilities along this section of the Blue Mountains. The Lawson substation is the last major rail electric substation built for the Sydney metropolitan network and the largest such building on the Main Western line between Penrith and Lithgow. While the original function of the building has been superseded by modern technology, the substation represents one of the final phases in the development of the electrified railway system for the Sydney Metropolitan area.”

(NSW Heritage Office, 2008)

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

5.2.3 Lawson Station Conservation Management Plan significance assessment

The Conservation Management Plan (CMP), which refers to Lawson Station as the Lawson Railway Station and Yard Precinct, included a revised significance assessment, reproduced here in Table 6.

Table 6 CMP significance assessment of the Lawson Railway Station Group and Yard Precinct (Australian Museum Business Services, 2013)

Criterion	Assessment
<p>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></p>	<p>Lawson Railway Station and Yard Precinct has been an important regional railway location since the opening of the Great Western Railway across the Blue Mountains in 1867. The site was chosen for its proximity to a good water supply, where steam locomotives crossing the steep slopes of the range could stop to take on water. The stop became one of the first two major stations of the Blue Mountains line, the other being Mount Victoria, hosting a variety of locomotive services, including water tanks, columns, and de-ashing pits. The station's locomotive services became redundant following electrification of the line in 1957; however, Lawson retained its regional importance through this period of technological change when it was chosen as the site of a new major electrical substation and an electrical maintenance depot, providing electricity transmission services to the railway and the Blue Mountains community.</p> <p>The post WW II electrification of the Blue Mountains line took place during the second major phase of railway electrification in NSW, and first major expansion of electrification outside the Sydney metropolitan area. The Blue Mountains electrification facilitated an important increase in rail freight capacity to Sydney from the Western Plains, and a major reduction in travelling times over the mountains. The Lawson Substation is the largest electrical substation along the Blue Mountains line, and together with the Electrical Depot continues to have important operational value to the running of the line. The regional importance of the site as depot site has been augmented by the creation of other sub-disciplinary maintenance depots alongside the Substation, including the Signals Depot.</p> <p>The various phases of occupation and development of the site, and its ongoing association with the development of the railways, are also illustrated by the former Station Master's Residence and the present Lawson Railway Station. The 1896 Station Master's Residence, the third and only remaining residence on the site, demonstrates the regional importance of the station in the late nineteenth century and the custom of providing on-site residential accommodation for railway staff. The 1902 Lawson Railway Station is historically associated with the duplication of the Blue Mountains line, when most of the local stations were rebuilt to a standard design, and the broader adoption of Federation style station designs by the NSW railways around this time.</p> <p>The Lawson Railway Station and Yard Precinct is historically associated with the development of Lawson Village. The station continues to provide an important transport function to the community, and is a highly visible element of the village streetscape.</p> <p>The Lawson Railway Station and Yard Precinct has State heritage significance under this criterion.</p>
<p>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 to area).</i></p>	<p>The Substation and Electrical Depot have a strong association with the work of the Electrical Branch of the Railways, and the functional division of buildings within the Depot is illustrative of the traditional division of labour within the railways workforce. However, the Lawson Railway Station and Yard Precinct does not meet the threshold for State heritage significance under this criterion.</p>

Criterion	Assessment
<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>	<p>The Lawson Substation and Electrical Depot are good examples of buildings purpose-designed by the engineers of the Ways and Works Branch of the NSW Department of Railways in the mid-twentieth century for the railways electrification project. Although each building in the Precinct is unique, they have consistent character and detailing, representative of post WW II International design.</p> <p>Lawson Substation and Electrical Depot are important in demonstrating post WW II adaptation of existing electrical engineering technology to handle increased loads for trains crossing the range. Lawson Substation continues to operate using a combination of original and updated equipment, including original rectifier transformers, switchgear, and regenerative breaking equipment. The Blue Mountains system was the first in Australia to use regenerative breaking technology, which both slows trains descending the steep slopes and feeds electricity back into the system at the Substation. The Electrical Depot incorporates various historical layers of equipment and signage, gradually adapted for use during the life of the yard.</p> <p>Lawson Railway Station has aesthetic significance as a representative example of Type 11 Federation style island station building in good condition, with an associated Island Platform, Out-of Shed and Pedestrian Subway. Lawson is one of a group of stations built to the same pattern across the Blue Mountains during duplication of the railway line. The Lawson Station Building, Platform, Out-of Shed and Pedestrian Subway have good integrity, retaining much of their original layout and a substantial amount of original fabric intact, including internal joinery, fixtures and some fittings. In addition, the 1921 Signal Box extension to the Station Building has technical value insofar as it houses original 1907 signal interlocking frame for the station and associated equipment.</p> <p>Lawson Railway Station and Substation are prominent landmarks within the local area, highly visible from the rail corridor and the Great Western Highway. The Station Master's Residence has aesthetic significance as a good example of a Type 7 three bedroom railway residence, purpose-designed by the NSW Department of Railways in the late nineteenth century, before the introduction of standard residence designs in NSW. The building retains much of its original layout and a substantial amount of original fabric, including original joinery, albeit in poor condition. The building has an unusual roof profile for its type.</p> <p>The Lawson Railway Station and Yard Precinct has State heritage significance under this criterion.</p>
<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>	<p>The Electrical Depot has some social significance as the site of a local Memorial Garden, created by workers at the Depot site.</p> <p>Preparation of this report did not involve community consultation regarding the social value of the Precinct as a whole. However, based on the community's successful campaign to save the local Mechanics Institute building from demolition during the recent widening of the Great Western Highway, it may be inferred that the Lawson Railway Station and Yard Precinct makes an important contribution to the local community's sense of place.</p>
<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>	<p>Lawson Substation and Electrical Depot contains an important group of original machinery, equipment, and other ephemera associated with the electrification of the Blue Mountains line in 1957 and its subsequent maintenance, which may in future provide an important railway reference collection.</p> <p>There is some potential for archaeological relics associated with the occupation of the 1896 Station Master's Residence and other former railway residences to be found on the site, which may provide new information about early domestic activity on the site, including information that is not readily available from other resources or archaeological sites.</p> <p>The Lawson Railway Station and Yard Precinct has local heritage significance under this criterion.</p>

Criterion	Assessment
<p>Criterion (f) – <i>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).</i></p>	<p>Lawson Substation is a rare example of a large, mid-twentieth century railway traction substation, with some original machinery and equipment still in use, and one of the largest still in operation in the NSW railways system. Other metropolitan examples of large substations generally date to an earlier phase of electrification, and have been substantially upgraded or adapted for new uses. Some of the small railway substations in the Blue Mountains may contain a more intact collection of original machinery and equipment than the Lawson Substation, but the large scale and dual function of the Lawson Substation, originally designed to supply electricity to both the railway and the local community, makes it unique.</p> <p>The Electrical Depot is a rare example of a mid-twentieth century railway electrical maintenance depot, which is still fulfilling its original function. The site contains an accumulation of equipment, tools, fixtures and ephemera which span the history of use from the late 1950s, including equipment which has been salvaged from other sites for ongoing maintenance of the Blue Mountains line, and equipment which is original to the site, but which has been adapted over time to new conditions and changing technologies.</p> <p>The Lawson Railway Station and Yard Precinct has State heritage significance under this criterion.</p>
<p>Criterion (g) – <i>an item is important in demonstrating the principal characteristics of a class of NSW’s (or local area’s):</i></p> <ul style="list-style-type: none"> • <i>cultural or natural places cultural; or natural environments.</i> 	<p>Lawson Railway Station demonstrates the key characteristics of a standard metropolitan railway station design of the early twentieth century. The Station Building, Island Platform, and Pedestrian Subway have a consistent architectural character and detailing representative of the Federation era, and are together, typical of stations constructed across the Blue Mountains during duplication of the line. The Station Building retains many key features of its class, including some original fixtures and fittings.</p> <p>The Station Master’s Residence is a typical example of a large, late-nineteenth century railway worker’s residence in NSW, built at a time when railway staff were often provided with on-site accommodation.</p> <p>The Substation and Electrical Depot contain a representative example of mid-twentieth century equipment and machinery, associated with the operation and maintenance of an electrified railway system.</p> <p>The Lawson Railway Station and Yard Precinct has State heritage significance under this criterion.</p>

The Statement of significance reads:

“Lawson Railway Station and Yard Precinct has been an important regional railway location since the opening of the Great Western Railway across the Blue Mountains in 1867. The station site was chosen for its proximity to a good water supply, where steam locomotives crossing the steep slopes of the range could stop to take on water. The station's locomotive services became redundant following electrification of the line in 1957; however Lawson retained its regional importance when it was chosen as the site of a new major electrical substation and an electrical maintenance depot, providing electricity transmission services to the railway and the Blue Mountains community.

The post WW II electrification of the Blue Mountains line took place during the second major phase of railway electrification in NSW, and first major expansion of electrification outside the Sydney metropolitan area. The Blue Mountains electrification facilitated an important increase in rail freight capacity from the Western Plains, and a major reduction in travelling times over the mountains. The Lawson Substation and Electrical Depot are good examples of buildings purpose-designed by the NSW Department of Railways in the mid-twentieth century for the railways electrification project. Although each building in the Substation and Electrical Depot areas is unique, together they have consistent character and detailing, representative of post WW II International design.

The Lawson Substation is a rare example of a large, mid-twentieth century railway substation building, originally designed to supply electricity to both the railway and the local community, which has some original machinery and equipment still in use. It is one of the largest early substations still in operation in the NSW railways system. Metropolitan examples of large substations generally date to an earlier phase of electrification, and have been substantially upgraded or adapted for new uses. The Electrical Depot is also a rare example of a mid-twentieth century railway electrical maintenance depot still fulfilling its original function. The site contains an accumulation of equipment, tools, fixtures and ephemera which span the history of use from the late 1950s, including equipment which has been salvaged from other sites for ongoing maintenance of the Blue Mountains line, and equipment which is original to the site, but which has been adapted over time to new conditions and changing technologies.

The various phases of occupation and development of the overall site, and its ongoing association with the development of the NSW railways, are also illustrated by the former Station Master's Residence and the present Lawson Railway Station. The 1896 Station Master's Residence, the third and only remaining residence on the site, demonstrates the regional importance of the station in the late nineteenth century and the custom of providing on-site residential accommodation for railway staff. The 1902 Lawson Railway Station is historically associated with the duplication of the Blue Mountains line. The Station Building, Island Platform, and Pedestrian Subway have a consistent architectural character and detailing representative of standard railway designs of the Federation era, and are together typical of stations constructed across the Blue Mountains during duplication of the line. The station is well maintained and retains many original features, including the internal layout of the station building and some original fixtures and fittings.

The Lawson Railway Station and Yard Precinct is historically associated with the development of Lawson Village, and the Precinct continues to be a functionally important and highly visible element of the village streetscape.

The Lawson Railway Station and Yard Precinct has State heritage significance for its historic, technical, rarity and representative values.”

(Australian Museum Business Services, 2013)

The two significance assessments and three statement of significance will be used to assess whether the Project would impact on the significance of Lawson Station in Section 6.

5.2.4 Station components significance

The CMP assessed the significance of the individual elements of Lawson Station (Australian Museum Business Services, 2013:98-99). The platform was assessed as 'high', indicating that the alterations undertaken do not detract from the significance and there is a large amount of original fabric. The CMP does not specifically identify a significance grading for the coping. It is therefore assumed that the coping is rated as high also.

5.3 Adjacent and overlapping heritage items

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

Table 7 Adjacent and overlapping heritage items

Heritage item	Listing	Significance	Description
Former Railway Reservoir	The Former Railway Reservoir is listed on the Blue Mountains LEP (LN026).	Local	The original water dam at Lawson (LN019) was built in 1867 to supply the railways with water. Later it is believed it was used to supply Lawson with water.
Grand Hotel archaeological site	The Grand hotel archaeological site is listed on the Blue Mountains LEP (LN078).	Local	This archaeological site is considered to have historical archaeological value and research potential relating to the construction and occupation of the former hotel from 1887 to 1932.
Entry Arch to Bellevue Park	The Entry Arch to Bellevue Park is listed on the Blue Mountains LEP (LN049).	Local	This archway first archway marking Honour Avenue, the archway is an important element in the civic fabric of Lawson that was carefully relocated to a new position of prominence when replaced with a more elaborate structure.
Explorers Centenary Lamp	The Explorers Centenary Lamp is listed on the Blue Mountains LEP (LN042).	Local	The monument is of significance for its historical links to the crossing of the Blue Mountains and for its social value as a community memorial to the history of the area.
Horse trough	The Horse trough is listed on the Blue Mountains LEP (LN016)	Local	The horse trough represents a phase of use of the Douglas Square, Honour Avenue precinct related to early settlement and development of Lawson.
Honour Gardens Conservation Area	The Honour Gardens Conservation Area is listed as a heritage conservation area on the Blue Mountains LEP (LN014)	Local	This heritage conservation area is associated with two highly significant architects, Sir Charles Rosenthal, who was also a dashing and successful soldier who rose in the war to the rank of Major-General, and Sir John Sulman, a formative force in Australian town-planning in whose honour the Sulman Prize for painting is still awarded annually. The wide, well planted, divided Avenue with its handsome flat-arched war memorial joining two important triangular reserves is a most striking element in the aesthetic of Lawson.

Heritage item	Listing	Significance	Description
Blue Mountains Hotel	The Blue Mountains Hotel is listed on the Blue Mountains LEP (LN080)	Local	The Blue Mountains Hotel is of local significance for its historic importance to the development of Lawson, for its former and potential high aesthetic value located at the centre of the Lawson civic square and Honour Avenue precinct both in its own right and with regard to the townscape, for its social value as the only hotel remaining in the area and for its association with the early pioneering Wilson family.
Staples Store Group	The Staples Store Group is listed on the Blue Mountains LEP (LN077)	Local	The Staples Group of buildings is of local significance for their historic importance in the development of Lawson, for their former and potential future high aesthetic value located at the centre of the Lawson civic square and Honour Avenue Precinct in their own right and with regard to the broader townscape and for their social value as part of the core shopping area.
Wilson Park	Wilson Park is listed on the Blue Mountains LEP (LN081)	Local	Wilson Park is of local significance for its importance as an area of open space at the junction of two major roads. It has informal character with a pleasing arrangement of exotic trees.

6 Archaeological assessment

6.1 Archaeological potential

The Lawson Station CMP identifies the following areas of archaeological potential which are shown on Figure 12:

- area of the former siding – low archaeological potential
- first Station Master's residence (1879) – moderate archaeological potential
- second Station Master's residence (c.1880s to c.1896) – moderate archaeological potential
- third Station Master's residence (1896 – still present) – moderate archaeological potential
- railway worker's cottage (1920-25 to 1970s) – moderate archaeological potential.

6.2 Second Station Master's residence

The proposed works includes the installation of impedance bonds and stand within an area mapped in the CMP as having moderate archaeological potential associated with the second Station Master's residence (1880s to 1896). Based on the CMP, the second Station Master's residence building was located in the southeast corner of the Lawson Electrical Depot (see Figure 12).

An 1896 plan of the third Station Master's residence shows the location of both the third and second Station Master's residences (refer Figure 13). The area identified in the CMP associated with the second Station Masters residence was conservative. Therefore AECOM has refined the location of the second Station Master's residences using the 1896 plan and has prepared an overlay (refer Figure 14), using the third Station Master's residence building (still present) as a reference in a current aerial photograph. This overlay plan indicates that the proposed location of the excavation required for the impedance bonds would be located within the area of the second Station Master's residence.

The second Station Master's residence was demolished in 1902 to make way for the duplication of the Blue Mountains Line and the construction of the Up Refuge siding (Australian Museum Business Services, 2013:87-88). The demolition is likely to have removed the building down to its foundation level to allow the track to be built up with fill and ballast. This would have ensured the stability of the railway track for the track duplication works. Remains associated with the second Station Master's residence building, if present, would be of moderate archaeological potential (Australian Museum Business Services, 2013:87-88).

No information regarding the style or building material of the second Station Master's residence has been identified as no plans or photographic evidence of the building are known to exist. However, photographic evidence suggests that earlier structures at Lawson Station were predominately timber structures.

6.3 Historical disturbance

In order to determine the likely depth of potential archaeological remains, consideration of the historical ground levels and disturbance has been undertaken.

The third Station Master's residence is still present today within the Lawson Electrical Depot grounds and the ground level it was built on has not been modified. This ground level is similar to the ground level the second Station Master's Residence was built on (Figure 9).

An inspection of the 1896 Station Master's residence shows that the current track level is at least 1.4 metres higher than the level of the ground the 1896 Station Master's residence was built on (Figure 10 and Figure 11). The current track level was built up to its current height during the duplication of the railway line through the Blue Mountains, and with the installation of the Up Refuge siding in 1902 (Australian Museum Business Services, 2013:87-88). This then also indicates that the ground level where the second Station Master's residence was previously built on is more than one metre below the current track level.



Figure 9: View of the third Station Master's residence (view to south)



Figure 10: View showing the difference between the ground level between the current track and the former ground level associated with the second Station Master's residence (view to south) (Photo scale = 20 cm gradients)

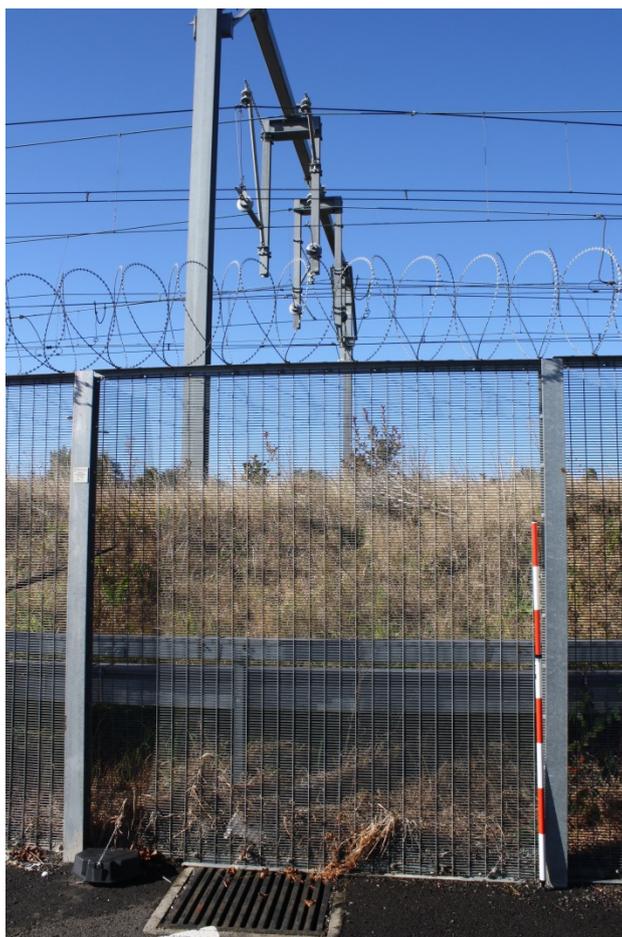


Figure 11: Detailed view of the difference in ground level between where the second Station Master's residence was built and the built up level of the current track level (view to southeast). (Photo scale = 20 cm gradients)

6.4 Assessment

As noted in the CMP there is moderate archaeological potential for relics associated with the second Station Master's residence to be present within the Project site. These relics would be limited to the foundation and any subfloor deposits that were not removed as part of the demolition works to remove the house. As noted above in Section 6.3, the current track was built up during the duplication of the Blue Mountain Line and installation of the refuge siding in 1902 and it is anticipated that the track was built with fill and ballast to meet the required gradient.

The proposed works within the area of archaeological potential include the installation of impedance bonds and stand, as shown in drawing SK-H1301 (Rev.B), SK-H1302 (Rev.A) and SK-H1303 (Rev.B). These works would involve excavation to a depth of up to one metre. As the rail corridor is expected to have been filled to its current level, the proposed works would not require excavation to the suspected depth where archaeological relics are likely to be encountered. As such, it is concluded that the proposed work would not impact on any known or potential archaeological relics associated with the second Station Master's Residence.

Under Section 140 of the *Heritage Act 1977*, a permit is required to disturb land that may contain relics. The potential for relics to be present within the vicinity of the excavation for the impedance bonds pit has been identified and it is therefore necessary to determine what approval is required. Where the impacts would be minimal, an exception under Section 139 may be applied for.

A gazettal under Section 139 of the Heritage Act indicates circumstances under which an exception may be sought. These include:

(a) an archaeological assessment, zoning plan or management plan has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that any relics in the land are unlikely to have State or local heritage significance; or

(b) the excavation or disturbance of land will have a minor impact on archaeological relics including the testing of land to verify the existence of relics without destroying or removing them; or

(c) a statement describing the proposed excavation demonstrates that evidence relating to the history or nature of the site, such as its level of disturbance, indicates that the site has little or no archaeological research potential.

The archaeological assessment provided above and as assessed in the CMP, has indicated that the relics associated with the second Station Master's residence, if present, would be of local significance. Exception under part 1a is therefore not applicable. Similarly, the site has been identified as holding archaeological potential and therefore exception under part 1c is not applicable.

The archaeological assessment has identified that, while the excavation associated with the installation of the impedance bonds would occur directly above potential archaeological relics, due to the depth of the potential relics (over 1.4 metres) and the maximum depth of the proposed excavation (one metre) there would be a minor or no impact on any preserved archaeological relics. An exception under part 1b is therefore recommended.

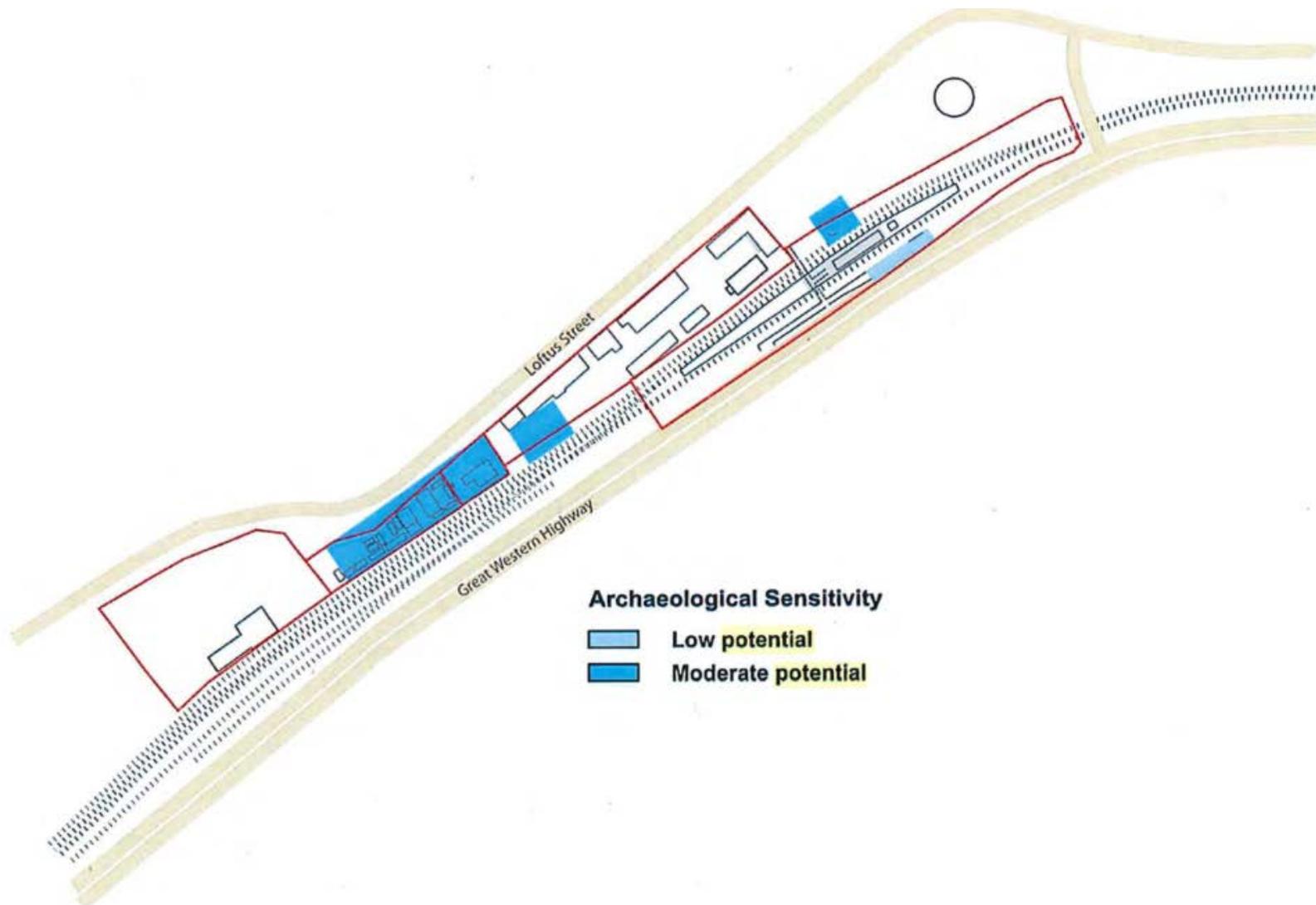
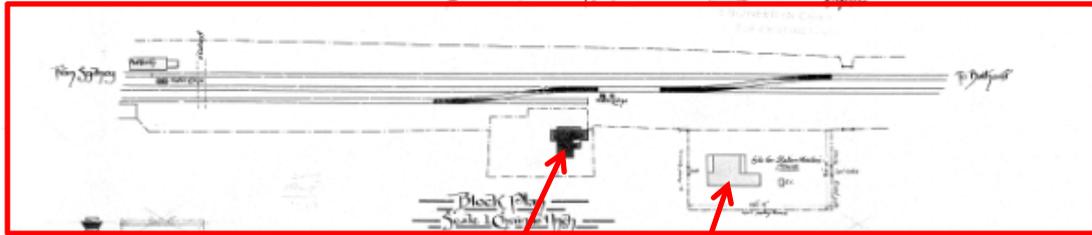


Figure 12 “Schematic plan of archaeological sensitivity across the Precinct (not to scale).” Reproduced from Australian Museum Business Services 2013:89. Approximate area of proposed works highlighted in orange.

WARNING SCANNED IMAGE
EDMS CV0363259

N.S.W.R.
Station Master's House
Lawson
Scale 8 Feet to 1 Inch
John Black 1896



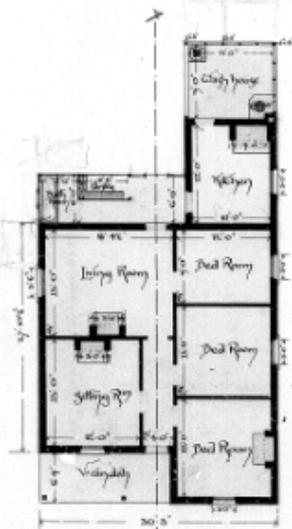
Front Elevation



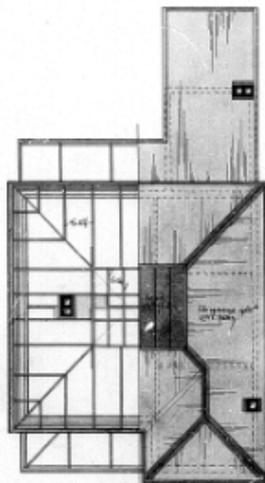
Cross Section on Line A-B

Second Station Master's residence

Third Station Master's residence



Ground Plan



Roof Plan



Plan Section & Elevation of Closet

RAH
1/24/96

Chas. Palmer
7/8/96

Figure 13 Detailed plan of the 1896 Station Master's residence with insert location map (outlined in red) showing the location of the second Station Master's residence in relation to the third Station Master's residence at the top (Source: Sydney Trains Plan Room CV0363259).

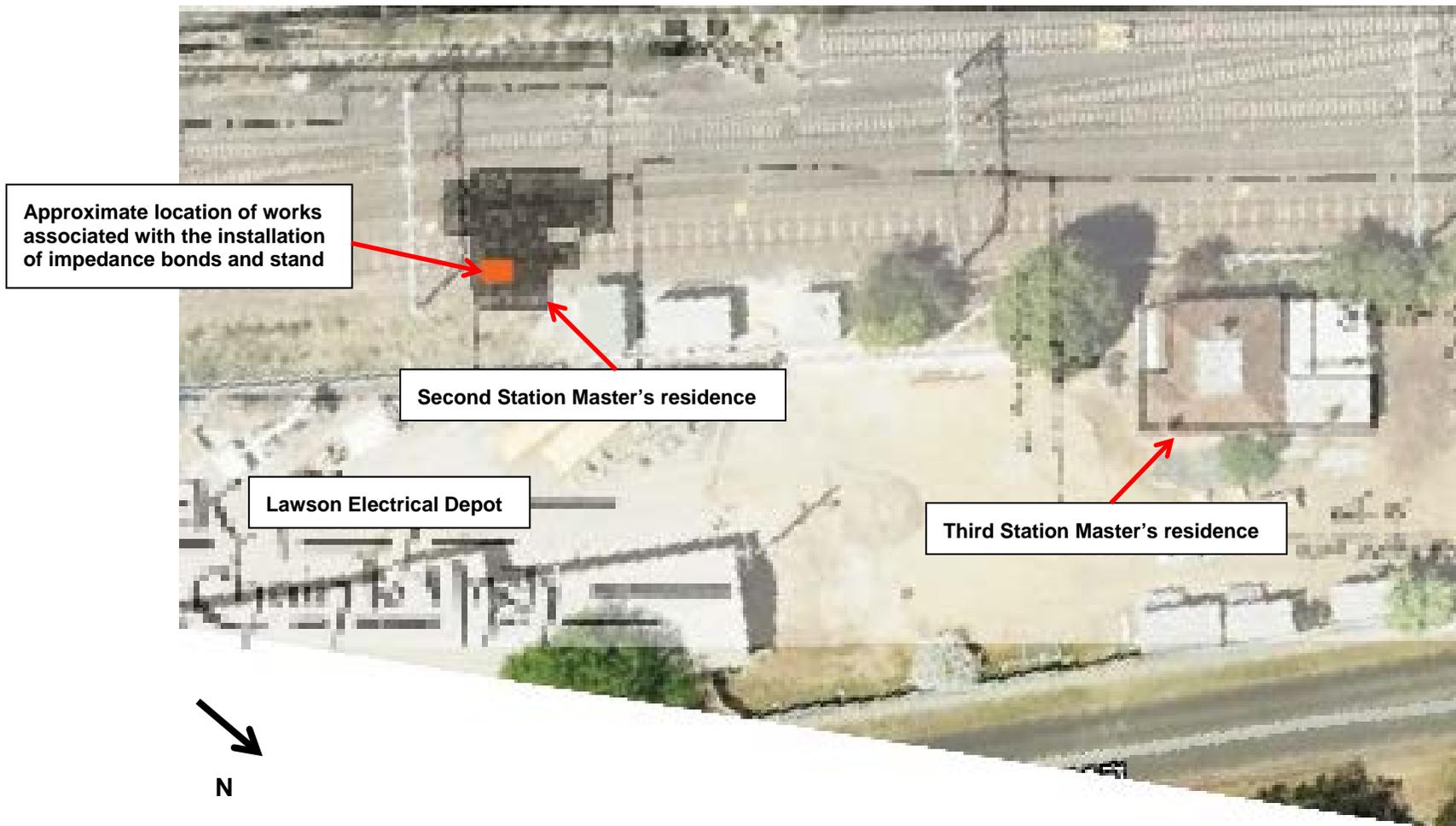


Figure 14: Overlay of a portion of the 1896 Plan (see Figure 13) showing the location of the second Station Master's residence (black shadow plan)(c.1880s) in relation to the third Station Master's residence overlaid on top of a modern aerial. (Figure prepared by AECOM). Proposed works shown in orange.

7 Impact assessment

7.1 Proposed works

7.1.1 Overview

The Project would provide adequate width of the carriageway along the Blue Mountains Line to facilitate the delivery of the New Intercity Fleet Program to replace the trains carrying customers from Sydney to the Blue Mountains. The Project, within the curtilage of Lawson Station would include the following key elements:

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

Track circuit works to the signalling room would also be installed as part of the works though these would be outside of the State Heritage Register curtilage for Lawson Station.

The proposed works are shown in drawings SK-H1301 (Rev.B), SK-H1302 (Rev.A) and SK-H1303 (Rev.B). The extent of the modifications the copings and track slewing are indicated in Table 8, Table 9, Table 10, and Table 11 respectively.

7.1.2 Platform coping modifications

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

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

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

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

- cut back the existing edge by about 50 millimetres
- application of a corrosive inhibiting compound to the existing exposed cut steel

- drilling of holes for anchors, surveying and marking coping set-out
- installation of temporary timber framework and the use of packers as required to ensure formwork does not project past the coping edge
- installation of new galvanised steel plates and anchors
- installation of infill repair mortar
- trowelling a 15 millimetre deep joint in the new repair mortar as a continuation of the existing platform slab joints
- installation of tactiles and painting.

The works include the removal of up to eight millimetres off the face of the corbelled coping and the addition of up to 72 millimetres on platform 2. On platform 1, up to 32 millimetres is proposed for removal from the vertical face and the addition of 70 millimetres in one area.

The proposed coping modifications are shown in Table 8 and Table 9. Negative values indicate where cutback is necessary, while positive values indicate the addition of concrete. There is a +/- 20 millimetre variance associated with coping modifications, however, where a positive value of less than five millimetres is identified; this work may not be completed. All values would be confirmed during detailed design and may be subject to change.

Table 8 Proposed coping modifications to platform 2

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
95950	72	96050	-5
95960	18	96060	-8
95970	13	96070	-8
95980	14	96080	2
95990	15	96090	6
96000	13	96100	11
96010	8	96110	14
96020	-3	96120	18
96030	4	96123.585	21
96040	1		

Table 9 Proposed coping modifications to platform 1

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
95942.409	70	96040	30
95950	41	96050	5
95960	28	96060	-24
95970	17	96070	-22

Kilometerage	Horizontal difference. negative value = coping cutback in mm	Kilometerage	Horizontal difference. negative value = coping cutback in mm
95980	4	96080	-19
95990	2	96090	-22
96000	0	96100	-27
96010	10	96110	-32
96020	11	96120	-31
96030	29	96123.585	-16

7.1.3 Track slewing

Track slewing refers to lateral alterations in the rail positioning to ensure adequate distance to platforms, and passing distance between trains. The works would include the temporary disconnection of signalling and communications infrastructure, re-positioning of the tracks and the replacement of ballast, headstock and other items as required. The works would result in the track associated with platform 2 been moved up to 50 millimetres laterally. The works to the track associated with platform 1 would involve the movement of the tracks by up to 58 millimetres laterally. The extent of the modifications is shown in Table 10 and Table 11.

Table 10 Proposed track slewing to platform 2

Kilometerage	Horizontal difference. Positive value = pull away from platform	Kilometerage	Horizontal difference. Positive value = pull away from platform
95940.643	0	96040	5
95950	-11	96050	10
95960	-6	96060	4
95970	-3	96070	-3
95980	-2	96080	-2
95990	-7	96090	7
96000	-11	96100	11
96010	-11	96110	7
96020	-12	96120	0
96030	-8	96123.585	-3

Table 11 Proposed track slewing to platform 1

Kilometrage	Horizontal difference. Positive value = pull away from platform	Kilometrage	Horizontal difference. Positive value = pull away from platform
95942.409	2	96050	58
95950	8	96060	49
95960	22	96070	46
95970	35	96080	36
95980	35	96090	31
95990	21	96100	32
96000	18	96110	45
96010	18	96120	48
96020	16	96123.585	52
96030	27	95942.409	46
96040	47		

7.1.4 Track circuit works

The Project includes the installation of impedance bonds and stand. Impedance bonds are necessary to allow the flow of electrical currents around an insulated rail joint. The installation would include the excavation of two 600 millimetre square pits to a depth of 600 millimetres adjacent to the signalling room, which would be connected to the impedance bonds and stands by a PVC conduit. The impedance bonds and stand would be installed outside of the State Heritage Register curtilage for Lawson Station, however, the area has been identified within the *Lawson Railway Station and Yard Precinct: Conservation Management Plan* (Australian Museum Business Services, 2013) as holding potential to contain archaeological relics or deposits associated with the second Station Master's residence (c.1880s).

7.2 Project justification and options

7.2.1 Justification

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

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

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

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

7.2.2 Project options to achieve necessary width clearances

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

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

Table 12 Summary of width clearance design options

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

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

7.3 Lawson Railway Station Yard Precinct CMP

The CMP provides some policies specifically relevant to the island platform. For the Project, the policy of relevance is 16.3, which requires that “alterations or additions, if required for operational purposes, should be compatible with the material, style and detailing of the original structure, but be readily identifiable as new work” (Australian Museum Business Services, 2013:178). The coping modifications may result in the addition of some concrete. This material would match the existing mortar and would be readily identifiable as new work until it aged, which is deemed appropriate given the limited scope and impact of the works.

7.4 Heritage Platforms Conservation Management Strategy

In addition, the works have been assessed against the *Heritage Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015). This document is considered to replace *Conservation Guide: Railway Station Platforms* (Office of Rail Heritage, 2013). The strategy was developed in order to protect heritage platforms from incremental changes and works associated with large scale renewals. An assessment against the relevant strategies is provided in Table 13. Of relevance to the current Project are strategies 1, 5, 6, 9 and 12. Due to the minor nature of the Project some of these strategies are not applicable.

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

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

Strategy	Comment
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>	The heritage value of the platform has been recognised through the design process and by limiting the impacts to the Lawson Station. Track slewing has been used to minimise the extent of the coping modifications. Reliance on coping modifications alone to achieve the required width clearance may have resulted to impacts to additional heritage items, such as to awnings associated with the station platform buildings. As discussed in Section 7.2, the implementation of both track slewing and coping modifications achieves the necessary width clearances, while reducing the level of impact to heritage fabric and the need to relocate other structures, principally overhead wiring stanchions, along the rail corridor.
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>	It is acknowledged that the New Intercity Fleet Project as a whole would result in alterations to six stations listed on the State Heritage Register (Katoomba, Lithgow, Medlow Bath, Eskbank, Blackheath and Lawson) and nine stations listed on the Sydney Trains Section 170 Heritage and Conservation Register (Bell, Bullaburra, Faulconbridge, Hazelbrook, Leura, Linden, Newnes Junction, Wentworth Falls and Woodford Stations). Within the context of the 626 platforms identified within the Heritage Platforms Conservation Management Strategy, it is considered that there would remain a representative sample of unmodified principal platform types.
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>	The Project does not include proactive conservation and it is therefore considered that this strategy is not relevant.

Strategy	Comment
Strategy 5: <i>Conserve and manage the fabric of heritage platforms in accordance with statutory requirements and heritage best practice</i>	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 Lawson Station environment due to the fabric and surface treatments, as discussed below.
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>	The modification of the coping will remove both original and non-original platform detailing, subject to detailed design. The brick coping is considered to be significance fabric associated with the island platforms, and the modifications would result in a loss. This is unavoidable as leaving the copings intact may have resulted in greater impacts to other aspects of the stations, modifications to awnings associated with the significant station building.
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>	As discussed in Section 7.2, the planning process considered the heritage significance of Lawson Station and a combination of track slewing and coping modification was implemented, which avoided potentially greater adverse impacts, such as modifications to the awning of the station associated with the significant station building. The integrated planning process included consultation with Sydney Trains and NSW TrainLink.
Strategy 11: <i>Heritage opportunities and constraints should be carefully considered throughout the options analysis and design process</i>	As discussed in Section 7.2, the heritage constraints of Lawson Station has been carefully considered, with the option selected that minimises impacts to fabric. It is considered that the Project fulfils this strategy.
Strategy 12: <i>Make a record of existing structural designs, fabric, and uses before changes are made</i>	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.

7.5 Heritage impact assessment

7.5.1 Impacts to significance

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

Table 14 Assessment of heritage impact of Project against State Heritage Register criterion for Lawson Station

Criterion*	Coping modifications	Track slewing	Impedance bonds and stand installation
<p>a) – Historical significance: Lawson Station Group is historically significant as part of the early station buildings built during the duplication of the Western rail line across the Blue Mountains combining a standard 1902 Federation style design station building and matching detached shed.</p>	<p>The modifications to the coping are considered to be minor. It is anticipated that they would largely be unnoticeable and would not impact on the historic significance of Lawson Station. It is acknowledged that the cutting back of the coping and addition of concrete would result in a variation in treatment along the face. It is therefore recommended that the length of the corbeled brickwork be rendered with concrete to create a consistent presentation.</p>	<p>The track slewing would not impact on the historical significance as there would be no alteration to the history of Lawson Station.</p>	<p>The impedance bonds are located outside of the State Heritage Register curtilage and would therefore not impact on the significance of Lawson Station under this criterion.</p>
<p>b) – Associative significance: No assessment provided against this criterion.</p>	<p>The Project would not impact on the association of Lawson Station with the Electrical Branch of the Railways or the functional division of the buildings. This is an intangible value that cannot be removed by the Project.</p>		<p>The impedance bonds are located outside of the State Heritage Register curtilage and would therefore not impact on the significance of Lawson Station under this criterion.</p>
<p>c) – Aesthetic significance: Lawson Station Group is of aesthetic significance as a representative example of an intact Federation free classical style railway station, which has retained its former lamp building (Out of Shed) which is designed in the same style as the main station building. It is one of a group of stations built to the same pattern across the Blue Mountains following the duplication of the railway line.</p>	<p>The modifications to the coping are considered to be negligible. It is anticipated that they would largely be unnoticeable and would not impact on the aesthetic significance of Lawson Station. It is acknowledged that the cutting back of the coping and addition of concrete would result in a variation in treatment along the face. It is therefore recommended that the length of the corbeled brickwork be rendered with concrete to create a consistent presentation.</p>	<p>The relocation of the tracks are minor. It is anticipated that they would be unnoticeable to the general public and by their nature could not impact on the aesthetic significance of Lawson Station, being indiscernible.</p>	<p>The impedance bonds are located outside of the State Heritage Register curtilage and would therefore not impact on the significance of Lawson Station under this criterion.</p>
<p>d) – Social significance: The place has the potential to contribute to the local community's sense of place and can provide a connection to the local community's history.</p>	<p>The Project is unlikely to reduce the local community's sense of place or reduce their connection to the past as it is considered they would largely go unnoticed and would not attenuate the use of Lawson Station as a means of public transport.</p>		<p>The impedance bonds are located outside of the State Heritage Register curtilage and would therefore not impact on the significance of Lawson Station under this criterion.</p>

Criterion*	Coping modifications	Track slewing	Impedance bonds and stand installation
<p>e) – Research: Lawson Station Group has research potential for its combination of buildings and structures that would provide information on the elements of the equipment contemporary with the electrification of the Main Western line over the Blue Mountains.</p>	<p>The modifications to the coping would not have an impact on the movable heritage or involve ground disturbance. The Project would therefore not have an impact to the assessed significance under this criterion.</p>	<p>The proposed track slewing works would not impact on the research significance of Lawson Station as there would be no impacts to areas identified as holding archaeological or technical significance.</p>	<p>While the impedance bonds and associated enabling works are located outside of the State Heritage Register curtilage, archaeological potential has been identified to be present in the area where the impedance bonds will be installed associated with the second Station Master's residence (c.1880s). The depth of the archaeological remains are likely to be encountered more than one metre below the current track level. The maximum depth of excavation for the impedance bonds would be 0.6 m. As such, the works are not likely to impact on the potential archaeological deposits or relics in this area.</p>
<p>f) – Rarity: The Electrical Depot site is rare in the railway network, which includes the substation, one of a small number of such building and one of the largest remaining on the system.</p>	<p>The Project would not impact on the assessed rarity of Lawson Station as the Project would not alter elements identified as being rare.</p>		<p>The impedance bonds are located outside of the State Heritage Register curtilage and will therefore not impact on the significance of Lawson Station under this criterion.</p>
<p>g) – Representative: Lawson Station Group is a representative example of a standard design larger station building group demonstrating the construction techniques and characteristics of commonly used railway designs.</p> <p>The Station Master's residence is a representative example of simple architectural forms of other similar railway residences.</p> <p>The substation is a good example of rail substations built in Sydney after 1926 including Hurstville, Lewisham, Sutherland, Hornsby and Belmore.</p>	<p>The modification to the coping would have a negligible impact on the detailing of the coping, the island platform having been identified as having a consistent architectural character and detailing. It is considered that the extent of the impacts, being the removal of less than 72 millimetres would not reduce the significance of Lawson Station under this criterion.</p>	<p>The track slewing would not impact on the representative value of Lawson Station as it would continue to be able to demonstrate the key characteristics of a standard metropolitan railway station.</p>	<p>The impedance bonds are located outside of the State Heritage Register curtilage and would therefore not impact on the significance of Lawson Station under this criterion.</p>

7.6 Adjacent heritage items

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

7.7 Cumulative impact assessment

While this document assesses the impacts of the New Intercity Fleet works on Lawson 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
Hazelbrook	No	Bell	No
Lawson* – the subject of this assessment	Yes	Newnes Junction (not in use)	No
Bullaburra	No	Eskbank (not in use)	Yes
Wentworth Falls	No	Lithgow	Yes
Leura	No		

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

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

In the case of platform extensions at Katoomba Station and Lithgow Station, the works are unlikely to have a substantial cumulative impact as the design has located the extensions along sections of the platform that have been previously modified and are relatively minor in length when compared to the platform as a whole. As a result, the cumulative impacts from the platform extensions are anticipated to be negligible to minor.

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

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

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

7.8 Summary of heritage impacts

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

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

An area of archaeological potential has been identified in the area where the impedance bonds will be installed. Excavation required for their installation will be no greater than 600 mm below the current track level. The area of archaeological potential has been identified to be at a depth greater than one metre. It has been assessed in Section 6 of this report that the proposed works will not impact on any potential archaeological relics or deposits associated with the second Station Master's residence built in the area. As such, no further archaeological works or permits are required for the installation of the impedance bonds.

Table 16 Summary of heritage impacts

Proposed work	Impact to fabric	Visual impact	Impact to archaeological remains	Impacts to adjacent heritage items
Modification of platform coping	Minor	Negligible	Nil	Nil
Slewing of track within the rail corridor	Negligible	Negligible	Nil	Nil
Installation of impedance bonds, stand and associated enabling works	Nil	Nil	There is archaeological potential associated with the second Station Master's residence to be present greater than 1.4 m below the current track level. The excavation required for the impedance bonds is no greater than 1 m. There will be no impact to any potential archaeological remains in this area.	Nil

8 Statement of Heritage Impact

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

This report has been prepared in accordance with the NSW *Heritage Office & Department of Urban Affairs and Planning NSW Heritage Manual* (1996) and *NSW Heritage Office Statements of Heritage Impact* (NSW Heritage Office, 2002). The guidelines pose a series of questions as prompts to aid in the consideration of impacts based on the type of Project. The Project involves minor modifications to the coping and track slewing. The guideline suggests the following questions be used to direct discussion in relation to these two modification types: minor partial demolition, relating to the impact to coping and track slewing.

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

Table 17 Statement of heritage impact for Lawson Railway Station Group

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

9 Conclusion and Recommendations

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

Excavation works associated with the installation of the track circuits have been identified as impacting on an area of moderate archaeological potential. Recommendations to meet obligations under the *Heritage Act 1977* are provided below.

The following are recommendations for the Project:

- A Section 60 permit under the *Heritage Act 1977* would be required prior to impacts occurring within the Lawson Railway Station Group curtilage.
- It is recommended that an exception under Section 139(1b) of the *Heritage Act 1977* be obtained prior to works commencing.
- A heritage conservation architect should provide ongoing heritage and conservation advice throughout detailed design and any subsequent relevant design modifications. The nominated heritage architect should provide advice regarding the scope of works and ensure that the final design adhered to the Sydney Trains *Heritage Platforms Conservation Management Strategy*.
- The nominated heritage conservation architect would be responsible for ensuring that material finishes and heritage recommendations provided in this Statement of Heritage Impact are enacted during detailed design and construction works.
- It is not anticipated the works would weaken or undermine the integrity of the platform. Further structure integrity investigations will be undertaken as part of the detailed design process. The results of the integrity investigations should be reviewed by the heritage conservation architect.
- It is recommended that the length of the corbeled brickwork coping be rendered, as appropriate and advised by the heritage conservation architect, to create a consistent presentation.
- The existing platform retaining wall would be archivally recorded prior to works. Archival recording of elements of Lawson Station that would be impacted would be undertaken in accordance with the relevant NSW Heritage Council guidelines. These archival records and design plans for the proposed works would be lodged with Sydney Trains and Heritage Division for their records.
- The materials used should be compatible with the heritage brickwork and concrete and not adversely impact the material.
- The concrete coping of the proposed platform extensions and the mortar associated with the brick facade used in the works should adhere to Strategy 7 of the Heritage Platforms Conservation Management Strategy.
- The Construction Environmental Management Plan (CEMP) must include stop work procedures in accordance with TfNSW's *Unexpected Heritage Finds Guideline* (Transport for NSW, 2015) to manage activities in the unlikely event that intact archaeological relics or deposits are encountered

- A heritage induction should be provided to all on-site staff and contractors involved in the Project. The induction should clearly describe the heritage constraints of the site.

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