

City & Southwest

SYDENHAM TO BANKSTOWN SUBMISSIONS AND PREFERRED INFRASTRUCTURE REPORT

> Appendix F - Non-Aboriginal heritage assessment





Memo: Sydney Metro City & Southwest -Sydenham to Bankstown Upgrade

Submissions and Preferred Infrastructure Report Non-Aboriginal Heritage Assessment

Project: Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade	Date: 7 June 2018
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1.1 Background

Transport for NSW is developing the Sydenham to Bankstown upgrade component of Sydney Metro City & Southwest (the project).

The project involves upgrading 10 existing stations west of Sydenham (Marrickville to Bankstown inclusive), and a 13 kilometre long section of the Sydney Trains T3 Bankstown Line, between west of Sydenham Station and west of Bankstown Station, to improve accessibility for customers and meet the standards required for metro operations. The project would enable Sydney Metro to operate beyond Sydenham, to Bankstown.

The main infrastructure and features that form part of the project are described in this section. These include:

- works to upgrade the 10 stations and station areas between Marrickville and Bankstown (inclusive) and to provide lifts at stations where there are none currently
- works to allow for a metro service to Bankstown, including:
 - station works
 - track and rail system facility works
 - other works to support metro operations.

It is noted that the project described in this section is based on the level of design developed to date. Detailed design would include further engineering, construction planning, and detailed assessment work, and would be subject to further input from key stakeholders and consultation with the community.

The project is subject to assessment and approval by the NSW Minister for Planning under Division 5.1 (previously Part 5.1) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

This non-Aboriginal heritage assessment (from herein referred to as 'memo') assesses design changes that Transport for NSW has made in response to submissions received during exhibition of the Environmental Impact Statement (from herein referred to as the 'preferred project'). This memo assesses design changes in relation to built heritage. It has been prepared by Shona Lindsay (Senior Heritage Consultant) and Dr Sandra Wallace (Managing Director).



The memo should be read in conjunction with the following documents:

- Artefact Heritage August 2017. Sydney Metro Sydenham to Bankstown Non-Aboriginal Heritage Impact Assessment (NAIA)
- Sydney Metro September 2017. Sydenham to Bankstown Environmental Impact Statement (EIS)

1.2 Limitations

This memo assesses design changes in relation to built heritage only. No additional site surveys were undertaken for this assessment as proposed impacts were within the existing project boundary.

1.3 Revised vibration assessment criteria

1.3.1 Vibration intensive plant

The construction vibration assessment for the exhibited project assessed rockbreakers as the most vibration intensive item of equipment. As the requirement for rockbreakers has been removed from the preferred project the most vibration intensive piece of construction equipment is now a ballast tamper. The ballast tamper was previously assessed as part of the exhibited project, however the locations it would be required for the preferred project have been significantly reduced.

The vibration levels generated by a ballast tamper are significantly lower than those generated by a rockbreaker and the ballast tamper would only be used on the rail tracks in a small number of locations of the preferred project. It is also noted that ballast tampers are routinely used without significant impact for Sydney Trains rail maintenance works across the project area. All other items of equipment required by the preferred project are generally not considered vibration intensive.

Construction works associated with platform alterations would be required to be completed in the vicinity of several heritage structures when working at stations. These works however are unlikely to require the use of vibration intensive equipment and the potential vibration impacts from items such as concrete saws and excavators are expected to be minimal.

The required vibration intensive equipment should be reviewed during construction planning to ensure the potential vibration impacts are minimised. If impacts are considered likely then vibration monitoring should be completed to ensure acceptable levels of vibration are not exceeded.

1.4 Applicable heritage listings

1.4.1 Registers search results

Statutory registers provide legal protection for heritage items. In NSW, the Heritage Act and the EP&A Act provide for heritage listings. The State Heritage Register, the s170 registers, and environmental heritage schedules of LEPs are statutory listings. Places on the National Heritage List and Commonwealth Heritage List are protected under the EPBC Act 1999.

A search of all relevant registers was undertaken on 17 May 2018. The results include both heritage items within the project area and a 25-metre visual buffer (the study area). The items are displayed below in Table 1.

Table 1: Heritage registers search results (with listed railway stations shaded)

ltem	Suburb ¹	Significance	Listing	Within project area?
Marrickville Railway Station Group	Marrickville	State	SHR (01186) RailCorp S.170 Heritage and Conservation Register (4801091) Marrickville LEP 2011 (189)	Yes
Sewage Pumping Station 271	Marrickville	State	SHR (01342) Sydney Water S.170 Heritage and Conservation Register (4571727) Marrickville LEP 2011 (167)	No
Stone house, including interiors	Marrickville	Local	Marrickville LEP 2011 (I114)	Yes
Stonewalling, terracing and street planting	Marrickville	Local	Marrickville LEP 2011 (I86)	No
Dulwich Hill Railway Station Group	Dulwich Hill	Local	RailCorp S.170 Heritage and Conservation Register (4801909)	Yes
South Dulwich Hill Heritage Conservation Area	Dulwich Hill	Local	Marrickville LEP 2011 (C29)	Yes
Inter-War Heritage Conservation Area Group—Hollands Avenue; Jocelyn Avenue and Woodbury Street	Dulwich Hill	Local	Marrickville LEP 2011 (C35)	No
Gladstone Hall, including interiors	Dulwich Hill	Local	Department of Health S.170 Heritage and Conservation Register (3540048) Marrickville LEP 2011 (I13)	No

¹ Suburbs as per SHI listing

ltem	Suburb ¹	Significance	Listing	Within project area?
Hurlstone Park Railway Station Group	Hurlstone Park	Local	RailCorp S.170 Heritage and Conservation Register (4802051) Canterbury LEP 2012 (I124)	Yes
Hurlstone Park Railway Underbridge	Hurlstone Park	Local	RailCorp S.170 Heritage and Conservation Register (4805737) Canterbury LEP 2012 (I126)	Yes
Canterbury Railway Station Group	Canterbury	State	SHR (01109) RailCorp S.170 Heritage and Conservation Register (4801100) Canterbury LEP 2012 (I67)	Yes
Canterbury (Cooks River) underbridge	Canterbury	Local	RailCorp S.170 Heritage and Conservation Register (4801568) Canterbury LEP 2012 (I72)	Yes
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Canterbury	Local	RailCorp S.170 Heritage and Conservation Register (5062566)	Yes
Old Sugarmill	Canterbury	State	SHR (00290) Canterbury LEP 2012 (I82)	No
Inter-War Hotel (former Hotel Canterbury)	Canterbury	Local	Canterbury LEP 2012 (I68)	No
Federation Post Office Building (former Canterbury Post Office)	Canterbury	Local	Canterbury LEP 2012 (I66)	No
Electricity substation no. 275	Canterbury	Local	Ausgrid S.170 Heritage and Conservation Register (3430425)	No



ltem	Suburb ¹	Significance	Listing	Within project area?
Campsie Railway Station Group	Campsie	Local	RailCorp S.170 Heritage and Conservation Register (4801101) Canterbury LEP 2012 (I40)	Yes
Federation commercial building–Coffill's Buildings	Campsie	Local	Canterbury LEP 2012 (I41)	No
Inter-War Commercial Building–Station House	Campsie	Local	Canterbury LEP 2012 (I42)	No
Inter-War Court House (former) Campsie Court House	Campsie	Local	Canterbury LEP 2012 (I44)	No
War Memorial Clock Tower	Campsie	Local	Canterbury LEP 2012 (I34)	No
Federation house	Campsie	Local	Canterbury LEP 2012 (I61)	No
Federation villa	Campsie	Local	Canterbury LEP 2012 (I62)	No
Belmore Railway Station Group	Belmore	State	SHR (No. 01081) RailCorp S.170 Heritage and Conservation Register (4801084) Canterbury LEP 2012 (I11)	Yes
Post-war bus shelter and public lavatories	Belmore	Local	Canterbury LEP 2012 (I29)	Yes
Federation House(former station master's cottage)	Belmore	Local	Canterbury LEP 2012 (I10)	No

ltem	Suburb ¹	Significance	Listing	Within project area?
Lakemba Railway Station Group	Lakemba	Local	RailCorp S.170 Heritage and Conservation Register (4801916) Canterbury LEP 2012 (I143)	Yes
Federation weatherboard house	Lakemba	Local	Canterbury LEP 2012 (I144)	No
Inter-War post office building - Lakemba Post Office	Lakemba	Local	Canterbury LEP 2012 (I145)	No
Electricity Substation no. 143	Lakemba	Local	Ausgrid S. 170 Heritage and Conservation Register (3430296)	No
Wiley Park Railway Station Group	Wiley Park	Local	RailCorp S.170 Heritage and Conservation Register (4801946) Canterbury LEP 2012 (1159)	Yes
Inter-War water pumping station– Lakemba Pumping Station (WP0003)	Wiley Park	Local	Sydney Water S.170 Heritage and Conservation Register (4570136) Canterbury LEP 2012 (I158)	No
Punchbowl Railway Station Group	Punchbowl	Local	RailCorp S.170 Heritage and Conservation Register (4802009) Canterbury LEP 2012 (I155)	Yes
War Memorial and street trees	Punchbowl	Local	Canterbury LEP 2012 (I152)	No
Post-war Civic Building (former Punchbowl Baby Health Centre)	Punchbowl	Local	Canterbury LEP 2012 (I154)	No
Bankstown Railway Station Group	Bankstown	Local	RailCorp S.170 Heritage and Conservation Register (4802067) Bankstown LEP 2015 (I3)	Yes



ltem	Suburb ¹	Significance	Listing	Within project area?
Bankstown Parcels Office (former)	Bankstown	Local	RailCorp S. 170 Heritage and Conservation Register (4802067) Bankstown LEP 2015 (I4)	Yes
Shop	Bankstown	Local	Bankstown LEP 2015 (I13)	No

1.4.2 Heritage Conservation Areas

The table below provides a summary of the Heritage Conservation Areas (HCA) within the study area. Of the two HCAs identified in Section 1.4.1, South Dulwich Hill HCA is partially located within the project area. Inter-War HCA is located within the 25-metre buffer (study area) and would not be directly impacted by the preferred project.

Table 2: Summary of HCAs located within study area

ltem	Suburb	Significance	Listing	Within study area?
South Dulwich Hill Heritage Conservation Area	Dulwich Hill	Local	Marrickville LEP 2011 (C29)	Yes
Inter-War Heritage Conservation Area Group—Hollands Avenue; Jocelyn Avenue and Woodbury Street	Marrickville	Local	Marrickville LEP 2011 (C35)	Yes

1.5 Revised built heritage impact assessment

1.5.1 Marrickville Station

The Marrickville Station Catchment includes two heritage items including the Marrickville Railway Station Group, and Stone house, including interiors. The buffer zone around the station catchment includes two heritage items.

1.5.1.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

Table 3: Heritage items within Marrickville Station Catchment and buffer zone

Suburb	Significance	Listing
		SHR (01186)
Marrickville	State	RailCorp S.170 Heritage and Conservation Register (4801091)
		Marrickville LEP 2011 (I89)
Marrickville	Local	Marrickville LEP 2011 (I114)
de project area)		
		SHR (01342)
Marrickville	State	Sydney Water S.170 Heritage and Conservation Register (4571727)
		Marrickville LEP 2011 (I67)
Marrickville	Local	Marrickville LEP 2011 (I86)
	Marrickville Marrickville de project area) Marrickville	Marrickville State Marrickville Local de project area) Marrickville State

1.5.1.2 Direct impacts

Marrickville Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole.



Table 4: Assessment of direct impacts for Marrickville Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1 (1895)	Exceptional	Retention of western section of platform; removal of eastern section with new platform to be rebuilt in straight alignment and extended towards the east; platform canopies and platform screen doors to be anchored on the portion of retained platform new building and canopies to be anchored on the portion of reconstructed platform	Major	Re-levelled New platform screen doors New emergency egress ramps	Platform 1 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where screens and screen doors are anchored at the platform edge. New emergency egress ramps would be constructed to the eastern end of the platform and would have a minor impact on the platform. Overall, the proposal would result in a moderate impact on the platform and station overall.	Moderate
Platform 1 building (Type 11) (1895) ²	Exceptional	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The proposed works to the Platform 1 building would include internal repurposing. Original layout and finishes, including the original plaster wall finishes, plaster ceilings, and ceiling roses in the general waiting room, ladies waiting room, ladies toilets, and the station master's room would be	Moderate

² See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building would be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					It is understood platform levelling would not encroach on any sub floor ventilation or door frame thresholds.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
		Partial retention on the western side; removal of eastern section with retention of structure underneath platform		Re-levelled	Platform 2 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform.	
Platform 2 Ex (1911)	Exceptional	building; platform to be rebuilt in straight alignment and extended towards the east; station buildings, platform canopies and platform screen doors to be anchored on both the retained and new	Major	New platform screen doors New emergency egress ramps	New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the eastern end of	Moderate
		platforms.			the platform and would have a minor impact on the platform.	



Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	
					The proposed works to the Platform 2 building would include internal refurbishment/repurposing.	
Platform 2 building (Type 11) (1911) ³	High	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	Moderate
					It is understood platform levelling would not encroach on any ventilation or door frames.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
Overbridge- Illawarra Road (1911, c.2013)	Brick parapets including curbs, piers and panels - Exceptional	Removal and replacement	Major	Throw screen will be installed on the country side of the bridge and will be fixed to existing parapet. Smoke	It is proposed to install anti-throw screens on the country side fixed to the existing parapet, install crack monitoring and implement a regime to monitor movement in piers and	Minor

³ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
	Structure below the deck level - Moderate			screens will be removed	abutments, remove current smoke screens, and other minor upgrade works for safety, as required. The proposed works would have a minor direct impact on the overbridge.	
Platform 2 booking office (1917, relocated)	Exceptional	Retention in current location	Neutral	Retained	The structure is proposed to be retained in its current location with possible repainting. This would result in a neutral impact on the Platform 2 booking office.	Neutral
Pedestrian steps: northern set (1917, c. 2014-2016)	Little	Retention	Neutral	Retained	The existing stairs were installed as part of the recent TAP upgrade and the original stairs are no longer present. The existing stairs have little significance within the station group. It is proposed to retain them. This would result in a neutral impact on the steps and station overall.	l
Pedestrian steps: southern set (1985, c.2014-2016)	Little	Retention	Neutral	Retained	The existing stairs were installed as part of the recent TAP upgrade and the original stairs are no longer present. The existing stairs have little significance within the station group. It is proposed to retain them. This would result in a neutral impact on the steps and station overall.	

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Marrickville Railway Station Group overall. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as major.

Sewage Pumping Station 271

No direct impacts to the Sewage Pumping Station 271 are proposed as part of the preferred project.

Direct impact on the Sewage Pumping Station 271 would be neutral. This is consistent with the assessment of the exhibited project.

Stone house, including interiors

No direct impacts to the Stone house, including interiors are proposed as part of the preferred project.

Direct impact on the Stone house, including interiors would be neutral. This is consistent with the assessment of the exhibited project.

1.5.1.3 Visual impacts

Marrickville Railway Station Group

The TAP upgrade concourse and lifts would remain with the addition of canopies over the landing areas around the lifts. The existing concourse buildings would be painted. Pedestrian steps would also be retained. The addition of the canopies around the lift area would have a minor visual impact and would not obscure significant views onto the platform buildings.

The proposed platform screen doors would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings towards the heritage buildings and a moderate impact on internal views as a result of visual clutter. The new platform screen doors would partially obscure views towards the Platform 1 and Platform 2 building, where they would result in a moderate visual impact which is consistent with the exhibited project.

Existing views from the Illawarra Road overbridge to significant station buildings would be retained and the addition of throw screens on the countryside of the overbridge would have a minor visual impact on the overbridge.

Additional impacts such as the services building to be constructed to the north-east of the station in the rail corridor and signage would have a minor impact on the setting and context of the station as they would be in keeping with the use of the station.

Overall, the new platform screen doors would result in a moderate visual impact. Some views onto the Platform 1 building of exceptional significance and onto the Platform 2 building of high significance would be retained for continued appreciation by the public and users. When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on Marrickville Railway Station Group. This is consistent with the assessment of the exhibited project.

Sewage Pumping Station 271

The heritage item is located approximately 350 metres from Marrickville Railway Station. The preferred project would have a neutral visual impact onto the pumping station given the intervening distance to the station. Such distances would prevent any significant visual impacts onto the pumping station and would likely be neutral. Any views of the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact.



Visual impacts on the Sewage Pumping Station 271 would be neutral. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as negligible.

Stone house, including interiors

The heritage-listed stone house is located approximately 150 metres from Marrickville Station and 20 metres south of the existing railway corridor. There would be no significant visual impacts onto the heritage item as a result of the preferred project. Any views of the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact.

Visual impacts on the heritage-listed Stone house would be neutral. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as negligible.

Stonewalling, terracing and street planting

The closest section of the heritage stonewalling, terracing and street planting is located approximately 65 metres from the southern boundary of Marrickville station. The station is presently screened from the item by existing commercial and residential development located along Station Street and Schwebel Street. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact.

Visual impacts on the heritage-listed stonewalling, terracing and street planting would be neutral. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as negligible.

1.5.1.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Marrickville Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Sewage Pumping Station 271	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Stone house, including interiors	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

Table 5: Potential direct impact assessment

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Stonewalling, terracing and street planting	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

1.5.1.5 Assessment against conservation management policies

The conservation policies provided in the Draft Conservation Management Plan (CMP) prepared for the site for Marrickville Railway Station Group (2016) have been reviewed for this report. Policies provided in the Draft CMP relevant to assessing the impacts of the preferred project have been extracted and provided below for reference. Note that the Draft CMP has been reviewed by the Heritage Council of NSW, but has not yet been endorsed.

Table 6: Relevant conservation policies – Marrickville Railway Station Group⁴

Policy	Assessment of impacts against recommendations
6.1 Adaptive Reuse	Retain the 1917/1944 Ticket office building in its relocated setting and conserve and enhance the present interior and exterior with all fittings.
	The booking office would be retained in its current location.
6.3 Adaptive Reuse	Consider the re-use of redundant spaces in the two buildings [Platform Buildings 1 and 2) for the provision of facilities and amenities which relate to the railway service and passenger and customer amenity and discuss with Property Group to determine the appropriate adaptive reuse options consistent with heritage significance.
	Re-purposing would be considered during detailed design in accordance with mitigation measure NAH5 (Section 10).
13.1 Associated Sites	Support the upgrading of the Illawarra Road bridge in rationalising the services and removing the vandalism and graffiti damage
	The bridge would be retained and upgraded as part of the preferred project.
18.1 Built Heritage	Ensure appropriate conservation of the Scouller station building on Platform 1
	The Platform 1 station building would be retained and repurposed
18.2 Built Heritage	Ensure appropriate conservation of the southern station building on Platform 2
	The Platform 2 station building would be retained and repurposed.
18.3 Built Heritage	Ensure appropriate conservation of the two Platforms and associated elements

⁴ David Scobie Architects Pty Ltd 2016

Policy	Assessment of impacts against recommendations
	Platforms 1 and 2 would be partially impacted by the preferred project. Sections of original fabric would be retained. Platform furniture and associated moveable heritage would be conserved and managed under the moveable heritage strategy and salvage strategy as discussed in the mitigation measures where appropriate.
18.4 Built Heritage	Ensure appropriate conservation of the Illawarra road bridge and associated elements
	The bridge would be retained and upgraded.
21.5 Materials and Techniques	Original and early stone masonry (Platform edges) and brickwork should be retained intact and maintained. If new stone is required, a durable stone of suitable colour and texture should be used. Where brick repairs are required, the original bricks should be reused wherever possible, or recycled bricks of the same size and shape as the originals. In both cases, masonry units should be laid with mortar of matching appearance, strength and composition to the original. Consolidants or sealants should not be used.
	Platforms 1 and 2 would be partially removed. Sections of original and early masonry would be retained where impacts resulting from releveling or installation of the platform barriers does not occur. If appropriate salvage and reuse of original fabric to be removed would be managed under the salvage requirements of mitigation measure NAH7.
22.1 Managing Change	It is recognised that in the future certain building works may be required for changing passenger and staff facilities however these should be incorporated after appropriate heritage impact analysis, followed by sympathetic design and construction to reduce any adverse heritage impact on the significance of the place.
	Reduction in heritage impacts has been a key consideration during the design process. Heritage experts have been consulted during the design and options phases including heritage architects and conservation specialists advising during design of the exhibited project. Consultation with the Heritage Working Group and Design Review Panel is ongoing. Results of this consultation have informed this impact assessment. Heritage advice will continue during detail design in order to ensure design is sympathetic to heritage values in accordance with mitigation measure NAH2 and NAH3.
22.2 Managing Change	Removal of fabric of exceptional or high significance may be acceptable where that fabric has ceased to function and is actively contributing to deterioration in other significant fabric. Otherwise, such fabric should be removed only as a last resort after all other options have been considered. Where multiple elements are present, it may be acceptable to remove some of these elements provided that overall significance is not diminished.
	The removal of significant fabric has been minimised. Removal of fabric associated with platform levelling is required to enable access to Metro rolling stock from the platform. Removal of significant fabric associated with re-purposing would be minimised and justified were required with appropriate mitigation undertaken.
22.3 Managing Change	All works to the buildings and site, including unavoidable alteration or removal of significant fabric, should be recorded to an appropriate archival standard. Where fabric of state significance is to be removed, the Heritage Council guidelines for archival recording indicate that the appropriate standard will include measured drawings and archival photographs.

Archival recording would be undertaken in accordance with NAH10.

Policy	Assessment of impacts against recommendations
22.4 Managing Change	Any demolition carried out to the buildings or other site elements should be performed with extreme care with the objective of removing the minimum amount of material, and recovering as much of it as possible in re-useable condition. Materials or components which have any likelihood of being re-used in future works should be protected, catalogued and stored in the dedicated Heritage store on Platform 1.
	Mitigation measure NAH 13 addresses protection of non-impacted fabric during construction.
	Alterations and additions to original or early fabric of the buildings and other site elements should be confined to: the removal of intrusive elements, and elements of little significance that interfere
22.7 Managing Change	 with interpretation, when they are no longer needed the removal of elements of little or no significance that are contributing to the deterioration of original or early fabric
	 the reinstatement where appropriate of original or early fabric that has since been removed and for which good evidence exists
	 works to conserve the existing significant fabric, and fully reversible works to adapt the place for changing uses as required.
	Platform buildings would be retained and repurposed. The overbridge and the booking office would be retained. The original brick platform faces would be conserved where possible. Removal of fabric associated with platform levelling is required to enable access to Metro rolling stock from the platform. Removal of significant fabric associated with re-purposing would be minimised and justified where required with appropriate mitigation undertaken.
22.8 Managing Change	Any alterations and additions to significant buildings and site elements should be confined to very minor works that are complementary and subservient to the original. Where new work is added to the old work, the new work should be shaped to fit the old rather than the old being altered to accommodate the new. It also implies that the original and early fabric should remain visually prominent after the alteration or addition.
	This recommendation would be considered as part of detailed design.
22.9 Managing Change	Any new external elements attached to the original buildings should be designed and constructed in the same style, design detail and materials as the original elements, continuing a process that has been occurring at the station for nearly 100 years. The reuse of surplus original components in any new elements is encouraged.
	This recommendation would be considered as part of detailed design.
23.1 New Intervention, New Work	Any new building structures independent of the original Platform 1 and 2 buildings such as the lift, stairs and canopies are to be of a minimal size and simple contemporary design that is sympathetic to the character of the precinct. They should not imitate the original design details; however it is preferred that similar building materials are used in the external finishes where appropriate.
	This recommendation would be considered as part of detailed design.
23.2 New Intervention, New Work	Where glass is used in contemporary canopies, it should incorporate a film (e.g. white sand-blast type) to reflect the tradition of toplight glazing in addition to producing dirt and debris hiding qualities.

Policy	Assessment of impacts against recommendations
	This recommendation would be considered as part of detailed design and implemented if appropriate.
23.3 New Intervention, New Work	Where steel is used for structural columns and beams, traditional plate and expressed web type sections should be used to reflect the traditional detailing of steelwork.
	This recommendation would be considered as part of detailed design and implemented if appropriate.
23.4 New Intervention, New Work	The orientation of new elements such as canopies, lifts and stairs should reflect the alignment and geometry of the related Platform and building elements and structures.
	This recommendation would be considered as part of detailed design and implemented if appropriate.
23.5 New Intervention, New Work	The colour of new materials used for cladding stairs and lifts should be dark and not light so as to allow the existing historic colours to remain visually dominant.
	This recommendation would be considered as part of detailed design and implemented if appropriate.

1.5.2 Dulwich Hill Station

The Dulwich Hill Station Catchment includes one heritage item, the Dulwich Hill Railway Station Group, and one conservation area, the South Dulwich Hill Heritage Conservation Area. The buffer zone around the station catchment includes one heritage item and one conservation area.

1.5.2.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

ltem	Suburb	Significance	Listing
Within project area			
Dulwich Hill Railway Station Group	Dulwich Hill	Local	RailCorp S.170 Heritage and Conservation Register (4801909)
South Dulwich Hill Heritage Conservation Area	Dulwich Hill	Local	Marrickville LEP 2011 (C29)
Within buffer zone	(outside proje	ect area)	
Inter-War Heritage Conservation Area Group—Hollands Avenue; Jocelyn Avenue and Woodbury Street	Dulwich Hill	Local	Marrickville LEP 2011 (C35)
Gladstone Hall, including interiors	Dulwich Hill	Local	Department of Health S.170 Heritage and Conservation Register (3540048) Marrickville LEP 2011 (I13)

Table 7: Heritage items within Dulwich Hill Station Catchment and buffer zone

1.5.2.2 Direct impacts

Dulwich Hill Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole.

Table 8: Assessment of direct impacts for Dulwich Hill Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platforms 1/2 (1935)	High	Removal apart from structure underneath heritage building; platform to be rebuilt in a similar curve to the existing and extend further towards the western end; covered concourse, access stairs, lift shaft, platform canopies and platform screen doors to be anchored on the wes side of the new platform; new services building to be located on western end of reconstructed platform	t	Re-levelled New platform screen doors New emergency egress ramps New concourse, stairs and lifts	Platform 1/2 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the eastern end of the platform and would have a minor impact on the platform. A new elevated station concourse with new stairs and lifts would be provided and would connect the station platform to the Dulwich Hill Light Rail stop. The concourse would be accessed from a new station entrance on Bedford Crescent (northern side). The new concourse, stairs and lifts would be constructed on the platform and located to the west of the platform	Moderate



Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					building. This would involve excavation into the platform for the lift shaft and stair pylons. The new stairs and lifts would have a moderate impact on the platform as a result of installation of pylons and construction of the lift shaft into the platform.	
					Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	
Platform 1/2 building (Type 13) (1935) ⁵	High	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The proposed works to the Platform 1/2 building would include internal refurbishment/repurposing. The building would be used for stores, an accessible (F.A.T) toilet, and staff facilities (including toilets and lockers). The public waiting room would be closed and used for station function. The platform screen door equipment requires a new room and this would be installed underneath the proposed new concourse / stair on the platform. Refurbishing for new accommodation should be designed to minimise impacts to the original fabric. Original layout and finishes, including the original plaster ceiling and wall finishes and original timber seats in the waiting room, should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal	Moderate

⁵ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds.	
_					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
					The proposed works to the overhead booking office include internal refurbishment/repurposing. The building would be used for station management, comms, and AC room. The existing retail within the overhead booking office would be retained.	I
Overhead booking office (1935)	High	Removal	Major	Retained and repurposed	The building was ranked in second position in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy ⁶ and recommended for retention. It was given an overall ranking of eight out or nine in the strategy.	Moderate f
					Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes should be preserved where possible. The opportunity could be taken to remove	

⁶ Australian Museum Consulting 2014. *Railway Overhead Booking Offices Heritage Conservation Strategy*. Prepared for Transport for NSW.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					The refurbishment/repurposing and repainting of the overhead booking office would result in a moderate impact on the fabric and heritage values of the booking office and Dulwich Hill Railway Station as a whole.	
					It is proposed to retain the stairs and footbridge.	
Stairs (1935)	Moderate	Removal	Major	Retained	The stairs were assessed as having moderate significance in the Railway Footbridges Heritage Conservation Strategy. ⁷	Neutral
					The retention of the stairs would result in a neutral impact on the fabric and historical values of the stairs and the station catchment as a whole.	
Wardell Road overbridge (c.1930; c.1975)	Moderate	Retention and upgrade	Minor	Full height throw screens would be installed on both sides of the bridge. Smoke screens would be removed as well as other minor upgrades	It is proposed to install throw screens on both sides of the Wardell Road overbridge and new insulation panels. The current smoke screens would be removed and other minor upgrade works provided for safety, as required. The proposed works would have a minor direct impact on the heritage	Minor

⁷ NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Assessment of preferred project	Preferred project impact summary
				values of the overbridge and station overall.	



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Dulwich Hill Railway Station Group overall. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as major.

South Dulwich Hill Heritage Conservation Area

Minor corridor works would be carried out between Marrickville and Dulwich Hill railway stations, including the installation of new fencing and communications services routes. The Albermarle Street overbridge would have train collision protection installed to the existing steel support trestles. The curtilage of the South Dulwich Hill HCA comprises a 295 metres section of railway line starting approximately 100 metres east of Dulwich Hill Station. Direct impacts proposed within the curtilage of the conservation area would include the corridor works, and installation of train collision protection to the existing steel support trestles of the Albermarle Street overbridge. No areas of heritage significance within the conservation area would be directly impacted by the works. Alterations to the railway corridor and the Albermarle Street overbridge would be in line with the exiting railway use and operation setting of this portion of the conservation area.

Direct impacts of the works onto the South Dulwich Hill HCA would be negligible. This is consistent with the assessment of the exhibited project.

1.5.2.3 Visual impacts

Dulwich Hill Railway Station Group

The new concourse would be modern in style and would be considerably larger in height in comparison with the 1935 platform building. New lifts and stairs would be constructed. Canopies would be constructed over the landing areas around lifts. There would not be canopies above, or adjacent to, the heritage building, which would remain clearly visible from the concourse, and separated from the new layers of development. The nature of the chosen materials and the contemporary nature of the proposed new concourse would be suitable within the present context as a contradistinctive design to be easily differentiated from the heritage components of the site. The proposed concourse and services building would be sited away from the heritage building.

The proposed platform screen doors along Platform 1/2 would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the new concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

The proposed full height throw screens and removal of smoke screens on the Wardell Road overbridge would have a minor visual impact to the overbridge.

Additional impacts such as the services building to be constructed to the west of the station in the rail corridor, landscaping, new pavement, kerbside facilities and signage would have a minor impact on the setting and context of the station as they would be in keeping with the use of the station.

Overall, the proposed concourse and station infrastructure would have a moderate visual impact on the character and setting of Dulwich Hill Station. The new Metro concourse would add considerable bulk to the station. The platform screen doors would result in a moderate visual impact.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on Dulwich Hill Railway Station Group. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as major.

South Dulwich Hill Heritage Conservation Area

The South Dulwich Hill HCA comprises a portion of land extending from the north of Dulwich Hill Station, approximately 125 metres from the north boundary of the station, across the railway line and to the south-east where it reaches Beauchamp Road. The proposed corridor works and installation of train collision protection to the existing steel support trestles of the Albermarle Street overbridge would remain in line with the existing character of this portion of the HCA and would result in a neutral visual impact.

The preferred project would involve the construction of a new concourse, and new services building along the southern boundary of Dulwich Hill Station. There are some views from residential allotments within the HCA onto the eastern side of the station. These views are generally limited by mature trees and the siting of the station catchment in an embankment below street level. The bulk of the additions proposed would be concentrated on the western side of the station catchment further from views. The visual impacts of the proposed works on the contributory items in proximity would be minor. The remainder of the HCA does not share views to and from the station catchment and would not be impacted by the works.

Visual impacts on the Dulwich Hill HCA would be negligible. This is consistent with the assessment of the exhibited project.

Inter-War Heritage Conservation Area Group

The Inter-War HCA is located approximately 25 metres north of the railway corridor and 490 metres east from the eastern edge of the station platform. Current views from the HCA towards the railway line are screened by houses along Marrickville Avenue. The section of the conservation area located within the buffer zone at the corner of Marrickville Avenue and Livingstone Road is also screened by existing vegetation along the railway corridor. Additionally, the railway corridor is located in an embankment below street level and only limited views are available from the surrounding environment. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the HCA and would have a neutral visual impact.

Visual impacts on the Inter-War HCA Group would be neutral. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as negligible.

Gladstone Hall, including interiors

Gladstone Hall is located approximately 40 metres south of the railway corridor and 270 metres from the western edge of the platform of Dulwich Hill Railway Station. Views from the heritage item towards the railway line are limited as they are screened by vegetation within the curtilage of the item, as well as along the railway corridor. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact.

Visual impact on Gladstone Hall would be neutral. This is consistent with the assessment of the exhibited project.

1.5.2.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.



Table 9: Potential direct impact assessment

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Dulwich Hill Railway Statior Group	¹ Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
South Dulwich Hill Heritage Conservation Area	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Inter-War Heritage Conservation Area Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Gladstone Hall, including interiors	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

1.5.3 Hurlstone Park Station

The Hurlstone Park Station Catchment comprises two heritage items, the Hurlstone Park Railway Station Group and the Hurlstone Park Railway Underbridge. The buffer zone around the station catchment does not comprise any heritage items or conservation areas.

1.5.3.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

Table 10: Heritage items within Hurlstone Park Station Catchment and buffer zone

ltem	Suburb	Significance	Listing
Within project are	a		
Hurlstone Park Railway Station Group	Hurlstone Park	Local	RailCorp S.170 Heritage and Conservation Register (4802051) Canterbury LEP 2012 (I124)
Hurlstone Park Railway Underbridge	Hurlstone Park	Local	RailCorp S.170 Heritage and Conservation Register (4805737) Canterbury LEP 2012 (I126)

1.5.3.2 Direct impacts

Hurlstone Park Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole. Since preparation of the assessment of the exhibited project, Hurlstone Park Railway Station Group is no longer considered for SHR listing.



Table 11: Assessment of direct impacts for Hurlstone Park Railway Station Group

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1 (1894)	High	Removal; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shafts, platform canopies, platform screen doors and station buildings to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps New lifts /concourse Stairs replaced	Platform 1 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. New small concourse, stairs and lifts would be constructed on the platform and located to the north-east of the platform buildings, immediately adjacent the existing concourse and station entry. This would involve excavation into the platform for the lift shaft and stair pylons. The construction of the new stairs and lifts would have a moderate impact on the platform with pylons into the platform to support the stairs and excavation of the lift shaft into the platform.	Moderate



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Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 2 (1894)	High	Removal apart from structure underneath heritage building; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shafts, platform canopies, platform screen doors and station buildings to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps New lifts /concourse Stairs replaced	Platform 2 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. New small concourse, stairs and lifts would be constructed on the platform and located to the north-east of the platform buildings, immediately adjacent the existing concourse and station entry. This would involve excavation into the platform for the lift shaft and stair pylons. The construction of the new stairs and lifts would have a moderate impact on the platform as a result of installation of stair pylons and excavation of the platform for the lift shaft. Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform building, platfor 1 (Type 11) (1915) ⁸	^m High	Removal	Major	Retained and repurposed	The proposed works to the Platform 1 building would include internal refurbishment/repurposing. The building would be used for stores, AC room, platform screen door equipment, and an accessible toilet. Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes, including the original plaster ceiling and wall finishes in the general waiting room, the ladies waiting room, and ladies toilets, and the original painting brick walls in the men's toilets, should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds. This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	Moderate

⁸ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform building, platfor 2 (Type 11) (1915) ⁹	^m High	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The proposed works to the Platform 2 building would include internal refurbishment/repurposing. The building would be used for a station management room, and staff toilets. Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes, including the original plaster wall finishes, ripple iron ceiling, plaster ceiling rose and timber floor in the waiting room and ladies waiting room, the original timber partitions and fittings in the ladies toilets, and the original painted bricks walls, urinal stalls, and timber partitions, should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds. This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	Moderate

⁹ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Footbridge (1915)	High (stairs) Moderate (footbridge) Little (deck)	Removal	Major	Replaced	The footbridge including significant stairs would be fully removed to allow for the construction of new lifts and stairs.	
					The footbridge was assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy. ¹⁰ It was highlighted for careful conservation and adaptation.	Major
					This removal would have a major impact on the fabric of the footbridge and on Hurlstone Park Station as a whole.	
Brick abutments (c.1915)	High	Retention and upgrade	Minor	Throw screens to both sides, remove smoke screens, and minor upgrades	It is proposed to install throw screens on both sides of Crinan Street overbridge. The current smoke screens would be removed, and other minor upgrades for safety as required. Proposed works to the brick abutments would be minor. The proposed works would have a negligible direct impact on the heritage values of the overbridge and station overall.	Negligible
Overhead booking office (c.1980)	Little	Removal	Neutral	Retained and repurposed	It is proposed to refurbish/repurpose the overhead booking office and repaint the exterior. The building would be used as staff rooms. The overhead booking office is not identified as significant in the Sydney Trains Overhead Booking Office	Neutral

¹⁰ NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					Conservation Strategy. The opportunity could be taken to remove any intrusive modifications to the structure. The proposed works would result in a neutral impact on the overhead booking office and station overall.	
Landscape /natural features	High	Retention	Neutral positive	Retained	It is proposed to retain the sandstone wall on Platform 2. This would result in a neutral positive impact on Hurlstone Park Railway Station.	Neutral positive



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Hurlstone Park Railway Station Group overall. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as major. It should be noted that the removal of the footbridge is a major localised impact.

Hurlstone Park Railway Underbridge

No works are proposed to the underbridge, which is located 180 metres west of Hurlstone Park Railway Station. Minor works would be undertaken within the rail corridor, including installation of fencing and communications services routes. The preferred project would have a negligible impact on the heritage values of the underbridge.

Direct impacts of the works on the Hurlstone Park Railway underbridge would be negligible. This is consistent with the assessment of the exhibited project.

Hurlstone Park Heritage Assessment Study - Heritage items

The Hurlstone Park Heritage Assessment study (Paul Davies September 2016) has recently been given a gateway Determination by the Department of Planning and Environment. There are a number of heritage items identified for listing and HCAs within the buffer zone of the Hurlstone Park Station Catchment. There would be no direct impacts to any newly identified heritage items as a result of the preferred project and indirect impacts are expected to be minor. Detailed design would consider the character of the Heritage Conservation Areas in the vicinity of the station. This is consistent with the assessment of the exhibited project.

1.5.3.3 Visual impacts

Hurlstone Park Railway Station Group

The new small concourse, lifts and stairs would be new elements within the station and use modern construction. The nature of the chosen materials and the contemporary nature of the proposed new concourse would be suitable within the present context as a contradistinctive design to be easily differentiated from the heritage components of the site. The proposed new concourse, lifts and stairs would have a moderate visual impact. The proposed concourse and services building would be sited away from the heritage building. Views from the Crinan Street overbridge towards the platform buildings would be partially impeded with the introduction of the new lifts.

The removal of the footbridge stairs would result in the loss of this heritage item and it would be replaced with modern structures. This would result in a major visual impact to the footbridge stairs.

The platform screen doors along the platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the new concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

The proposed throw screens and removal of smoke screens on the Crinan Street overbridge would have a negligible visual impact to the brick abutments.

Additional impacts such as the services building to be constructed to the south-west of the station in the rail corridor, landscaping, new pavement, kerbside facilities and signage would have a minor impact on the setting and context of the station as they would be in keeping with the use of the station.

Overall, the proposed concourse, lifts and stairs, and station infrastructure would have a moderate visual impact on the character and setting of Hurlstone Park Railway Station Group. Views onto the platform buildings would be partially retained from the new concourse, although views from the

overbridge would be partially impeded due to the introduction of the new lifts. Views of the footbridge stairs would be lost due to the removal of this element which would also result in a major visual impact. The platform screen doors would result in a moderate visual impact overall.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on Hurlstone Park Railway Station Group. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as major.

Hurlstone Park Railway Underbridge

No works are proposed to the underbridge. The heritage item is located approximately 180 metres west of Hurlstone Park Railway Station. Current views on the station are very limited. The proposed redevelopment of Hurlstone Park Railway Station would have a negligible visual impact on the underbridge. The Metro rail corridor would be in keeping with the current setting of the heritage item and would have a neutral visual impact.

Visual impact on Hurlstone Park Railway Underbridge would be negligible. This is consistent with the assessment of the exhibited project.

1.5.3.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Hurlstone Park Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Hurlstone Park Railway Underbridge	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

Table 12: Potential direct impact assessment

1.5.4 Canterbury Station

The Canterbury Station Catchment comprises three heritage items including the Canterbury Railway Station Group, the Canterbury (Cooks River) Underbridge and the Canterbury (Cooks River/Charles St) Underbridge - Main Line. The buffer zone around the station catchment comprises four heritage items.

1.5.4.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

item	Suburb	Significance	Listing
Within project area			
			SHR (01109)
Canterbury Railway Station Group	Canterbury	State	RailCorp S.170 Heritage and Conservation Register (4801100)
			Canterbury LEP 2012 (I67)
Canterbury (Cooks	Canterbury	Local	RailCorp S.170 Heritage and Conservation Register (4801568)
River) Underbridge	-		Canterbury LEP 2012 (I72)
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Canterbury	Local	RailCorp S.170 Heritage and Conservation Register (5062566)
Within buffer zone	(outside proje	ect area)	
	Contorbury		SHR (00290)
Old Sugarmill	Canterbury	State	Canterbury LEP 2012 (I82)
Inter-War Hotel (former Hotel Canterbury)	Canterbury	Local	Canterbury LEP 2012 (I68)
Federation Post Office Building (former Canterbury Post Office)	Canterbury	Local	Canterbury LEP 2012 (I66)
Electricity Substation no. 275	Canterbury	Local	Ausgrid S.170 Heritage and Conservation Register (3430425)

Table 13: Heritage items within Canterbury Station Catchment and buffer zone

1.5.4.2 Direct impacts

Canterbury Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole.

Table 14: Assessment of direct impacts for Canterbury Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1 (1895)	High	Removal; platform to be rebuilt in straight alignment covered concourse, access stairs, lift shaft, platform canopies and platform screen doors to be anchored on new platform		Re-levelled New platform screen doors New emergency egress ramps Stairs demolished and replaced with new stairs Installation of a new lift	Platform 1 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. The existing stairs would be demolished and replaced with new stairs. A new lift would be installed. This would involve excavation into the platform for the lift shaft and stair pylons. The new stairs and lift would have a moderate impact on the	Moderate



Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	
Platform building, platform 1 (Type 11) (1895) ¹¹	e Exceptional	Retention for re-use with potential retrofitting	Minor	Retained and repurposed Awning would be removed	The proposed works to the Platform 1 building would include internal refurbishment/repurposing and the awning at the stair end which is not significant, would be removed. The building would be used for stores, station management room, AC room and Accessible toilet. Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds. This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	Moderate

¹¹ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 2 (1895)	High	Removal apart from structure underneath heritage building; platform to be rebuilt in straight lines; covered concourse, access stairs, lift shafts, platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps New lift	Platform 2 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. A new lift would be installed. This would involve excavation into the platform for the lift shaft. The new lifts would have a moderate impact on the platform.	Moderate
Platform building, platform 2 (Type 11) (1915) ¹²	High	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The proposed works to the Platform 2 building would include internal refurbishment/repurposing. The building would be used for platform screen door equipment and chemical store.	Moderate

¹² See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes, including the original ripple iron ceiling, ceiling rose, and plaster wall finishes in the waiting room and ladies room, should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds. This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
Signal box (1915)	High	Retention	Neutral	Retained	The signal box would be retained as is and would not be affected by the project. This would result in a neutral impact on the signal box.	Neutral
Footbridge (1915, 1947)	Moderate	Removal for replacement with new covered concourse including access stairs and lift shafts	S Moderate	Retained	It is proposed to retain the footbridge. The footbridge was assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy. ¹³	Neutral

¹³ NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					This would result in a neutral impact on the footbridge and Canterbury Railway Station overall.	
Overbridge (c.1917)	High	Retention and upgrade	Moderate	Retained	It is proposed to install throw screens on the city side of the Canterbury Road overbridge. Vehicle barriers would be installed on the north side of the bridge, as well as other minor upgrades for safety as required. The proposed works would have a minor direct impact on the heritage values of the overbridge and station overall.	Minor
Overhead booking office and concourse (Late 1980s)	Little	Removal for replacement with new covered concourse including access stairs and lift shafts	Neutral	Retained and repurposed	It is proposed to retain and repurpose the overhead booking office. It would be used for a staff room, bin room, and AC room. The overhead booking office is not identified as significant in the Sydney Trains Overhead Booking Office Conservation Strategy. This would result in a neutral impact on the station catchment.	Neutral
Canopies (Late 1980s)	Little	Removal for replacement with new platform canopies	Neutral	Retained	It is proposed to retain the canopies. This would result in a neutral impact on the canopies and station catchment.	Neutral
Canopies	Little	None	Neutral	Removed	These intrusive steel framed and metal roof clad canopies would be removed.	Neutral



The design provides for a potential future station entrance on Charles Street, to enable access to Platform 2. The future station entrance is to be safeguarded subject to detail design. No heritage items would be removed in regard to the future proofing. When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Canterbury Railway Station Group overall. This is consistent with the assessment of the exhibited project.

Canterbury (Cooks River) Underbridge

Throw screens and vehicle protection would be added to the bridge. This would have a minor direct impact onto Canterbury (Cooks River) Underbridge. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as moderate.

Canterbury (Cooks River/Charles St) Underbridge – Main Line

The proposed works include installing throw screens and vehicle protection. This would have a minor direct impact onto Canterbury (Cooks River/Charles St) Underbridge – Main Line. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as moderate.

1.5.4.3 Visual impacts

Canterbury Railway Station Group

The new lifts and stairs would be new elements within the station and use modern construction. The use of new materials would be suitable within the present context as a contradistinctive design to be easily differentiated from the heritage components of the site. The proposed new lifts and stairs would have a moderate visual impact. The proposed services building would be sited away from the heritage building to the south-west.

The modern brick retaining wall at the station entrance would be removed to allow for better accessible access. This would have a negligible visual impact on the station.

The removal of the footbridge stairs would result in the loss of this heritage item and it would be replaced with modern structures. This would result in a major visual impact to the footbridge stairs.

The platform screen doors along the platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

The proposed throw screens and installation of vehicle barriers on the overbridge would have a minor visual impact to the overbridge.

Additional impacts such as the services building to be constructed to the south-west of the station in the rail corridor, landscaping, new pavement, kerbside facilities and signage would have a minor impact on the setting and context of the station as they would be in keeping with the use of the station.

The design provides for a potential future station entrance on Charles Street, to be safeguarded subject to detail design. .. Views towards the provisional location of the future station entrance are not of high significance, and the entrance would be located at a suitable distance to the west of the Platform 2 building.

Overall, the proposed lifts and stairs, and station infrastructure would have a moderate visual impact on the character and setting of Canterbury Railway Station Group. Views of the footbridge stairs



would be lost due to the removal of this element which would also result in a major visual impact. The platform screen doors would result in a moderate visual impact overall.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on Canterbury Railway Station Group. This is consistent with the assessment of the exhibited project.

Canterbury (Cooks River) Underbridge

The heritage item is located approximately 200 metres to the northwest of Canterbury Railway Station. Current views on the station are very limited. The preferred project would have a negligible visual impact on the underbridge. The Metro rail corridor would be in keeping with the current setting of the heritage item and would have a neutral visual impact.

Visual impacts on Canterbury (Cooks River) Underbridge would be negligible. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as minor.

Canterbury (Cooks River/Charles St) Underbridge - Main Line

The heritage item is located approximately 200 metres to the northwest of Canterbury Railway Station, adjacent to the Canterbury (Cooks River) Underbridge. Current views on the station are very limited. The preferred project would have a minor visual impact on the underbridge as it is assumed throw screens and vehicle protection would be as light weight as possible. The Metro rail corridor would be in keeping with the current setting of the heritage item and would have a neutral visual impact.

Visual impacts on Canterbury (Cooks River/Charles St) Underbridge – Main Line would be minor. This is consistent with the assessment of the exhibited project.

Old Sugarmill

The Old Sugarmill is located approximately 30 metres south of the railway corridor and 270 metres south-east of Canterbury station. Current views towards the railway line are screened by the rise of Hutton Street as it goes west. Some vegetation also screens partial views towards the railway corridor. Views towards the station are screened by contemporary residential development. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. It is proposed to install throw screens on both sides of the Church St/Hutton St footbridge. The current smoke screens would be removed, and other minor upgrades for safety as required. This would have a negligible visual impact on Old Sugarmill.

Visual impacts on the Old Sugarmill would be negligible. This is consistent with the assessment of the exhibited project.

Inter-War Hotel (former Hotel Canterbury)

The Inter-War Hotel is located approximately 45 metres east of the current station entrance. There is currently a direct view from the hotel towards the station entrance. Views towards the railway corridor are screened as the railway line is located in a cutting at a lower level. The installation of the new lifts would be screened by the existing overhead booking office and entrance. The modern brick retaining wall at the station entrance would be removed to allow for better accessible access. This would have a neutral visual impact on the Inter-War Hotel. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. There are no views from the heritage item onto the Church St/Hutton St footbridge.



Visual impacts on the Inter-War Hotel would be neutral. This is consistent with the assessment of the exhibited project.

Federation Post Office Building (former Canterbury Post Office)

The post office is located approximately 15 metres north of the current station entrance. There is currently a direct view from the former post office towards the station entrance. Views towards the railway corridor are screened as the railway line is located in a cutting at a lower level. The installation of the new lifts would be screened by the existing overhead booking office and entrance. The modern brick retaining wall at the station entrance would be removed to allow for better accessible access. This would have a neutral visual impact. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. There are no views from the heritage item onto the Church St/Hutton St footbridge.

Visual impacts on the Federation Post Office Building would be neutral. This is consistent with the assessment of the exhibited project.

Electricity Substation no. 275

The electricity substation is located approximately 10 metres north of the railway corridor and 210 metres south-east of the station. Current views towards the railway line are partially obstructed as the railway corridor is in a cutting at this location. Views towards the station are screened as the railway line turns slightly north. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. It is proposed to install throw screens on both sides of the Church St/Hutton St footbridge. The current smoke screens would be removed, and other minor upgrades for safety would be carried out as required. This would have a negligible visual impact on the Electricity Substation no. 275.

Visual impacts on the Electricity Substation no. 275 would be negligible. This is consistent with the assessment of the exhibited project.

1.5.4.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Canterbury Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Canterbury (Cooks River) underbridge	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

Table 15: Potential direct impact assessment



ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Old Sugarmill	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Inter-War Hotel (former Hotel Canterbury)	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Federation Post Office Building (former Canterbury Post Office)	y Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Electricity substation no. 275	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

1.5.5 Campsie Station

The Campsie Station Catchment comprises one heritage item, the Campsie Railway Station Group. The buffer zone around the station catchment comprises six heritage items.

1.5.5.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

ltem	Suburb	Significance	Listing
Within project area			
Campsie Railway	Campsie	Local	RailCorp S.170 Heritage and Conservation Register (4801101)
Station Group			Canterbury LEP 2012 (I40)
Within buffer zone	(outside proje	ect area)	
Federation commercial building–Coffill's Buildings	Campsie	Local	Canterbury LEP 2012 (I41)
Inter-War Commercial Building–Station House	Campsie	Local	Canterbury LEP 2012 (I42)
Inter-War Court House (former) Campsie Court House	Campsie	Local	Canterbury LEP 2012 (I44)
War Memorial Clock Tower	Campsie	Local	Canterbury LEP 2012 (I34)
Federation house	Campsie	Local	Canterbury LEP 2012 (I61)
Federation villa	Campsie	Local	Canterbury LEP 2012 (I62)

Table 16: Heritage items within Campsie Station Catchment and buffer zone

1.5.5.2 Direct impacts

Campsie Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole.



Table 17: Assessment of direct impacts for Campsie Railway Station Group

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred ject	Preferred project impact summary
Platform 1 (1894)	High	Removal apart from structure underneath heritage building; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shafts, platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps	Platform 1 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	Moderate
Platform 2 (1894)	High	Removal apart from structure underneath heritage building; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shaft, platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps	Platform 2 would be re-levelled including the removal of the top section of the concrete coping where necessary. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform.	Moderate



Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred ject	Preferred project impact summary
					New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform.	
					Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	
					The proposed works to the Platform 1 building would include internal refurbishment/repurposing. The building would be used for cleaner's store, chemical store, and an accessible toilet.	
Platform building, platform 1 (Type 11) (1915) ¹⁴	pe ^{High}	Retention for re-use with potential retrofittin	g Minor	Retained and repurposed	Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes should be preserved where possible. Note that original plaster wall finishes, ripple iron ceilings and timber cornices remain as well as celling roses in the general waiting room, ladies waiting room and ladies toilets. These should be retained.	Moderate
					The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	

¹⁴ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred	Preferred project impact summary
					It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds. This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
Platform building, platform 2 (Type 11) (1915) ¹⁵	e High	Retention for re-use with potential retrofitting) Minor	Retained and repurposed	The proposed works to the Platform 2 building would include internal refurbishment/repurposing. The building would be used for stores for the platform screen door equipment and a station store room. Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes should be preserved where possible. The waiting room and ladies waiting room retain original plaster wall finishes, ripple iron ceiling, plaster ceiling roses and timber floors. These should be conserved.	Moderate
					The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	

¹⁵ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred ject	Preferred project impact summary
					It is understood platform levelling would not encroach on any ventilation or door frames.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
					It is proposed to retain the existing new concourse elements (c2001) including concrete deck, lifts, stairs, roof, gateline and customer toilets. The existing (original) concourse steel structure would be retained and repurposed.	
Concourse including overhead booking office and Parcels Office	Little (Concourse) Moderate (Overhead booking office and Parcels Office)	Retention and partial removal for upgrading	Moderate	Retained and repurposed	It is proposed to retain the 1915 overhead booking office, the c.1950 Parcels Office, and the remaining concourse structures between the gateline and Beamish Street, which would be repurposed for a store, bin room, comms room, staff toilets, station management, staff facilities and an AC room.	Minor
					Note that the overhead booking office ranked four out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy and its retention is a positive heritage outcome ¹⁶ . Remnant elements of the	

¹⁶ Australian Museum Consulting 2014. *Railway Overhead Booking Offices Heritage Conservation Strategy*. Prepared for Transport for NSW.

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred	Preferred project impact summary
					building are wholly incorporated into the modern overhead concourse.	
Overbridge (1915)	High	Retention and upgrade	Minor	Retained	The structure is proposed to be retained and repaired for ongoing use. These minor upgrade works would include checking exiting OHW connection and repairing where necessary, blasting clean and rectifying defects to structural steel members and installing vehicle and train collision protection. It is expected this aspect of the preferred project would result in a minor impact on the heritage values of the overbridge and station overall.	Minor
Footbridge (1947, 2002)	Little	Retention	Neutral	Retained	It is proposed to retain the footbridge. The footbridge was assessed as having little significance as per the Railway Footbridges Heritage Conservation Strategy. ¹⁷ Footbridges of little significance can be conserved and adapted or where there is no reasonable alternative, demolished. The retention of the footbridge would result in a neutral impact on the footbridge and Campsie Railway Station.	Neutral
Platform 3 (1916, 1950)	Moderate	Removal	Moderate	Retained	It is proposed to retain the platform. This would result in a neutral impact on the platform and station catchment.	Neutral

¹⁷ NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Exhibited project proposed action		Preferred project proposed action	Assessment of preferred	Preferred project impact summary
Platform canopies, platforms 1- 3 (2002)	Little	Removal	Neutral	Retained	It is proposed to retain the platform canopies. This would result in a neutral impact on the canopies and station catchment.	Neutral
Landscape/ natural features (n/a,1915)	High	Removal to accommodate new covered concourse, access stairs and lift shaft	Moderate	Retained	It is proposed to retain the landscape and natural features, including the cambered stone and brick retaining wall. This would result in a neutral impact to the landscape and natural features.	Neutral



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Campsie Railway Station Group overall. This is consistent with the assessment of the exhibited project.

1.5.5.3 Visual impacts

Campsie Railway Station Group

Changes at Campsie Station are limited to upgrading of the station entrance, re-purposing of the station buildings and changes to the platforms including addition of platform end egress ramps

Visual impacts associated with the upgrades to the Beamish Street entrance are likely to be neutral to positive as the existing retail would be refreshed. Early elements of the station such as the 1915 overhead booking office and the c.1950 Parcels Office associated with the entrance have been detractingly modified overtime and can no longer be easily appreciated in their existing context. Their upgrade would result in a neutral visual impact.

The platform screen doors along the reconstructed platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the existing concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on Campsie Railway Station Group. This is consistent with the assessment of the exhibited project.

Federation commercial building-Coffill's Buildings

Coffill's Buildings is located approximately 30 metres north-east of the station entrance. The construction in the vicinity of Coffill's Buildings consists of new Metro tracks. There is a direct visual connection between Coffill's Buildings and the station entrance. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. It is proposed to upgrade the existing Duke Street footbridge including installing safety screens, lighting and other minor upgrades. The works are unlikely to significantly alter the aesthetics of the bridge and visual impacts on the heritage item are anticipated to be negligible.

Visual impacts on the Coffill's Federation Commercial Building would be negligible. This is consistent with the assessment of the exhibited project.

Inter-War Commercial Building–Station House

Station House is located approximately 35 metres south-east of the station entrance. The construction in the vicinity of Station House consists of minor corridor works. There is a direct visual connection between Station House and the station entrance. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact.

Visual impacts on the Inter-War Commercial Building –Station House would be neutral. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as negligible.

Inter-War Court House (former) Campsie Court House

Campsie Court House is located approximately 10 metres north of the railway corridor and 240 metres west of the western end of the station platforms. The construction in the vicinity of the Court House consists of minor corridor works. Current views towards the railway line are partially screened by vegetation. Any views on the Metro rail corridor would be in keeping with the current views and



vistas of the heritage item and would have a neutral visual impact. It is proposed to install throw screens on both sides of the existing Lock Street overbridge, remove existing smoke screens, as well as other minor upgrades. The works are unlikely to significantly alter the aesthetics of the bridge and visual impacts on the heritage item, located at a notable distance, are anticipated to be negligible.

Visual impacts on the Inter-War Court House would be neutral. This is consistent with the assessment of the exhibited project.

War Memorial Clock Tower

The War Memorial Clock Tower is located approximately 55 metres south of the station entrance. The construction in the vicinity of the clock tower consists of new Metro tracks. Current views towards the station are screened by commercial buildings along the north side of Anzac Mall.

Visual impacts on the War Memorial Clock Tower would be neutral. This is consistent with the assessment of the exhibited project.

Federation house

The Federation House is located approximately 30 metres south of the railway corridor and 185 metres south-east of the station entrance. The construction in the vicinity of the Federation House consists of minor corridor works. Current views towards the railway line are partially screened by vegetation. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. It is proposed to upgrade the existing Duke Street footbridge including installing safety screens, lighting and other minor upgrades. The works are unlikely to significantly alter the aesthetics of the bridge and visual impacts on the heritage item are anticipated to be negligible.

Visual impacts on the Federation House would be negligible. This is consistent with the assessment of the exhibited project.

Federation villa

The Federation villa is located approximately 30 metres south of the railway corridor and 130 metres south-east of the station entrance. The construction in the vicinity of the Federation villa consists of minor corridor works. Current views towards the railway line are partially screened by vegetation. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. It is proposed to upgrade the existing Duke Street footbridge including installing safety screens, lighting and other minor upgrades. The works are unlikely to significantly alter the aesthetics of the bridge and visual impacts on the heritage item are anticipated to be negligible.

Visual impacts on the Federation villa would be negligible. This is consistent with the assessment of the exhibited project.

1.5.5.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.



Table 18: Potential direct impact assessment

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Campsie Railway Station Group	Minor	The proposed works would have a potential direct impact to platforms and station buildings from vibration associated with works in proximity to heritage items. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Minor
Federation commercial building–Coffill's Buildings	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Inter-War Commercial Building–Station House	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Inter-War Court House (former) Campsie Court House	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
War Memorial Clock Tower	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Federation house	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Federation villa	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

1.5.6 Belmore Station

The Belmore Station Catchment comprises two heritage items, the Belmore Railway Station Group and the Post-war bus shelter and public lavatories. The buffer zone around the station catchment comprises one heritage item.

1.5.6.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

Table 19: Heritage items within Belmore Station Catchment and buffer zone

ltem	Suburb	Significance	Listing
Within project area			
			SHR (No. 01081)
Belmore Railway Station Group	Belmore	State	RailCorp S.170 Heritage and Conservation Register (4801084)
			Canterbury LEP 2012 (I11)
Post-war bus shelter and public lavatories	Belmore	Local	Canterbury LEP 2012 (I29)
Within buffer zone ((outside proje	ct area)	
Federation House (former station	Belmore	Local	Canterbury LEP 2012 (I10)
master's cottage)	Demole	Lucai	

1.5.6.2 Direct impacts Belmore Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole.



Table 20: Assessment of direct impacts for Belmore Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1/2 (1895, 1907)	High	Removal apart from structure underneath heritage building; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shafts, platform station building, platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps	Platform 1/2 would be re-levelled including the removal of the top section of the original platform edge. Impacts to the original brick platform face should be avoided where possible. The re- levelling and removal of the original platform edge would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the eastern end of the platform and would have a minor impact on the platform. Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	Moderate
Platform building (Type 11) (1895) ¹⁸	Exceptional	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The proposed works to the Platform building would include internal refurbishment/repurposing. The building would be used for a store, station management room, platform screen door equipment, an AC room and a staff toilet. Refurbishing for new accommodation should be designed to minimise	Moderate

¹⁸ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					impacts to original fabric. Original layout and finishes should be preserved where possible.	
					The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					It is understood platform levelling would not encroach on any sub-floor ventilation or door thresholds.	
_					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
					The proposed works to the overhead booking office include internal refurbishment. The building would be used for staff rooms.	
Overhead booking office and concourse (1937, 2008)	High	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The overhead booking office ranked five out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy. ¹⁹ The strategy recommends adaptive reuse of the building.	Moderate
					Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where	

¹⁹ Australian Museum Consulting 2014. *Railway Overhead Booking Offices Heritage Conservation Strategy*. Prepared for Transport for NSW.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					possible. The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					The preferred project would have a moderate impact on the heritage values of the overhead booking office and station overall.	
Overbridge (Modified 1961)	Little	Retention and upgrade	Negligible	Retained	The structure is proposed to be retained and upgraded for ongoing use. The proposed works would include installing throw screens to both sides, removing smoke screens, rectifying OHW connections and replacing where necessary, upgrading earth bonding and rectifying any defects in existing system. The preferred project would result in a negligible impact on the heritage values of the overbridge and station overall.	Negligible
Platform canopies (2008)	Little	Removal for replacement with new covered concourse including access stairs and lift shafts	Neutral	Retained	The canopies are proposed to be retained. This would result in a neutral impact on the canopies and station catchment.	Neutral



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Belmore Railway Station Group overall. This is consistent with the assessment of the exhibited project.

Post-war bus shelter and public lavatories

Since preparation of the assessment of the exhibited project, the Post-war bus shelter and public lavatories are no longer considered for SHR listing.

The Post-war bus shelter and public lavatories located within the car park to the north of the station would be retained. This would have a neutral direct impact on the Post-war bus shelter and public lavatories. This is consistent with the assessment of the exhibited project.

1.5.6.3 Visual impacts

Belmore Railway Station Group

Changes within the Belmore Railway Station Group curtilage are limited to upgrading of the station entrance, re-purposing of the station buildings, and changes to the platforms including addition of platform screen doors and platform egress ramps.

The platform screen doors along the reconstructed platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the new concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

The new services building would not visually dominate the retained heritage buildings, as it would be located at a distance to the east and is in keeping with the use of the station. The services building would have a minor visual impact on the station.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on Belmore Railway Station Group. This is consistent with the assessment of the exhibited project.

Post-war bus shelter and public lavatories

It is proposed to retain the post-war bus shelter and public lavatories.

There are views to and from the post-war shelters and public lavatories and Belmore Railway Station Group. The preferred project at Belmore Station would not significantly alter views onto the Platform building of exceptional significance which would continue to be appreciated from the heritage item.

Visual impacts on the post-war shelters and public lavatories would be minor. This is consistent with the assessment of the exhibited project.

Federation House (former station master's cottage)

The Federation House is located approximately 15 metres north of the railway corridor and 25 metres north-west of the station entrance. There is a direct visual connection between the Federation House and the station entrance, but as the station entrance will not be significantly altered this will not result in visual impacts. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. The current heritage station buildings adjacent to the Federation House would be retained. No views towards the Federation House would be impacted.



Visual impacts on the Federation House would be negligible. This is consistent with the assessment of the exhibited project.

1.5.6.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Belmore Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Post-war bus shelter and public lavatories	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Federation House (former station master's cottage)	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

1.5.7 Lakemba Station

The Lakemba Station Catchment includes one heritage item, the Lakemba Railway Station Group. The buffer zone around the station catchment includes three heritage items.

1.5.7.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

ltem	Suburb	Significance	Listing			
Within project area						
Lakemba Railway	Lakemba	Local	RailCorp S.170 Heritage and Conservation Register (4801916)			
Station Group			Canterbury LEP 2012 (I143)			
Within buffer zone ((outside proje	ct area)				
Federation weatherboard house	Lakemba	Local	Canterbury LEP 2012 (I144)			
Inter-War post office building - Lakemba Post Office	Lakemba	Local	Canterbury LEP 2012 (I145)			
Electricity Substation no. 143	Lakemba	Local	Ausgrid S. 170 Heritage and Conservation Register (3430296)			

Table 22: Heritage items within Lakemba Station Catchment and buffer zone

1.5.7.2 Direct impacts

Lakemba Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole. Since preparation of the assessment of the exhibited project, Lakemba Railway Station Group is no longer considered for SHR listing.



Table 23: Assessment of direct impacts for Lakemba Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1/2 (1919)	High	Removal apart from structure underneath heritage building and the current concourse and stairs; platform to be rebuilt in straight alignment; platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps	Platform 1/2 would be re-levelled including the removal of the top section of the coping where necessary. The original brick platform edge would be removed. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	Moderate
Platform building, platform 1/2 (Type 11) (1919) ²⁰	High	Retention for re-use with potential retrofitting	Minor	Retained and repurposed	The proposed works to the Platform 1/2 building would include internal refurbishment/repurposing. The building would be used for stores for the platform screen doors equipment, station management room, staff room and staff facilities (including toilet). Refurbishing for new accommodation should be designed to minimise impacts	Moderate

²⁰ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					to original fabric. Original layout and finishes should be preserved where possible.	
					The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
					It is proposed to retain the footbridge and stairs.	
Footbridge and stairs (1926)	Moderate	Retention with new lifts constructed to platform	Minor	Retained	The footbridge was assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy. ²¹	Neutral
					The retention of the footbridge and stairs would have a neutral impact on the original footbridge and station overall.	
War Memorial (1953)	High	Retention; construction of new platforms and toilets in proximity	Neutral	Retained	It is proposed to retain the memorial. This would result in a neutral impact on the memorial and the station catchment.	

²¹ NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					The re-levelling of the platforms in proximity of the memorial would have a neutral impact on the memorial provided that construction works are carried out, so as to minimise any direct impacts and that the memorial is adequately protected during the works.	
Overhead booking office /concourse (2001)	Little/Intrusive	Existing concourse structure retained and expanded with new lifts to platforms	Neutral	Retained and repurposed	It is proposed to retain the existing concourse structure including stairs to platforms, stairs and lifts to the north and south entries. The overhead booking office would be retained and repurposed for storerooms. The overhead booking office is not identified as significant in the Sydney Trains Overhead Booking Office Conservation Strategy. This aspect of the proposal would result in a neutral impact on the Lakemba Railway Station.	Neutral
Canopies (2001)	Intrusive	Removal of the canopy over the stairs to the platform for replacement with new canopy. Retention of the concourse canopy.	Minor positive	Retained	It is proposed to retain the station canopies. This would result in a neutral impact on the canopies and station catchment.	Neutral



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Lakemba Railway Station Group overall. This is consistent with the assessment of the exhibited project.

1.5.7.3 Visual impacts

Lakemba Railway Station Group

Changes at Lakemba Station are limited to re-purposing of the station buildings, changes to the platforms including re-levelling and addition of platform end egress ramps, and construction of a new services building. Minor works to the Haldon Street overbridge would also be carried out.

The platform screen doors along the reconstructed platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the existing concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

The new services building would not visually dominate the station heritage structures as it would be located at a distance to the west in the rail corridor. The new services building would have a minor visual impact to the station. as it would be keeping with the current setting.

It is proposed to install new throw screens and balustrade to both sides of the Haldon Street overbridge which is situated in proximity of Lakemba Station. The proposed works would remove the existing smoke screens and other minor works would be conducted as required. The works to the bridge would be located at a notable distance from the platform building and mostly screened from the existing concourse. These works are unlikely to significantly alter the existing aesthetics of the bridge. The visual impacts of the works to the Haldon Street overbridge on Lakemba Railway Station Group would be minor.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on the Lakemba Railway Station Group. This is consistent with the assessment of the exhibited project.

Federation weatherboard house

The Federation weatherboard house is located approximately 20 metres south of the railway corridor and 335 metres east of the eastern edge of the station platform. The construction in the vicinity of the Federation weatherboard house consists of station works and upgrades to the surrounding station area. Current views towards the railway line are screened by vegetation. Any views would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. Distance and mature trees prevent views from the heritage item on Lakemba Station Catchment and there would be no views of proposed works.

Visual impacts on the Federation weatherboard house would be neutral. This is consistent with the assessment of the exhibited project.

Inter-War post office building - Lakemba Post Office

The Inter-War post office is located approximately 25 metres south-west of the station entrance. The construction in the vicinity of the post office consists of minor upgrades to the station entrance and area. There are views between the post office and the current station entrance. Any new development would be largely screened by existing single-storey retail buildings located on the north side of The Boulevarde. The proposed works would be within the scale of the existing development and as such would not significantly detract from the existing setting of this heritage item.



Visual impacts on the Inter-War post office would be negligible. This is consistent with the assessment of the exhibited project.

Electricity Substation no. 143

The electricity substation no.143 is located approximately 25 metres north of the railway corridor and 95 metres north-east of the eastern edge of the station platform. The construction in the vicinity of the substation consists of minor corridor works. Current views towards the railway line and the station are screened by vegetation. Distance and vegetation prevent views between the heritage item and Lakemba Station Catchment. Any views on the Metro rail corridor would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact.

Visual impacts on the electricity substation no.143 would be neutral. This is consistent with the assessment of the exhibited project.

1.5.7.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

Item	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Lakemba Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Federation weatherboard house	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Inter-War post office building - Lakemba Post Office	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Electricity Substation no. 143	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

Table 24: Potential direct impact assessment

1.5.8 Wiley Park Station

The Wiley Park Station Catchment includes one heritage item, the Wiley Park Railway Station Group. The buffer zone around the station catchment also includes one heritage item.



1.5.8.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

Table 25: Heritage items within Wiley Park Station Catchment and buffer zone

Suburb	Significance	Listing				
Wiley Park	Local	RailCorp S.170 Heritage and Conservation Register (4801946) Canterbury LEP 2012 (I159)				
Within buffer zone (outside project area)						
Wiley Park	Local	Sydney Water S.170 Heritage and Conservation Register (4570136)				
		Canterbury LEP 2012 (I158)				
(Wiley Park outside proj	Wiley Park Local outside project area)				

1.5.8.2 Direct impacts

Wiley Park Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole.

Table 26: Assessment of direct impacts for Wiley Park Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1 (1938)	High	Removal; platform to be rebuilt in a straight alignment; covered concourse, access stairs, lift shafts, platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps New lift	 Platform 1 would be re-levelled including the removal of the top section of the platform surface and edge. This would remove a section of the original platform, which was constructed using steel rail posts and concrete cast in situ. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform. A new lift would be installed. This would involve excavation into the platform for the lift shaft. The new lift would have a moderate impact on the platform. Overall, the proposal would result in a moderate impact on the platform and station group as a whole. 	Moderate
Platform 2 (1938)	High	Removal; platform to be rebuilt in a straight alignment; covered concourse, access stairs, lift shafts, platform canopies and platform	Major	Re-levelled New platform screen doors	Platform 2 would be re-levelled including the removal of the top section of the platform surface and edge. This would remove a section of the original platform, which was constructed using steel rail posts and	Moderate



Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
		screen doors to be anchored on new platform		New emergency egress ramps	concrete cast in situ. This would have a moderate impact on the platform.	
				New lift	New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform.	
					New emergency egress ramps would be constructed to the western end of the platform and would have a minor impact on the platform.	
					A new lift would be installed. This would involve excavation into the platform for the lift shaft. The new lift would have a moderate impact on the platform.	
_					Overall, the proposal would result in a moderate impact on the platform and station group as a whole.	
Platform building, platform 1 (Typ	e High	Removal; replacement with platform canopies and platform screen doors to be	Major	Retained and repurposed	The proposed works to the Platform 1 building would include internal refurbishment/repurposing. The building would be used for staff facilities, chemical store, and an accessible toilet.	Moderate
13) (1938) ²²		anchored on new platform			Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Note original internal fit outs and finishes are no longer extant. Timber framed windows	

²² See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					remain, although the original glass louvres have been removed and boarded up or fitted with fixed glass.	
					The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					It is understood platform levelling would not encroach on any subfloor ventilation or door thresholds.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
Platform		Removal; replacement wit	h		The proposed works to the Platform 2 building would include internal refurbishment/repurposing. The building would be used for stores for the platform screen doors.	
building, platform 2 (Type 13) (1938) ²³	be High	platform canopies and platform screen doors to b anchored on new platform	e ^{Major}	Retained and repurposed	Refurbishing for new accommodation should be designed to minimise impacts to original fabric. Original layout and finishes should be preserved where possible. Note that original timber slatted seats remain.	Moderate

²³ See Artefact August 2017. Section 2.2.6 Station building types

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					The opportunity could be taken to remove any intrusive modifications to the structure. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	
					It is understood platform levelling would not encroach on any sub-floor ventilation or door thresholds.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
					The building is proposed to be retained and repurposed as store room, cleaner's store and multipurpose room. The station entrance and concourse through the overhead booking office would be retained.	
Overhead booking office (1938)	High	Removal for replacement with new covered concourse including access stairs and lift shafts	Major	Retained and repurposed	weatherboard siding, multi-pane sash windows, covered booking hall with AC ceilings, cantilever awning over footpath, original ticket collector's cabin and window and an early safe.	Moderate
					The overhead booking office ranked seven out of nine in the Sydney Trains Overhead Booking Offices Heritage	

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					Conservation Strategy ²⁴ . The strategy recommends adaptive reuse of the building.	
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall.	
Retail at entrance	Little	Removal for replacement with new covered concourse including access stairs and lift shafts	n/a	Remove retail at each side of overhead booking office entrance	Existing retail would be removed. The SHI listing for the item identified the structures as detracting from the significance of the overhead booking office, therefore their removal would have a neutral impact on the overhead booking office and the station as a whole.	Neutral
Footbridge (1938)	Moderate	Removal for replacement with new covered concourse including access stairs and lift shafts	Major	Retained, regraded to allow access to new lifts.	It is proposed to retain the footbridge. Alterations would involve regrading to allow access to the new lifts required to connect the footbridge to the ramps that lead to the platform. The retention and adaptation of the footbridge would result in a moderate impact on the footbridge and Wiley Park Railway Station.	Moderate
Access ramp canopies (Modern)	Little	Retain in majority; new station building to be constructed along the southern boundary to the west of the platforms	Neutral	Retain	It is proposed to retain the access ramp canopies. This would result in a neutral impact on the access ramp canopies and a neutral impact on the station overall.	Neutral

²⁴ Australian Museum Consulting 2014. *Railway Overhead Booking Offices Heritage Conservation Strategy*. Prepared for Transport for NSW.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Landscape/ Natural features	Moderate		Moderate	Retained	It is proposed to retain the existing landscape and natural features, including the earth and stone formed retaining walls along the southern boundary, and the grass verges with mature plantings along both boundaries. This would result in a neutral impact on the landscape features and on Wiley Park Railway Station overall.	Neutral



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Wiley Park Railway Station Group overall. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as major. Wiley Park Railway Station Group would now continue to meet the threshold for local significance. Impacts as a result of the exhibited project would have resulted in the heritage item no longer meeting the threshold for local significance and would likely have been delisted.

1.5.8.3 Visual impacts

Wiley Park Railway Station Group

Changes at Wiley Park are limited to upgrading of the station entrance including demolition of existing intrusive retail shops, re-purposing of the station buildings and changes to the platforms including re-levelling, addition of platform end egress ramps and installation of two lifts a. A new services building would also be constructed and be sited away from the heritage buildings.

Generally, there would be a positive visual impact at the station entrance with the intrusive retail structures on either side of the overhead booking office removed and replaced. The overhead booking office and its distinctive awning would be retained.

Visual impacts associated with the changes to the entrance on the King Georges Road overbridge are likely to be neutral to positive, as the existing retail would be removed and refreshed. Early elements of the station such as the 1938 platform buildings, overhead booking office and footbridge have been unsympathetically modified overtime and can no longer be easily appreciated in their existing context. Their upgrade would result in a neutral visual impact.

The new lifts would introduce new, modern elements into the station catchment. Contemporary design would provide a juxtaposition of the twentieth century elements and the new upgrades. Visual impacts associated with the lifts would be moderate.

A new service building would be located at the western end of the platforms along the southern boundary. This would have a minor visual impact as it would be keeping with the current setting of the station catchment and not impede views of the platform buildings.

The platform screen doors along the reconstructed platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the existing concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

Minor upgrade works, including installation of vehicle and train collision protection, are proposed to the King Georges Road overbridge and would have a minor visual impact to the station catchment.

Overall, the proposed lifts would have a moderate visual impact on the character and setting of Wiley Park Station. The platform screen doors would result in a moderate visual impact.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on the Wiley Park Railway Station Group. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as major.

Inter-War water pumping station- Lakemba Pumping Station (WP0003)

The Lakemba Pumping Station is located approximately 4 0metres south-west of the station platforms. The construction in the vicinity of the pumping station consists of new platform screen doors and provision of new lifts to the existing concourse. Views towards the railway corridor are mostly screened by existing vegetation. Views towards the station are mostly screened due to the cutting for the railway line and station buildings being located below street level. The proposal would



result in the establishment of a services building along The Boulevarde, directly opposite the Lakemba Pumping Station. While the service building is in the immediate vicinity of the heritage item, it is not anticipated to be visually obtrusive, and views towards the heritage item from the station would not be obscured.

Visual impacts on the Inter-War water pumping station would be negligible. This is consistent with the assessment of the exhibited project.

1.5.8.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Wiley Park Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Inter-War water pumping station– Lakemba Pumping Station (WP0003)	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

Table 27: Potential direct impact assessment

1.5.9 Punchbowl Station

The Punchbowl Station Catchment comprises one heritage item, the Punchbowl Railway Station Group. The buffer zone around the station catchment comprises two heritage items.

1.5.9.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone.

Table 28: Heritage items within Punchbowl Station Catchment and buffer zone

ltem	Suburb	Significance	Listing
Within project area	I		
Punchbowl Railway Station Group	Punchbowl	Local	RailCorp S.170 Heritage and Conservation Register (4802009) Canterbury LEP 2012 (I155)



ltem	Suburb	Significance	Listing
Within buffer zone	(outside proj	ect area)	
War Memorial and street trees	Punchbowl	Local	Canterbury LEP 2012 (I152)
Post-war Civic Building (former Punchbowl Baby Health Centre)	Punchbowl	Local	Canterbury LEP 2012 (I154)

1.5.9.2 Direct impacts

Punchbowl Railway Station Group

The table below provides an assessment of the direct impacts of the preferred project on the fabric of each element constituting the railway station and an assessment of the subsequent impacts on the heritage values of the station group as a whole. Since preparation of the assessment of the exhibited project, Punchbowl Railway Station Group is no longer considered for SHR listing.

Table 29: Assessment of direct impacts for Punchbowl Railway Station Group

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Platform 1/2 (1909)	High	Removal; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shafts, platform canopies and platform screen doors to be anchored on new platform	Major	Re-levelled New platform screen doors New emergency egress ramps New lift	 Platform 1/2 would be re-levelled including the removal of the original platform edge. Impacts to the original brick platform face should be avoided where possible. This would have a moderate impact on the platform. New platform screen doors would be anchored on the re-levelled platform. This would result in a moderate impact where pylons and struts are anchored in the platform. New emergency egress ramps would be constructed to the eastern end of the platform and would have a minor impact on the platform. A new lift would be installed to the west of the platform building. This would involve excavation into the platform for the lift shaft. The new lift would have a moderate impact on the platform. Overall, the proposal would result in a moderate impact on the platform and station group as a whole. 	Moderate
Overhead booking office (1929)	High	Removal for replacement with new covered concourse including access stairs and lift shafts	Major ;	Retained and repurposed	The overhead booking office is proposed to be retained. The later lamp room addition on the western side of the building would be used for a station management room and services	Moderate

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					Refurbishing of the lamp room for new use should be designed to minimise impacts to original fabric.	
					The overhead booking office ranked seven out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy ²⁵ . The strategy recommends adaptive reuse of the building.	
_					This aspect of the proposal would result in a moderate impact on the building and station group as a whole.	
					It is proposed to retain and extend the footbridge to accommodate two new lifts and two new stairs.	
Footbridge (1930, 2014)	Moderate	Removal for replacement with new covered concourse including access stairs, lift shafts and station buildings	Major	Retained and extended to accommodate two new lifts and new stairs	footbridge with standard concrete	Moderate
					The retention and adaptation of the footbridge would result in a moderate impact on the footbridge and Campsie Railway Station.	

 ²⁵ Australian Museum Consulting 2014. *Railway Overhead Booking Offices Heritage Conservation Strategy*. Prepared for Transport for NSW.
 ²⁶ NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
Toilet block, platform 1/2 (1970s)	Moderate	Removal for replacement with new covered concourse including access stairs and lift shafts	Major	Retained and repurposed	It is proposed to retain and adapt the toilet block on Platform 1/2 for use as a store, AC room, gas room and power and utilities room. The western station building has a central component with later extensions at either end which contain station control rooms, open waiting room and toilets. It is proposed to use the existing toilets and the open waiting room as a platform screen door equipment room and the western end as a store room. The toilet block on Platform 1/2 is a simple rectangular building with external walls of face brick, and aluminium framed windows. This aspect of the proposal would have a moderate impact on the heritage values of the building and station overall.	Moderate
Platform building, platform 1/2 (early 1980s)	Moderate	Removal for replacement with new covered concourse including access stairs, lift shafts and station buildings	Major	Retained and repurposed	The proposed works to the Platform 1/2 building would include internal refurbishment/repurposing. The building would be used for stores for staff facilities (including toilet), store room and multipurpose room. Internally, the Platform 1/2 building consists of face brick rendered brick walls and a concrete floor. Internal additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts.	Moderate



Element	Significance	Exhibited project proposed action	Exhibited project impact summary	Preferred project proposed action	Assessment of preferred project	Preferred project impact summary
					This aspect of the preferred project would have a moderate impact on the heritage values of the building and station overall, pending detailed design.	
Canopies and extensions to overhead booking office (c.2000s)	Little	Removal for replacement with new covered concourse including access stairs and lift shafts	Neutral	Retained	It is proposed to retain the canopies and extensions, and to extend the footbridge to accommodate two new lifts and two new stairs. The canopies and extensions have been assessed as having little significance. This aspect of the proposal would result in a negligible impact on the canopies and station catchment.	Negligible



When considering cumulative impacts, it is assessed that the preferred project would result in a moderate direct impact on Punchbowl Railway Station Group overall. This is a reduction in impact from the assessment of the exhibited project, which assessed direct impacts as major. Punchbowl Railway Station Group would now continue to meet the threshold for local significance. Impacts as a result of the exhibited project would have resulted in the heritage item no longer meeting the threshold for local significance and would likely have been delisted.

1.5.9.3 Visual impacts

Punchbowl Railway Station Group

Changes at Punchbowl are limited to upgrading of the station entrance, retaining and repurposing existing station buildings, extension of the existing concourse footbridge and changes to the platforms including re-levelling, installation of three new lifts and two new stairs. A new services building would be constructed to the east of the station in the northern rail corridor. No works are proposed to the Punchbowl Road overbridge.

Visual impacts associated with the changes to the entrances on Punchbowl Road (via Warren Reserve) and The Boulevarde are likely to be neutral to positive. Early elements of the station such as the 1929 overhead booking office and 1930 footbridge have been unsympathetically modified overtime and can no longer be easily appreciated in their existing context. Their upgrade would result in a neutral visual impact.

The new lifts and stairs would introduce new, modern elements into the station catchment. Contemporary design would provide a juxtaposition of the twentieth century elements and the new upgrades. Visual impacts associated with the lifts and stairs would be moderate.

The platform screen doors along the reconstructed platforms would rise to about two metres to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the existing concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter.

The new services building would not visually dominate the retained heritage buildings, as it would be located at a distance to the east and is in keeping with the use of the station. The services building would have a minor visual impact on the station.

Overall, the proposed lifts and stairs would have a moderate visual impact on the character and setting of Punchbowl Station. The platform screen doors would result in a moderate visual impact. The new services building would result in a minor visual impact.

When considering cumulative impacts, it is assessed that the preferred project would result in a moderate visual impact on the Punchbowl Railway Station Group. This is a reduction in impact from the assessment of the exhibited project, which assessed visual impacts as major.

War Memorial and street trees

Since preparation of the assessment of the exhibited project, the War Memorial and street trees are no longer considered for SHR listing. No works are proposed to the War Memorial and street trees located on The Broadway as part of the preferred project. The construction in the vicinity of the heritage item would comprise new Metro tracks and reconfiguration of the existing parking area on the northern side of The Boulevard.

Punchbowl Railway Station is located 150 to 275 metres away from the north boundary of the heritage item and views from this vantage point onto the station would be mostly screened by existing mature trees along The Boulevarde. It would remain outside the visual catchment of the remainder of the curtilage of the heritage item including the listed trees and War Memorial as it



would be screened by existing development on The Broadway. The works to Punchbowl Railway Station would result in a negligible visual impact on the item.

Visual impacts on the War Memorial and street trees would be negligible. This is consistent with the assessment of the exhibited project.

Post-war Civic Building (former Punchbowl Baby Health Centre)

The Post-war Civic Building is located approximately 80m north of the eastern end of the station platforms. The construction in the vicinity of the baby health centre consists of new platform screen doors, extension of the existing footbridge and installation of new lifts and stairs. Views towards the railway corridor, platforms and station are mostly screened by vegetation and reduced by the distance. The proposed works would be keeping with the current visual landscape to and from the heritage item.

Visual impacts on the Post-war Civic Building would be negligible. This is consistent with the assessment of the exhibited project.

1.5.9.4 Potential direct impacts

The following table provides an assessment of potential direct impacts on heritage items within the station catchment.

ltem	Exhibited project impact	Potential direct impact assessment	Preferred project impact
Punchbowl Railway Station Group	Minor	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
War Memorial and street trees	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible
Post-war Civic Building (former Punchbowl Baby Health Centre)	Negligible	Vibration levels would not generate higher structural damage than typical Sydney Trains rail track maintenance works. Further assessment and management would be undertaken in accordance with management measures outlined in Table 34.	Negligible

Table 30: Potential direct impact assessment

1.5.10 Bankstown Station

There are no changes proposed at Bankstown Station compared to the exhibited project. Therefore, the heritage impact assessment provided in the assessment of the exhibited project remains relevant.



1.6 Corridor works and compound sites

Impacts as a result of the preferred project in relation to corridor works would be reduced from the assessment of the exhibited project. The preferred project would include minimal track and corridor works. It is assumed the location of compound sites would remain the same as outlined in the assessment of the exhibited project.

1.7 Other infrastructure elements

The potential heritage impacts from the installation of throw screens and vehicle protection measures on heritage listed bridges (Illawarra Road Overbridge, Hurlstone Park Railway Underbridge, Canterbury (Cooks River) Underbridge, Canterbury (Cooks River/Charles St) Underbridge – Main Line) are minor. This is a reduction in impacts from the assessment of the exhibited project, which assessed impacts as negligible to major. A summary of these impacts is provided in Table 31.

ltem	Exhibited project direct impact	Exhibited project visual impact	Preferred project direct impact	Preferred project visual impact
Illawarra Road Overbridge (Part of Marrickville Railway Station Group)	Major	Moderate	Minor	Minor
Hurlstone Park Railway Underbridge	Negligible	Negligible	Negligible	Negligible
Canterbury (Cooks River) Underbridge	Moderate	Minor	Neutral	Negligible
Canterbury (Cooks River/Charles St) Underbridge – Main Line	Moderate	Minor	Minor	Minor

Table 31: Summary of impacts for other infrastructure elements

1.8 Revised cumulative impacts

1.8.1 The Bankstown Line

1.8.1.1 Overview of Impacts

A summary table of direct, visual, potential direct is provided below for each railway heritage item located on the Bankstown Line within the preferred project area. An assessment is provided of whether the overall significance level of the heritage item is retained following the impacts (would it still meet the threshold for local or State significance). All items are listed on the RailCorp S.170 Heritage and Conservation Register. There are no RailCorp S.170 items listed within the buffer zone of the preferred project area.



ltem	Significance level	Direct	Visual	Potential direct	Significance level retained?
Marrickville Railway Station Group	State	Moderate	Moderate	Negligible	Yes
Dulwich Hill Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Hurlstone Park Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Hurlstone Park Railway Underbridge	Local	Negligible	Negligible	Negligible	Yes
Canterbury Railway Station Group	State	Moderate	Moderate	Negligible	Yes
Canterbury (Cooks River) underbridge	Local	Neutral	Negligible	Negligible	Yes
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Local	Minor	Minor	Negligible	Yes
Campsie Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Belmore Railway Station Group	State	Moderate	Moderate	Negligible	Yes
Lakemba Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Wiley Park Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Punchbowl Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Bankstown Railway Station Group	Local	Moderate	Moderate	Negligible	Yes

Table 32: Summary of Heritage Impacts for the Bankstown Line

ltem	Significance level	Direct	Visual	Potential direct	Significance level retained?
Bankstown Parcels Office (former)	Local	Neutral	Neutral	Negligible	Yes

1.8.1.2 Statement of Heritage Impact for the Bankstown Line

Impact summary

The Bankstown Line was constructed in three stages between 1880 and 1939. The Sydenham to Belmore section was first constructed between 1880 and 1895. The second phase of development of the line was between 1896 and 1909, where the rail corridor cut through undeveloped country estate and farm land to Bankstown. The early twentieth century saw the addition of platform buildings, overhead booking offices, footbridges and overbridges at existing railway stations. The line was electrified in 1926, marking a significant change in the railway network system. The third phase of development of the line occurred between 1928 and 1939 when it reached Regents Park via Yagoona and Birrong. Wiley Park opened in 1938 as an infill station on the Sydenham to Bankstown section and Dulwich Hill Station was redeveloped in 1935, both stations representing examples of Inter-War railway architecture. The development of the line can be recognised across the line as a whole, with phases of building, platform and station types. It can also be appreciated within a single station, such as at Dulwich Hill which has retained layers of development.

Each railway station within the preferred project area is listed as a heritage item at a State or local level as well as being listed under the RailCorp Section 170 Heritage & Conservation Register. Marrickville, Canterbury, and Belmore railway stations are listed on the State Heritage Register. Other heritage items listed under the RailCorp s170 register within the preferred project area include underbridges at Hurlstone Park and Canterbury and the parcels office at Bankstown. All railway stations include several elements of significance including wayside or island platforms, platform buildings, overhead booking offices, footbridges and overbridges. A few stations include a parcels office, evidencing the role of rail in transportation. A signal box is located at Canterbury station.

Among the ten heritage railway stations located on the Marrickville to Bankstown section of the Bankstown Line, the preferred project would not result in major direct or visual impacts to any stations.

There would be moderate direct and visual impacts to ten stations, three of which are listed on the SHR: Marrickville, Canterbury and Belmore. All SHR stations would continue to meet the threshold for State significance under more than one significance assessment criteria. All locally listed stations would continue to meet the threshold for local significance.

Direct and visual impacts to three railway underbridges would be neutral to minor.

As there would be impacts to significant elements at all listed stations along the line, conservation management plans (CMPs) for SHR listed stations and Conservation Management Strategies (CMS) for s170 items of local significance would be prepared by the Metro Operator. These documents would address any changes to the item including an updated assessment of significance of elements. The CMP would also provide suggested site-specific exemptions or management policies.

Re-purposing of station buildings

Existing station buildings at every station would be re-purposed for new uses to facilitate the construction and operation of the Metro line. In general, this would involve change of use for the



room, refurbishment to service the new function and maintenance where required for the new use, for example when the room has not been used for an extended period. All station buildings would maintain their general function supporting the operation of the railway stations and enabling the continued use of the Bankstown Line as a modern transport route.

Re-purposing is required to avoid the need to construct new buildings within the heritage curtilages of the items.

In some cases original fabric would be removed, in general when safety standards require it, such as wooden floors in a plant room with electrics. Rooms which are publicly accessible such as waiting rooms would in some cases be no longer available to customers, as their new use would require them to be closed. Where publicly accessible rooms, such as toilets do not meet DDA standards, they would be upgraded to FAT amenities.

Re-purposing would be undertaken in accordance with the recommended mitigation measures with removal of original fabric minimised and maintenance of retained fabric where possible.

Although some impacts to original fabric would be required, it is expected that all station buildings would retain their assessed significance as elements of the listed stations.

Conclusion

Where new additions are proposed, these would generally be distinguishable from the heritage character of the historic stations. The preferred project would enable the line to function in its original use within a modern railway infrastructure context.

1.8.2 The Study Area

1.8.2.1 Overview of impacts

A summary table of direct, visual, potential direct is provided below for each heritage item located within the study area. An assessment is provided of whether the overall significance level of the heritage item is retained following the impacts. Items where there are more than a minor impact are bolded to identify areas of impact that cannot be fully mitigated.

Station	ltem	Significance	Direct	Visual	Potential direct	Significance level retained?
	Marrickville Railway Station Group	State	Moderate	Moderate	Negligible	Yes
Marrickville	Sewage Pumping Station 271	State	Neutral	Neutral	Negligible	Yes
	Stone house, including interiors	Local	Neutral	Neutral	Negligible	Yes

Table 33: Summary of Built Heritage Impacts for the Study Area



Station	ltem	Significance	Direct	Visual	Potential direct	Significance level retained?
	Stonewalling, terracing and street planting	Local	Neutral	Neutral	Negligible	Yes
	Dulwich Hill Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
liiH Hi	South Dulwich Hill Heritage Conservation Area	Local	Negligible	Negligible	Negligible	Yes
Dulwich Hill	Inter-War Heritage Conservation Area Group	Local	Neutral	Neutral	Negligible	Yes
	Gladstone Hall, including interiors	Local	Neutral	Neutral	Negligible	Yes
le Park	Hurlstone Park Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Hurlstone Park	Hurlstone Park Railway Underbridge	Local	Negligible	Negligible	Negligible	Yes
	Canterbury Railway Station Group	State	Moderate	Moderate	Negligible	Yes
Canterbury	Canterbury (Cooks River) underbridge	Local	Neutral	Negligible	Negligible	Yes
Cant	Canterbury (Cooks River/Charles St) Underbridge - Main Line	Local	Minor	Minor	Negligible	Yes



Station	ltem	Significance	Direct	Visual	Potential direct	Significance level retained?
	Old Sugarmill	State	Neutral	Negligible	Negligible	Yes
	Inter-War Hotel (former Hotel Canterbury)	Local	Neutral	Neutral	Negligible	Yes
	Federation Post Office Building (former Canterbury Post Office)	Local	Neutral	Neutral	Negligible	Yes
	Electricity substation no. 275	Local	Neutral	Negligible	Negligible	Yes
	Campsie Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
	Federation commercial building– Coffill's Buildings	Local	Neutral	Negligible	Negligible	Yes
Campsie	Inter-War Commercial Building– Station House	Local	Neutral	Neutral	Negligible	Yes
Cam	Inter-War Court House (former) Campsie Court House	Local	Neutral	Neutral	Negligible	Yes
	War Memorial Clock Tower	Local	Neutral	Neutral	Negligible	Yes
	Federation house	Local	Neutral	Negligible	Negligible	Yes
	Federation villa	Local	Neutral	Negligible	Negligible	Yes

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Station	ltem	Significance	Direct	Visual	Potential direct	Significance level retained?
	Belmore Railway Station Group	State	Moderate	Moderate	Negligible	Yes
Belmore	Post-war bus shelter and public lavatories	Local	Neutral	Minor	Negligible	Yes
	Federation House (former station master's cottage)	Local	Neutral	Negligible	Negligible	Yes
	Lakemba Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
pa	Federation weatherboard house	Local	Neutral	Neutral	Negligible	Yes
Lakemba	Inter-War post office building - Lakemba Post Office	Local	Neutral	Negligible	Negligible	Yes
	Electricity Substation no. 143	Local	Neutral	Neutral	Negligible	Yes
	Wiley Park Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Wiley Park	Inter-War water pumping station– Lakemba Pumping Station (WP0003)	Local	Neutral	Negligible	Negligible	Yes

Station	Item	Significance	Direct	Visual	Potential direct	Significance level retained?
	Punchbowl Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Punchbowl	War Memorial and street trees	Local	Neutral	Negligible	Negligible	Yes
Pun	Post-war Civic Building (former Punchbowl Baby Health Centre)	Local	Neutral	Negligible	Negligible	Yes
	Bankstown Railway Station Group	Local	Moderate	Moderate	Negligible	Yes
Bankstown	Bankstown Parcels Office (former)	Local	Neutral	Neutral	Negligible	Yes
	Shop	Local	Neutral	Negligible	Negligible	Yes

1.8.2.2 Statement of Heritage Impact for the study area

Impact summary

Five SHR items, thirty-two items of local significance and two heritage conservation areas are located within the study area. The preferred project area includes three SHR items, thirteen local heritage items and one heritage conservation area. The buffer zone includes two SHR items, nineteen local heritage items and one heritage conservation area.

Assessment of heritage items within the preferred project area considered direct, visual, and potential direct (vibration) impacts. Assessment for heritage items in the buffer zone considered visual, and potential direct (vibration) impacts. All construction sites are included in the preferred project area.

Among the five SHR items in the study area, it was assessed that the preferred project would result in moderate direct impacts to three items (Marrickville Railway Station Group, Canterbury Railway Station Group and Belmore Railway Station Group), and neutral direct impacts to two items (Sewage Pumping Station 271 and Old Sugarmill). The preferred project would result in moderate visual impacts to three SHR items (Marrickville Railway Station Group, Canterbury Railway Station Group and Belmore Railway Station Group), and neutral-negligible visual impacts to two items (Sewage Pumping Station 271 and Old Sugarmill). All SHR items would continue to meet the threshold for State significance.



Among the thirty-two local items and two heritage conservation areas in the study area, eight would have moderate direct impacts and visual impacts. One LEP item would have minor direct and visual impacts. Among the heritage items and conservation areas located within the buffer zone, impacts would range from neutral to negligible. No LEP items would have major direct or visual impacts. All LEP items would continue to meet the threshold for local significance.

Residual impacts

Heritage impacts caused by the preferred project would be mitigated by implementing management measures such as photographic archival recording, salvage schemes, interpretation and moveable heritage items strategies, archaeological management, Construction Environmental Management Plan (CEMP) and site remediation, as well as sensitive design and re-purposing or refurbishment of significant elements where possible. However, impacts assessed as moderate would not be fully mitigated and there would be some residual impacts.

Residual impacts would include items or fabric proposed for removal where the function and condition of the item would not easily enable re-use or interpretation in any meaningful way. More generally, the historic character of the line, a late nineteenth-century to early twentieth century railway line with layers of inter-war development, would be altered by the contemporary Metro infrastructure.

1.9 Revised Environmental Management Measures

Revised mitigation and management measures are provided below and relevant heritage items concerned summarised for easy reference. These would be implemented to address heritage impacts on non-Aboriginal heritage sites within the study area.

ID	Impact	Mitigation measures	Relevant location(s)						
Design/p	Design/pre-construction								
NAH1	Minimising impacts during design	The project design would minimise adverse impacts to heritage buildings, elements, fabric, spaces and vistas that contribute to the overall heritage significance of the Bankstown Line.	 All heritage items 						
NAH2		The project design would maximise the retention and legibility of heritage buildings, structures, fabric, spaces and vistas that are individually significant and contribute to the overall heritage significance of the Bankstown Line.	All heritage items						
NAH3		The project design would complement retained heritage buildings, elements, fabric, spaces and vistas to avoid outcomes that compromise the significance of these heritage items.	 All heritage items 						
NAH4		The project design would be developed with guidance from an appropriately qualified and experienced conservation architect.	 All heritage items 						
NAH5	Reuse of retained items	Where heritage significant items or elements are to be retained within the operational area, an adaptive reuse strategy would be prepared	 All heritage items 						

Table 34: Mitigation and management measures



ID	Impact	Mitigation measures	Relevant location(s)
		by an appropriately qualified and experienced heritage architect.	
NAH6	Interpretation	A Heritage Interpretation Plan would be prepared to document the development of the Bankstown Line and detail the history of each station and its contribution to both the Bankstown Line and the surrounding suburbs. Appropriate heritage interpretation would be incorporated in the design and would provide legible connection between stations.	 Each railway station in the preferred project area Bankstown Parcels Office (former)
NAH7	Management of moveable heritage and heritage fabric	A moveable heritage item strategy would be prepared by an appropriately qualified and experienced heritage specialist in consultation with Sydney Trains, and would include a comprehensive record of significant railway elements to be impacted. This would include items contained within station and platform buildings, as well as of any other significant equipment within the curtilage of the heritage railway stations. The moveable heritage item strategy would form part of the broader interpretation strategy.	• Each railway station in the preferred project area apart from Bankstown Station and Bankstown Parcels Office (former)
NAH8	Station Building repurposing and refreshing	 Where significant station buildings are to be repurposed or refreshed: the inherent character of the building should be retained with new additions, including form, palette and materiality, sympathetic to its heritage values a suitably qualified and experienced heritage architect should advise on appropriate materials and finishes which would be sympathetic to the heritage values of each individual station. the internal layout of the building should be retained where possible and rooms should not be subdivided unless it can be completed without adverse impact and/or is reversible without any long term adverse impact. a significant element register should be prepared by a suitably qualified and experienced heritage architect. The register should list significant fabric, assess its condition, tolerance for change and recommend retention or salvage. Where fabric of high significance is to be removed, adequate assessment should be carried out that outlines 	• Each railway station in the preferred project area

ID	Impact	Mitigation measures	Relevant location(s)
		with the Otelewants of Heritage James	
		with the <i>Statements of Heritage Impact</i> guidelines (NSW Heritage Council 2002).	
NAH9	Design of new access stairs, concourses, canopies and lift shafts	The design and materials used for the construction of new access stairs, concourses, canopies and lift shafts should be as sympathetic as possible to the existing character of the stations with the aim of minimising visual impacts. The design should use unobtrusive, modern, lightweight materials such as glass panelling	 Each railway station in the preferred project area
		and slim frame elements. The Design Review Panel should be consulted in regard to the design, form and material of these additions.	
NAH10	Design of platform re- levelling	Where platforms are re-levelled, door thresholds and steps should be accessible without raising or relocation of entries. Sub-floor ventilation should remain open to avoid long term impacts to the structures.	 Each railway station in the preferred project area
NAH11	Impacts to the Old Sugarmill	A landscape scheme would be prepared for the Old Sugarmill to re-instate planting within and close to the curtilage of the item. The scheme would consider appropriate period plants and trees. Any boundary wall treatment would be designed in consultation with a heritage architect.	Old Sugarmill
NAH12	Impacts to archaeology	The archaeological research design, including any mitigation measures identified in the Archaeological Assessment and Research Design report, would be implemented.	Bankstown Line
NAH13	Archival recording	Photographic Archival Recording would be carried out in accordance with the NSW Heritage Office's How to Prepare Archival Records of Heritage Items (1998), and Photographic Recording of Heritage Items Using Film or Digital Capture (2006).	 Each railway station in the preferred project area Bankstown Parcels Office (former)
NAH14	Unexpected finds	An unexpected finds procedure would be developed and included in the construction heritage management plan.	 Bankstown Line
Construct	tion	<u></u>	<u> </u>
NAH15	Minimising impacts during construction	Methodologies for the removal of existing structures and construction of new structures would be developed and implemented during construction to minimise direct and indirect impacts to other elements within the curtilages of the heritage items, or to heritage items located in the vicinity of works.	 All heritage items



ID	Impact	Mitigation measures	Relevant location(s)
NAH16		All retained heritage buildings, structures, fabric and moveable heritage items would be protected to avoid damage during works in the vicinity of these items, including from vibration. Retained significant buildings or elements susceptible to damage would be protected by hoardings or screens.	 All heritage items
NAH17		Prior to construction commencing, a detailed inventory of all buildings, structures, fabric, spaces and vistas of heritage significance that are to be retained or removed would be prepared by appropriately qualified and experienced heritage specialists. The inventory must provide an assessment of the heritage impact based on the significance of each element and sub-element that comprises it and include recommendations for protection and conservation relative to the identified level of heritage significance.	All heritage items
NAH18	Unexpected finds	In the event that unexpected archaeological remains, relics, or potential heritage items are discovered during construction, all works in the immediate area would cease, and the unexpected finds procedure would be implemented.	Bankstown line
NAH19	Human skeleton material	In the event that a potential burial site or potential human skeletal material is exposed during construction, the Sydney Metro Exhumation Management Plan would be implemented.	 Bankstown line
NAH20	Works to heritage fabric	All works to conserve, protect or remove significant heritage fabric would be undertaken by skilled tradespeople with experience working on heritage sites, in consultation with an appropriately qualified conservation heritage architect.	 Each railway station in the preferred project area Bankstown Parcels Office (former)
Operation	·	1	
NA21	Conservation management	A conservation management plan would be prepared for all State Heritage Register listed stations, in accordance with NSW Heritage Council guidelines. The plan would address any changes to the item, including updated assessment of significance of elements and recommendations on curtilage changes. It would also provide suggested site specific exemptions and management policies.	 Marrickville Railway Station Group Canterbury Railway Station Group Belmore Railway Station Group

ID	Impact	Mitigation measures	Relevant location(s)
NA22		A conservation management strategy would be prepared for nominated Section 170 register listed stations not listed on the State Heritage Register, in accordance with NSW Heritage Council guidelines.	 Dulwich Hill Railway Station Group Hurlstone Park Railway Station Group Campsie Railway Station Group Lakemba Railway Station Group Wiley Park Railway Station Group Punchbowl Railway Station Group Bankstown Railway Station Group

SYDENHAM TO BANKSTOWN SUBMISSIONS AND PREFERRED INFRASTRUCTURE REPORT

> Appendix F - Non-Aboriginal heritage assessment