sydney METRO | city & southwest

SYDENHAM TO BANKSTOWN

ENVIRONMENTAL IMPACT STATEMENT

> Technical Paper 3 - Non-Aboriginal heritage impact assessment

NSW GOVERNMENT

Sydney Metro City & Southwest - Sydenham to Bankstown

Technical Paper 3

Non-Aboriginal Heritage Impact Assessment

Report to Transport for NSW

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EXECUTIVE SUMMARY

Overview

Project Background

The New South Wales (NSW) Government is implementing *Sydney's Rail Future* (Transport for NSW, 2012a), a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of rail customers into the future.

Sydney Metro is a new standalone rail network identified in Sydney's Rail Future, providing 66 kilometres of metro rail line and 31 metro stations. The NSW Government is currently delivering the first two stages of Sydney Metro, shown in Figure 1, which consist of Sydney Metro Northwest (between Rouse Hill and Chatswood) and Sydney Metro City & Southwest (between Chatswood and Bankstown).

Sydney Metro Northwest is currently under construction. Sydney Metro Northwest services will start in the first half of 2019, with a metro train running every four minutes in the peak period. Services will operate between a new station at Cudgegong Road (beyond Rouse Hill) and Chatswood Station. Sydney Metro City & Southwest will extend the Sydney Metro system beyond Chatswood to Bankstown, delivering about 30 kilometres of additional metro rail, a new crossing beneath Sydney Harbour, new railway stations in the lower North Shore and Sydney central business district (CBD), and the upgrade of existing stations from Marrickville to Bankstown. City & Southwest trains would run between Sydenham and Bankstown stations in each direction, at least every four minutes in peak periods, averaging around 15 trains per hour.

Sydney Metro City & Southwest comprises two core components (shown in Figure 1):

- the Chatswood to Sydenham project
- the Sydenham to Bankstown upgrade ('the project' and the subject of this document).

The project for which approval is sought

Transport for NSW is seeking approval to construct and operate 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.

A key element of the project is upgrading stations along the corridor from Marrickville to Bankstown, to allow better access for more people by providing new concourses, level platforms, and lifts at stations. These upgrades aim to provide a better, more convenient, and safer experience for public transport customers, by delivering:

- stations that are accessible to people with a disability or limited mobility, the elderly, people with prams, and people travelling with luggage
- upgraded station buildings and facilities for all transport modes that meet the needs of a growing population

- interchanges that support an integrated transport network and allow seamless transfers between different modes for all customers.

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

The project

Location

The location of the project is shown in Figure 2.

The key elements of the project are located mainly within the existing rail corridor, from about 800 metres west of Sydenham Station in Marrickville, to about one kilometre west of Bankstown Station in Bankstown. The project is located in the Inner West and Canterbury-Bankstown local government areas.

The term 'project area' is used throughout this document to refer to the area where the physical works for the project would be undertaken. This area encompasses the existing rail corridor (as described above), the 10 existing stations within the corridor, and areas surrounding the rail corridor as shown in Figure 1.

Key features

The key features of the project are summarised below and are shown in Figure 2.

Works to upgrade access at stations

The project includes upgrading the 10 stations from Marrickville to Bankstown as required, to meet legislative requirements for accessible public transport, including the requirements of the *Disability Discrimination Act 1992* and the *Disability Standard for Accessible Public Transport 2002*. The proposed works include:

- works to platforms to address accessibility issues, including levelling and straightening platforms
- for some stations a new station concourse and station entrance locations, including:
  - new stairs and ramps
  - new or relocated lifts
- provision of additional station facilities as required, including signage and canopies.

Works would also be undertaken in the areas around the stations to better integrate with other modes of transport, improve travel paths, and meet statutory accessibility requirements. This would include provision of pedestrian, cyclist, and other transport interchange facilities; as well as works to the public domain, including landscaping.

Works to convert stations and the rail line to Sydney Metro standards

Station works

In addition to the station upgrades to improve accessibility, works to meet the standards required for metro services would be carried out, including:

- installation of platform screen doors
- provision of operational facilities, such as station services buildings.

Track and rail system facility works

Upgrading the track and rail systems to enable operation of metro services would include:

- track works where required along the 13 kilometre long section of the rail corridor, including upgrading tracks and adjusting alignments, between west of Sydenham Station and west of Bankstown Station
- new turn back facilities and track crossovers
- installing Sydney Metro rail systems and adjusting existing Sydney Trains rail systems
- overhead wiring adjustments.

Other works

Other works proposed to support Sydney Metro operations include:

- upgrading existing bridges and underpasses across the rail corridor
- installation of security measures, including fencing
- installation of noise barriers where required
- modifications to corridor access gates and tracks
- augmenting the existing power supply, including new traction substations and provision of new feeder cables
- utility and rail system protection and relocation works
- drainage works to reduce flooding and manage stormwater.

Active transport corridor and surrounding development

The project would also provide for:

- parts of an active transport corridor where located within the station areas or surplus rail corridor land, to facilitate walking and cycling connections to each station and between Marrickville and Bankstown
- enabling works to support possible future development at Campsie Station (future development would be subject to a separate approvals process).

Temporary works during construction

During construction, the project would involve:

- provision of temporary facilities to support construction, including construction compounds and work sites
- implementation of alternative transport arrangements for light rail customers during possession periods and/or station closures, guided by the proposed Temporary Transport Strategy.

Timing

Construction

Construction of the project would commence once all necessary approvals are obtained (anticipated to be in 2018), and would take about five years to complete.

The T3 Bankstown Line would remain operational for the majority of the construction period. However, to ensure the station and infrastructure upgrade works are completed as efficiently and safely as possible, and to accommodate works that cannot be undertaken when trains are operating, it would be necessary to undertake some work during rail possession periods, when trains are not operating. It is anticipated that these rail possession periods would comprise the routine weekend maintenance possessions, together with some longer possession periods during periods of reduced patronage such as school holidays.

A final, longer possession of about three to six months would also be required. This would involve full closure of the line to enable conversion to metro operations. This would include works such as the installation of new signalling, communication systems, and platform screen doors.

During each possession period, alternative transport arrangements would be implemented to ensure that customers can continue to reach their destinations.

Operation

Sydney Metro City & Southwest would be fully operational by 2024, with the opportunity of operation commencing in two phases. Initially, Sydney Metro Northwest services would be extended by the City & Southwest project, and would operate from Chatswood Station to Sydenham Station. Some months later, metro operations would extend from Sydenham Station to Bankstown Station, with both phases planned to be completed before the end of 2024. The opportunity for phased opening of the project would enable metro trains to operate from Cudgegong Road Station to Sydenham Station prior to the final conversion of the T3 Bankstown Line to metro operations.

Once the project is operational, Sydney Trains services would no longer operate along the T3 Bankstown Line between Sydenham and Bankstown stations. Customers would be able to interchange with Sydney Trains services at Sydenham and Bankstown stations. Sydney Trains services to and from Bankstown to Liverpool and Lidcombe stations would not be affected.

Purpose and scope of this report

This report has been prepared to support the Environmental Impact Statement for the project. The Environmental Impact Statement has been prepared to accompany the application for approval of the project, and addresses the environmental assessment requirements of the Secretary of the Department of Planning and Environment ('the Secretary's environmental assessment requirements').

This report:

- Identifies items and areas of heritage significance that would be materially affected by the project during construction and operation, by field survey and research, including any buildings, works, relics, views, or places of heritage significance
- Considers of the potential impacts on the values, settings and integrity of heritage areas and items and archaeological resources located near the project, including items both above and below ground and, where such potential exists, the likely significance of those impacts

- Outlines the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) in accordance with relevant best practice guidelines.

The assessment is based on a desktop review of information available for the existing environment and a site visit. Information available for the project at the time of this report included preliminary drawings, reports, flood modelling data, and construction information.

Overview Statement of Heritage Impact

Impact summary

Five State Heritage Register (SHR) items, thirty-two items of local significance and two heritage conservation areas are located within the study area. The 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 project area considered direct, visual, and potential direct (vibration) impacts. An archaeological assessment and assessment of impact was provided for the entire project area. Assessment for heritage items in the buffer zone considered visual, and potential direct (vibration) impacts. All construction sites are included in the project area.

Among the five SHR items in the study area, it was assessed that the project would result in a major direct impact to one item (Marrickville Railway Station Group), moderate direct impacts to two items (Canterbury Railway Station Group and Belmore Railway Station Group), and neutral direct impacts to two items (Sewage Pumping Station 271 and Old Sugarmill). The 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 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, four would have major direct impacts and four major visual impacts. Among the four items of local significance to have major impacts, two would no longer meet the threshold for local significance and would likely be delisted. Among the heritage items and conservation areas located within the buffer zone, impacts would range from neutral to minor with a majority of impacts being neutral or negligible, and temporary as a result of operation of construction sites.

Residual impacts

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

Residual impacts would include items 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.

Bankstown Line heritage impacts

Impact summary

The Bankstown Line was constructed in three stages between 1880 and 1939. The Marrickville 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 Marrickville to Bankstown section and Dulwich Hill Station was redeveloped in 1935, both stations showing 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 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 project area include underbridges at Hurlstone Park and Canterbury and the parcels office at Bankstown. Most railway stations comprise 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 project would result in major direct impact to five stations, one of which is listed on the SHR: Marrickville. There would be moderate direct impacts to five stations, two of which are listed on the SHR: Canterbury and Belmore. Four stations would be subject to major visual impacts. Five stations would be subject to a moderate visual impact, three of which are listed on the SHR: Marrickville, Canterbury and Belmore. Two locally-listed stations, Wiley Park and Punchbowl, would no longer meet the threshold for local significance and would likely be delisted. All SHR stations would continue to meet the threshold for State significance.

Overall, all ten stations would be subject to moderate to major direct and visual impacts. Direct and visual impacts to three railway underbridges would be negligible to moderate. There would be major direct impacts to the Illawarra Road overbridge at Marrickville, which is within the station's SHR curtilage. 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 updated assessment of significance of elements and recommendations on curtilage changes, for example a possible reduction in curtilage at Marrickville Station as a result of impacts to the Illawarra Road overbridge. The CMP would also provide suggested site specific exemptions or management policies.

Station types

The ten railway stations within the project area could be divided into three main station types: the first layer of development of the Bankstown Line: Marrickville, Dulwich Hill (although fully redeveloped), Hurlstone Park, Campsie, Canterbury and Belmore; the second layer of development of the line: Lakemba, Punchbowl and Bankstown; and the inter-war development phase with the infill station at Wiley Park and the fully redeveloped Dulwich Hill station.

Stations constituting the first layer of development of the line would generally be retained, Dulwich Hill being excluded from this group as it was fully redeveloped in 1935. All platform buildings and general station configurations would be conserved at Marrickville, Hurlstone Park, Campsie, Canterbury and Belmore except for the Platform 1 building at Hurlstone Park which are required to be removed.

Stations constituting the second layer of development of the line would mostly be conserved in their existing states. Lakemba and Bankstown's island platform configurations and platform buildings would be retained. Punchbowl Station would be subject to greater impacts as it would be fully redeveloped.

The inter-war layer of the Bankstown Line would be impacted with Wiley Park Station being fully redeveloped, constituting the loss of the only example of Inter-War Railway Domestic station on the line. The inter-war phase of redevelopment of Dulwich Hill station would also be altered with the loss of the overhead booking office and major visual impacts on the station building, although the latter, and the island platform configuration would be conserved.

The most significant stations on the line at Marrickville, Canterbury and Belmore dated from the first phase of development would retain their significant near-identical brick buildings of exceptional significance. The intermediate stations of the first phase of development have more modest brick buildings dated 1915 including Campsie and Hurlstone Park station. Campsie would retain its original configuration and buildings whilst Hurlstone Park would be subject to greater impacts with the more prominent of two platform buildings being removed. The configuration of two stations at Punchbowl and Wiley Park would be fully modified from island platforms to wayside platforms. The configuration at Bankstown Station would be retained and the station extended to the east.

Station elements

The Bankstown Line would conserve examples of each significant platform building type found on the Marrickville to Bankstown portion of the line. Examples of 1895 Type 11 buildings of exceptional significance would be conserved at Marrickville, Canterbury and Belmore stations. Several examples of 1911-1919 Type 11 buildings would be conserved at Marrickville, Hurlstone Park, Canterbury, Campsie, Lakemba and Bankstown to evidence the second historical layer of the line. Evidence of the transitional style of Inter-War railway architecture would be retained at Dulwich Hill, although the Inter-War domestic style buildings at Wiley Park would be lost.

A good example of an overhead booking office would be conserved at Belmore, whilst good to fair examples included in a Transport for NSW study of overhead booking offices would be removed at Dulwich Hill, Wiley Park and Punchbowl stations[1]. The platform booking office at Marrickville which is of exceptional significance would be retained. A significant portion of original footbridges already impacted would be removed to meet the requirements of the new Metro concourses. A footbridge assessed to be of high significance within the NSW railway collection in a Sydney Trains' footbridge conservation strategy would be removed at Dulwich Hill, as would three footbridges of moderate significance at Hurlstone Park, Canterbury and Wiley Park.[2]

Original platforms along the line would be removed to meet accessibility and operational requirements for straight platforms, except for the platforms at Bankstown Station which would be mostly retained. This would result in a substantial loss of curved wayside and island platforms, and of brick vertical and battered platform walls along the Bankstown Line. General platform configuration would be

[1] Australian Museum Consulting 2014. Railway Overhead Booking Offices Heritage Conservation Strategy. Prepared for Transport for NSW.
[2] NSW Government Architect's Office Heritage Group 2016. Railway Footbridges Heritage Conservation Strategy. Prepared for Sydney Trains.

retained apart from at Punchbowl and Wiley Park where original island platform configuration would be changed to two wayside platforms.

Overbridges on the line have generally been impacted over time. The majority of the overbridges would be conserved for upgrade and continued use, with the exception of the Illawarra Road overbridge which would be removed and replaced.

Archaeological impacts

Overall the study area has a nil-low potential to contain significant archaeological remains. There was limited development across the study area prior to development of the rail line. Construction of the railway stations and rail line in the late nineteenth and early twentieth century would have required a considerable amount of ground disturbance and excavation.

There are four locations that have the potential to contain significant archaeological remains, the Marrickville Station Catchment, the Canterbury Station Catchment and construction site, the Lakemba Station Catchment and Belmore Station Catchment. Other locations across the line may contain archaeological 'works' such as remains of culverts, former platforms (within existing remodelled platforms), and infrastructure such as drains.

Marrickville Station Catchment
There is a moderate-high potential for potentially local significant archaeological remains associated with the railway station to be impacted by the proposed works.

Canterbury Station Catchment and construction site
Although the location of the Old Sugarmill and former associated structures is to the east of the station, there is a moderate – high potential that remains associated with this period of occupation may also extend into the station catchment and construction site to the south of the rail line, adjacent to the Old Sugarmill SHR item. These remains would have local or State significance depending on their nature and intactness.

The former Canterbury Township is located to the east of Canterbury Station. Any subsurface works within the rail corridor and construction site have a moderate – high potential to impact any associated intact archaeological remains. These remains would have local significance.

Lakemba Station Catchment
There is a low potential for locally significant archaeology associated with the early settlement of Lakemba including structures associated with the Taylor House (Lakemba) such as outbuildings and stables and archaeological features associated with farming activities, domestic and agricultural structures, refuse pits and drains or culverts. Works within the station catchment have the potential to impact any associated intact archaeological remains.

Belmore Station Catchment
There is a low-moderate potential for locally significant archaeological remains associated with the railway station goods shed and goods platform to be impacted by the proposed works.

Construction compounds impact

The construction compounds impact assessment considered impacts of temporary construction compounds on the heritage items located within the project area. Overall, impacts of construction sites would be minor and temporary. Provided that mitigation measures are implemented to remediate the sites following the completion of the project, overall impacts from the construction of the project on the current Bankstown Line would be negligible.

Conclusion

The contrasting contemporary design of the Metro stations would generally be distinguishable from the heritage character of the historic stations and provide enhanced views of significant platform buildings. The new Metro line would be read as the latest phase of development of the Bankstown Line and would enable the line to function in its original use within a modern railway infrastructure context. The continued use of the stations in their historic function, the retention of a majority of platform buildings for re-use and enhanced views of significant buildings would constitute positive heritage impacts in the context of the project and its requirements.

Mitigation and Management Measures

Specific mitigation and management measures were provided for each station catchment. These would be implemented to address heritage impacts on non-Aboriginal heritage sites and areas of archaeological potential within the study area.

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1. INTRODUCTION

1.1 Overview

1.1.1 Project background

The New South Wales (NSW) Government is implementing *Sydney's Rail Future* (Transport for NSW, 2012a), a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of rail customers into the future.

Sydney Metro is a new standalone rail network identified in Sydney's Rail Future, providing 66 kilometres of metro rail line and 31 metro stations. The NSW Government is currently delivering the first two stages of Sydney Metro, shown in Figure 1, which consist of Sydney Metro Northwest (between Rouse Hill and Chatswood) and Sydney Metro City & Southwest (between Chatswood and Bankstown).

Sydney Metro Northwest is currently under construction. Sydney Metro Northwest services will start in the first half of 2019, with a metro train running every four minutes in the peak period. Services will operate between a new station at Cudgegong Road (beyond Rouse Hill) and Chatswood Station. Sydney Metro City & Southwest will extend the Sydney Metro system beyond Chatswood to Bankstown, delivering about 30 kilometres of additional metro rail, a new crossing beneath Sydney Harbour, new railway stations in the lower North Shore and Sydney central business district (CBD), and the upgrade of existing stations from Marrickville to Bankstown. City & Southwest trains would run between Sydenham and Bankstown stations in each direction, at least every four minutes in peak periods, averaging around 15 trains per hour.

Sydney Metro City & Southwest comprises two core components (shown in Figure 1):

- the Chatswood to Sydenham project
- the Sydenham to Bankstown upgrade ('the project' and the subject of this document).

1.1.2 The project for which approval is sought

Transport for NSW is seeking approval to construct and operate 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.

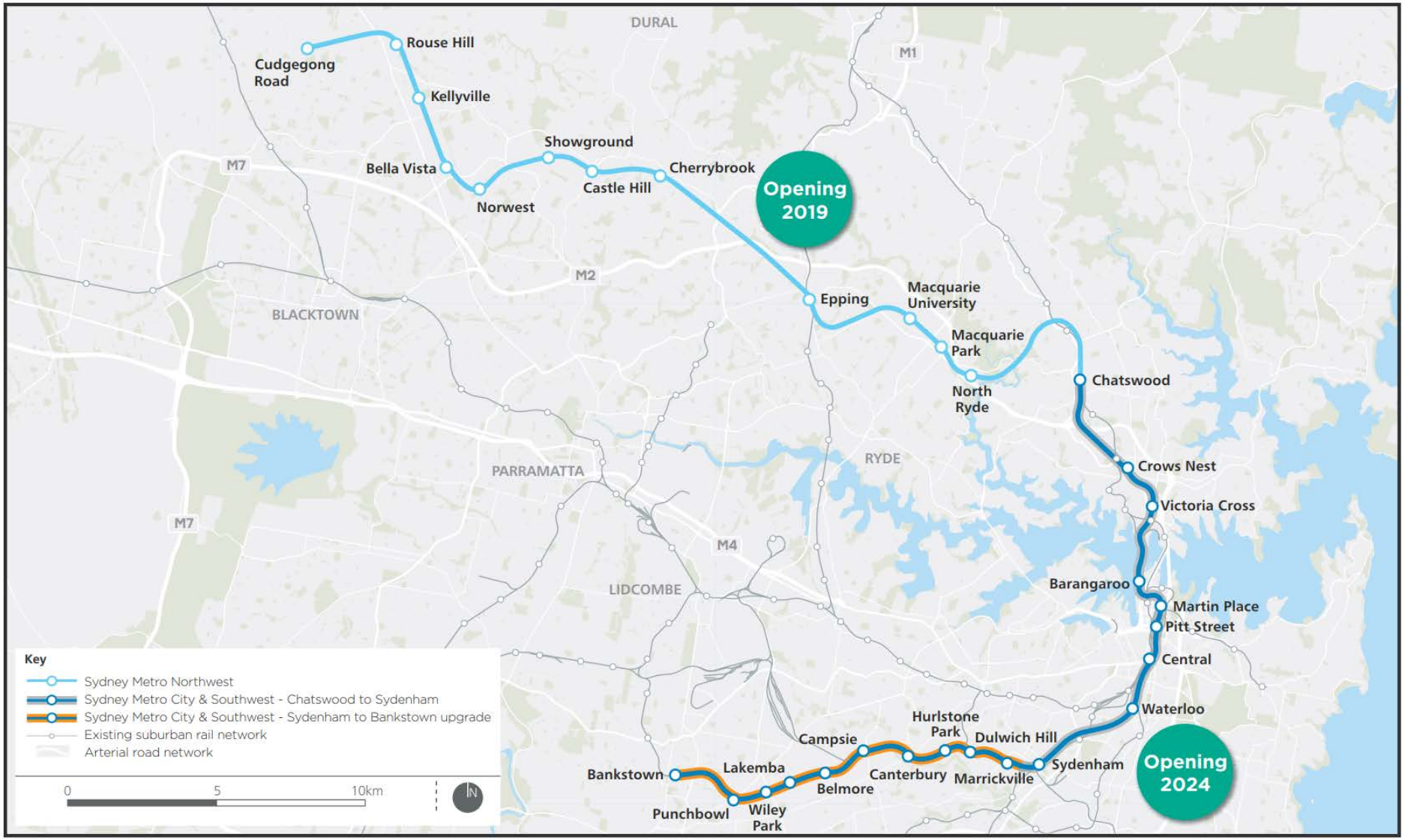
A key element of the project is upgrading stations along the corridor from Marrickville to Bankstown, to allow better access for more people by providing new concourses, level platforms, and lifts at stations. These upgrades aim to provide a better, more convenient, and safer experience for public transport customers, by delivering:

- stations that are accessible to people with a disability or limited mobility, the elderly, people with prams, and people travelling with luggage
- upgraded station buildings and facilities for all transport modes that meet the needs of a growing population

- interchanges that support an integrated transport network and allow seamless transfers between different modes for all customers.

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

Figure 1: The Sydney Metro network



1.2 The project

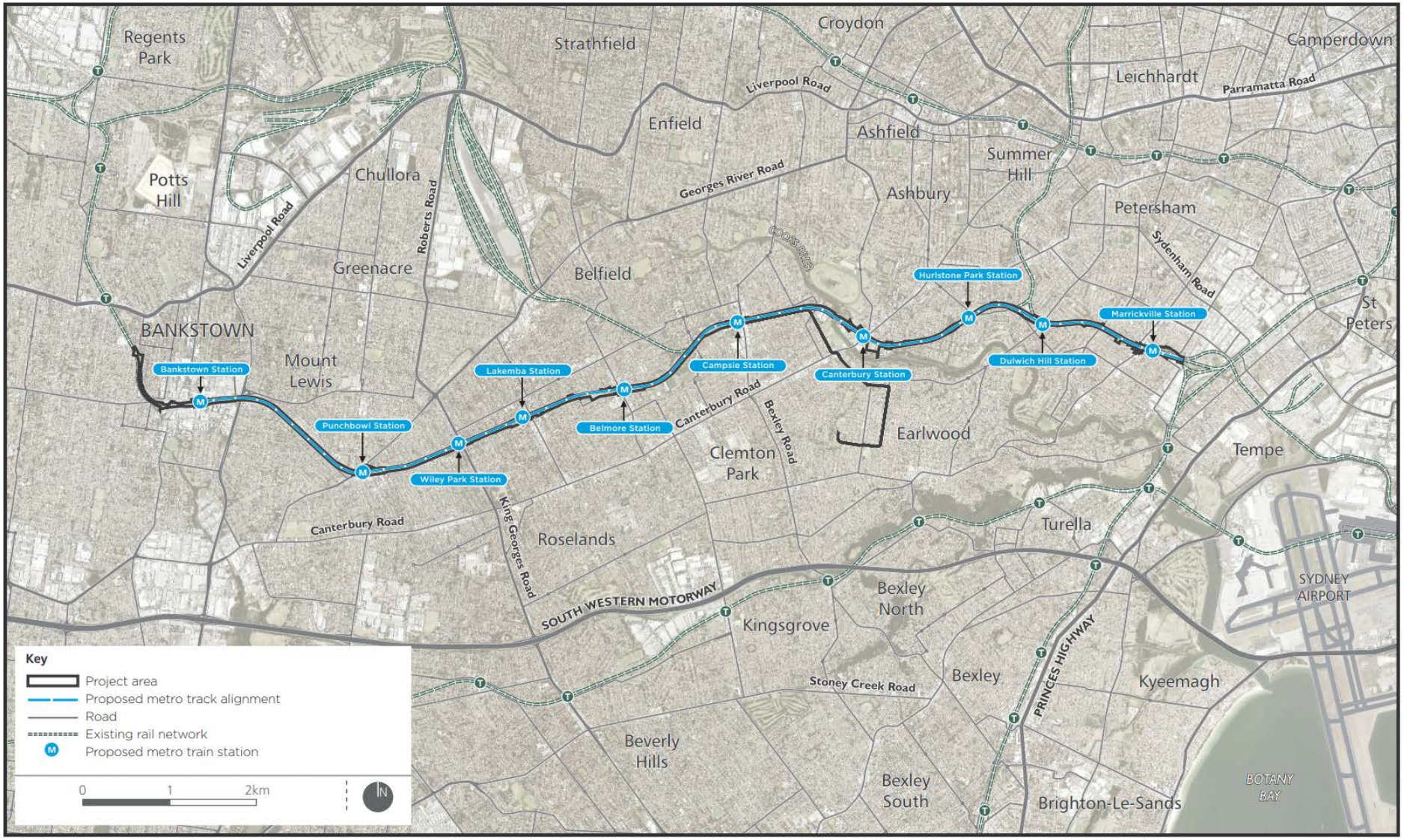
1.2.1 Location

The location of the project is shown in Figure 2.

The key elements of the project are located mainly within the existing rail corridor, from about 800 metres west of Sydenham Station in Marrickville, to about one kilometre west of Bankstown Station in Bankstown. The project is located in the Inner West and Canterbury-Bankstown local government areas.

The term ‘project area’ is used throughout this document to refer to the area where the physical works for the project would be undertaken. This area encompasses the existing rail corridor (as described above), the 10 existing stations within the corridor, and areas surrounding the rail corridor as shown in Figure 1.

Figure 2: Overview of the project



1.2.2 Key features

The key features of the project are summarised below and area shown in Figure 2.

Works to upgrade access at stations

The project includes upgrading the 10 stations from Marrickville to Bankstown as required, to meet legislative requirements for accessible public transport, including the requirements of the *Disability Discrimination Act 1992* and the *Disability Standard for Accessible Public Transport 2002*. The proposed works include:

- works to platforms to address accessibility issues, including levelling and straightening platforms
- new station concourse and station entrance locations, including:
  - new stairs and ramps
  - new or relocated lifts
- provision of additional station facilities as required, including signage and canopies.

Works would also be undertaken in the areas around the stations to better integrate with other modes of transport, improve travel paths, and meet statutory accessibility requirements. This would include provision of pedestrian, cyclist, and other transport interchange facilities; as well as works to the public domain, including landscaping.

Works to convert stations and the rail line to Sydney Metro standards

Station works

In addition to the station upgrades to improve accessibility, works to meet the standards required for metro services would be carried out, including:

- installation of platform screen doors
- provision of operational facilities, such as station services buildings.

Track and rail system facility works

Upgrading the track and rail systems to enable operation of metro services would include:

- track works where required along the 13 kilometre long section of the rail corridor, including upgrading tracks and adjusting alignments, between west of Sydenham Station and west of Bankstown Station
- new turn back facilities and track crossovers
- installing Sydney Metro rail systems and adjusting existing Sydney Trains rail systems
- overhead wiring adjustments.

Other works

Other works proposed to support Sydney Metro operations include:

- upgrading existing bridges and underpasses across the rail corridor
- installation of security measures, including fencing
- installation of noise barriers where required

- modifications to corridor access gates and tracks
- augmenting the existing power supply, including new traction substations and provision of new feeder cables
- utility and rail system protection and relocation works
- drainage works to reduce flooding and manage stormwater.

Active transport corridor and surrounding development

The project would also provide for:

- parts of an active transport corridor where located within the station areas or surplus rail corridor land, to facilitate walking and cycling connections to each station and between Marrickville and Bankstown
- enabling works to support possible future development at Campsie Station (any future development would be subject to a separate approvals process).

Temporary works during construction

During construction, the project would involve:

- provision of temporary facilities to support construction, including construction compounds and work sites
- implementation of alternative transport arrangements for rail customers, during possession periods and/or station closures, guided by the proposed Temporary Transport Strategy.

1.2.3 Timing

An overview of the construction and operation timing of the project is outlined below.

Construction

Construction of the project would commence once all necessary approvals are obtained (anticipated to be in 2018), and would take about five years to complete.

The T3 Bankstown Line would remain operational for the majority of the construction period. However, to ensure the station and infrastructure upgrade works are completed as efficiently and safely as possible, and to accommodate works that cannot be undertaken when trains are operating, it would be necessary to undertake some work during rail possession periods, when trains are not operating. It is anticipated that these rail possession periods would comprise the routine weekend maintenance possessions, together with some longer possession periods during periods of reduced patronage such as school holidays.

A final, longer possession of about three to six months would also be required. This would involve full closure of the line to enable conversion to metro operations. This would include works such as the installation of new signalling, communication systems, and platform screen doors.

During each possession period, alternative transport arrangements would be implemented to ensure that customers can continue to reach their destinations.

Operation

Sydney Metro City & Southwest would be fully operational by 2024, with the opportunity of operation commencing in two phases. Initially, Sydney Metro Northwest services would be extended by the City & Southwest project, and would operate from Chatswood Station to Sydenham Station. Some months later, metro operations would extend from Sydenham Station to Bankstown Station, with both phases planned to be completed before the end of 2024. The opportunity for phased opening of the project would enable metro trains to operate from Cudgegong Road Station to Sydenham Station prior to the final conversion of the T3 Bankstown Line to metro operations.

Once the project is operational, Sydney Trains services would no longer operate along the T3 Bankstown Line between Sydenham and Bankstown stations. Customers would be able to interchange with Sydney Trains services at Sydenham and Bankstown stations. Sydney Trains services to and from Bankstown to Liverpool and Lidcombe stations would not be affected.

1.3 Purpose and scope of the report

This report has been prepared to support the Environmental Impact Statement for the project. The Environmental Impact Statement has been prepared to accompany the application for approval of the project, and addresses the environmental assessment requirements of the Secretary of the Department of Planning and Environment ('the Secretary's environmental assessment requirements').

This report:

- Identifies items and areas of heritage significance that would be materially affected by the project during construction and operation, by field survey and research, including any buildings, works, relics, views, or places of heritage significance
- Considers of the potential impacts on the values, settings and integrity of heritage areas and items and archaeological resources located near the project, including items both above and below ground and, where such potential exists, the likely significance of those impacts
- Outlines the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) in accordance with relevant best practice guidelines.

The assessment is based on a desktop review of information available for the existing environment and a site visit. Information available for the project at the time of this report included preliminary drawings, reports, flood modelling data, and construction information.

1.4 Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) relating to non-Aboriginal heritage, and where these requirements are addressed in this report, are outlined in Table 1 below.

Table 1: Secretary's environmental assessment requirements – non-Aboriginal heritage

Secretary's environmental assessment requirements	Where addressed
General standard SEARs	
3. Assessment of key issues 2. For each key issue the Proponent must: (a) describe the biophysical and socio-economic environment, as far as it is relevant to that issue;	Sections 6 and 7.
(b) describe the legislative and policy context, as far as it is relevant to the issue;	Section 4.
(c) identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence (including worst case scenario) of the impact (comprehensive risk assessment), and the cumulative impacts;	Sections 6, 7, 8 and 9.
(d) demonstrate how potential impacts have been avoided (through design, or construction or operation methodologies);	Section 5 discusses project justification and design development in regard to heritage conservation outcomes
(e) detail how likely impacts that have not been avoided through design will be minimised, and the predicted effectiveness of these measures (against performance criteria where relevant); and	Impacts would be managed through the detailed design process which is subject to management measures such as involvement of a heritage architect. Management of any impacts not minimised is discussed in section 10.
(f) detail how any residual impacts will be managed or offset, and the approach and effectiveness of these measures.	Sections 6, 7, 8 and 9 discuss impacts to heritage significance. Cumulative and residual impacts are discussed. Management of residual impacts included archival recording, reuse of structures and heritage interpretation.
3. Where multiple reasonable and feasible options to avoid or minimise impacts are available, they must be identified and considered and the proposed measure justified taking into account the public interest.	Section 5 discusses project justification and design development in regard to heritage conservation outcomes.
Key issue requirements	
7. Heritage 1. The Proponent must identify and assess any direct and/or indirect impacts (including cumulative impacts) to the heritage significance of:	
(a) Aboriginal places and objects, as defined under the National Parks and Wildlife Act 1974 and in accordance with the principles and methods of assessment identified in the current guidelines;	Technical Paper 4 – Aboriginal heritage assessment.
(b) Aboriginal places of heritage significance, as defined in the Standard Instrument – Principal Local Environmental Plan;	
(c) environmental heritage, as defined under the *Heritage Act 1977*; and	

Secretary's environmental assessment requirements	Where addressed
(d) items listed on the National and World Heritage lists.	Sections 6, 7, 8 and 9. Direct, visual and potential direct (vibration) impacts are identified for each heritage listed item. For listed stations, impacts are assessed at an element level. Impacts to the Bankstown Railway Line are considered as part of the cumulative impact discussion (Section 9).
2. Where impacts to State or locally significant heritage items are identified, the assessment must: (a) include a statement of heritage impact for all heritage items (including significance assessment);	Section 6. Significance assessments adapted from existing listings and detailed statements of heritage impact, in accordance with the required guidelines, are provided for each listed item.
(b) consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment (as relevant)	Sections 6, 7 and 8. Direct, visual and potential direct (vibration) impacts are identified for each heritage listed item. Listed stations impacts are assessed at an element level. Impacts to potential archaeology are assessed in Section 7. Impacts from construction compounds are assessed in Section 8. A cumulative impact assessment is provided in Section 9. Changes to curtilages would be assessed in a Conservation Management Plan (CMP) or Conservation Management Strategy (CMS) as outlined in Section 10.
(c) outline measures to avoid and minimise those impacts in accordance with the current guidelines; and	Section 10. Management and mitigation measures are provided in accordance with the current guidelines. Guidelines are discussed in Section 2.
(d) be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria).	Section 1.5 for brief CVs.
(e) have regard to the specific and broader values of historic structures (such as footbridges, overhead booking offices, platforms and platform buildings) and conservation approaches provided in the relevant conservation strategies and design guides and conservation management plans, as applicable; and	Sections 6, 7, 8 and 9. Heritage Council and Sydney Trains current guidelines have been used to inform impacts assessments. For example in all cases where footbridges or overhead booking offices are to be impacted they are assessed in relation to the findings of the Sydney Trains conservation strategies as listed in the current guidelines. Impacts have been assessed against conservation management plans where applicable. Design has considered heritage guidelines as outlined in Section 2.2.2 and Section 5.3.

Secretary's environmental assessment requirements	Where addressed
(f) identify potential uses for heritage items to be retained within the corridor.	Retained buildings would be used for rail operational purposes such as storage or staff amenities. Discussed throughout impact assessments, and in mitigation measures in Section 10.
3. Where archaeological investigations of Aboriginal objects are proposed these must be conducted by a suitably qualified archaeologist, in accordance with section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010).	Technical Paper 4 – Aboriginal heritage assessment.
4. Where impacts to Aboriginal objects and/or places are proposed, consultation must be undertaken with Aboriginal people in accordance with the current guidelines. The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be addressed.	

Use of the current guidelines referred to in the SEARs are discussed in Section 2.0.

1.5 Authors

This report was prepared by Shona Lindsay (Heritage Consultant), Emmanuelle Fayolle (Senior Heritage Consultant) and Sandra Wallace (Director), with management input and review by Sandra Wallace. The report was reviewed by James Phillips (Weir Phillips) who provided comment from the perspective of a heritage architect. Relevant qualifications are provided in Table 2 below.

Table 2: Authors of this report and relevant qualifications

Authors	Qualifications
Sandra Wallace	**Director – Artefact Heritage** **Qualifications** PhD (Archaeology) University of Sydney BA (Honours First Class - Prehistoric and Historical Archaeology) University of Sydney. **Professional affiliations** Australian Association of Consulting Archaeologists (AACAI): Full Member Australian Archaeological Association: Member
Emmanuelle Fayolle	**Senior Heritage Consultant – Artefact Heritage** **Qualifications** MSc Architectural Conservation (2011) University of Edinburgh, UK BA History and Languages (2008) University Stendhal Grenoble III, France **Professional affiliations** Member of the International Council on Monuments and Sites (Australia ICOMOS).
Shona Lindsay	**Heritage Consultant – Artefact Heritage** **Qualifications** MA Artefact Studies (2014) University College London, UK

Authors	Qualifications
	BA (First Class Honours) Archaeology and Ancient History (2011) University of Queensland, Australia **Professional affiliations** Member of the International Committee for the Conservation of Industrial Heritage (TICCIH)
James Phillips (review)	**Director – Weir Phillips Architects** **Qualifications** M. Heritage Conservation (Hons), Heritage University of Sydney B.Sc. (Arch) B. Arch, Landscape Architecture University of NSW.

1.6 Limitations

- This report provides an assessment of non-Aboriginal (historical) built heritage and potential archaeological resources only and does not provide an Aboriginal heritage assessment.
- Potential heritage items and heritage conservation areas considered for addition to the environmental schedules of the Marrickville and Canterbury Local Environmental Plans have not been assessed in detail this report. It is understood that Planning Proposals are currently under assessment by the DP&E.
- It is assumed the proposed 33 kilovolt high voltage feeder would not impact on heritage items or potential archaeology as it would be through existing road reserves and use horizontal directional drilling (HDD) in certain areas.

2. ASSESSMENT METHODOLOGY

This section outlines the methodologies used to prepare this heritage assessment. The methodologies used in assessing heritage significance for built heritage and non-Aboriginal archaeology are also provided, along with the methodology used in assessing heritage impact.

2.1 Identification of study elements

2.1.1 Study area

The indicative alignment for the project is shown in Figure 1. The alignment runs from Marrickville Station to Bankstown Station, with ancillary works extending to the west of Bankstown Station. The project area consists of the alignment and contains all construction sites.

For the purpose of this investigation, the study area boundary has been defined as a 25-metre buffer around the project area. The project area and the buffer are collectively referred to as the study area in this report unless otherwise stated.

The application of a buffer helps to identify heritage items potentially located within the visual catchment of the project and where potential visual impacts on that item may occur. It also supports assessment of other potential impacts on heritage fabric (for example, as a result of vibration).

Archaeological potential has not been assessed within the buffer as it is assumed subsurface impacts would only occur within the project area.

2.1.2 Heritage-listed items

Heritage listed items were identified through a search of relevant State and federal statutory heritage registers:

- World Heritage List
- Commonwealth Heritage List
- National Heritage List
- State Heritage Register
- Marrickville Local Environmental Plan (LEP) 2011
- Canterbury LEP 2012
- Bankstown LEP 2015
- Section 170 Heritage and Conservation Registers for Sydney Water, Roads and Maritime, RailCorp, Ausgrid and Department of Housing.
- NSW State Heritage Inventory database

Non-statutory registers were not included in the search.

Items listed on these registers have been previously assessed against the NSW Heritage Assessment guidelines (as outlined in section 2.2.1). Statements of heritage significance, based on the NSW Heritage Assessment guidelines, as they appear in relevant heritage inventory sheets and documents, are provided throughout this assessment. No additional assessment of significance has been undertaken, apart from in relation to archaeology and where recent changes to the item (such as in regard to Sydney Trains upgrades, have affected the relevant information provided in the existing statement. Assessments of levels of significance of elements of listed items have been taken where available from the statutory listings, Conservation Management Plans (CMPs) or previous

studies. Where no assessment of elements was available, levels have been assessed in relation to the criteria provided in Table 4. Where recent impacts may have altered documented levels of significance of elements, a revised level has been provided with the date and nature of the impacts to the element noted.

Where relevant, CMPs and other heritage management documents, guidelines and previous assessments have been utilised to provide additional information regarding heritage significance and management.

Unlisted built heritage items were not assessed as part of this investigation as it was assumed existing heritage studies which informed inclusion on LEP schedules and the s170 register would have captured all relevant items.

It is noted that this methodology is consistent with the Sydney Metro City and Southwest - Chatswood to Sydenham Environmental Impact Statement and associated technical report.

2.2 Built heritage assessment

2.2.1 NSW heritage assessment guidelines

Determining the significance of heritage items or a potential archaeological resource is undertaken by utilising a system of assessment centred on the *Burra Charter* of Australia ICOMOS. The principles of the charter are relevant to the assessment, conservation and management of sites and relics. The assessment of heritage significance is outlined through legislation in the NSW Heritage Act 1977 and implemented through the *NSW Heritage Manual* and the *Archaeological Assessment Guidelines*.[3]

If an item meets one of the seven heritage criteria, and retains the integrity of its key attributes, it can be considered to have heritage significance. The significance of an item or potential archaeological site can then be assessed as being of local or State significance. If a potential archaeological resource does not reach the local or State significance threshold, then it is not classified as a relic under the Heritage Act.

'State heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

'Local heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.[4]

The assessment of significance will result in a succinct statement of heritage significance that summarises the values of the place, site, resource, deposit or feature. The heritage significance assessment criteria are as follows:

Table 3: NSW heritage assessment criteria

Criteria	Description
A – Historical Significance	An item is important in the course or pattern of NSW's or the local area's cultural or natural history.

[3] NSW Heritage Office 1996; 25-27
[4] This section is an extract based on the Heritage Office Assessing Significance for Historical Archaeological Sites and Relics 2009:6.

Criteria	Description
B – Associative Significance	An item has strong or special associations with the life or works of a person, or group of persons, of importance in NSW's or the local area's cultural or natural history.
C – Aesthetic Significance	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or the local area.
D – Social Significance	An item has strong or special association with a particular community or cultural group in NSW or the local area for social, cultural or spiritual reasons.
E – Research Potential	An item has potential to yield information that will contribute to an understanding of NSW or the local area's cultural or natural history.
F – Rarity	An item possesses uncommon, rare or endangered aspects of NSW's or the local area's cultural or natural history.
G - Representativeness	An item is important in demonstrating the principal characteristics of a class of NSW's or the local area's cultural or natural places, or cultural or natural environments.

This report includes an assessment of the relative contributions of individual elements of heritage items to its heritage value. These assessments were based on the standard grades of significance set out in the NSW Heritage Office publication *Assessing Heritage Significance* shown in Table 4.[5] Where significance of elements is discussed in listings or CMPs, these grades are used unless additional information has been presented (such as change in condition or removal), that would justify a change.

Table 4: Standard grades of significance

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

2.2.2 Sydney Trains current guidelines

The following Sydney Trains strategies have been used in this assessment:

- Railway Footbridges Heritage Conservation Strategy, by NSW Government Architect's Office (August 2016).

[5] Heritage Division 2002. Assessing Heritage Significance.

- Railway Overhead Booking Offices Heritage Conservation Strategy. Prepared for Transport for NSW (2014).
- Heritage Platforms Conservation Management Strategy. Prepared for Sydney Trains (2015).

The Canopies and Shelters, Design Guide for Heritage Stations, by Sydney Trains (December 2016) and Design in Context Guidelines for infill Development in the Historic Environment, by NSW Heritage Office (June 2006) have informed the development of the design principles for the project. As they are design guidelines, not assessment frameworks or conservation strategies, they have not been used explicitly in this assessment but as they inform design they have been accounted for.

2.2.3 Heritage studies

For precedence, this report considered the Non-Aboriginal Heritage Impact Assessment prepared for Phase 1 of the Metro City & Southwest project as well as several heritage investigations undertaken within, or close to, the study area that provide evidence which assists in evaluating the heritage significance of heritage items within the study area.

Artefact Heritage 2016. *Sydney Metro City & Southwest: Chatswood to Sydenham, Non-Aboriginal Heritage Impact Assessment*. Prepared for Jacobs/Arcadis/RPS.

The technical paper considered the construction and operational impacts on listed heritage items and potential archaeological resources within the study area and included identification of items and areas of heritage significance that would be materially affected by the project, consideration of the potential impacts on the values, settings and integrity of heritage items and archaeological resources located within the project area and an outline of the proposed mitigation and management measures in accordance with relevant best practice guidelines.

Artefact Heritage 2013. *Punchbowl Railway Station Stair Replacement Statement of Heritage Impact.* Prepared for GW Hyder Consulting.

This report investigated the proposed replacement of two flights of stairs at Punchbowl Station in 2014.

Australian Museum Business Services 2012. *Bankstown Railway Station Upgrade. Statement of Heritage Impact.* Prepared for Transport for New South Wales.

This report assessed a TAP upgrade which was undertaken on the footbridge and overhead booking office in 2012.

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

Five stations located in the study area were investigated in the *Railway Overhead Booking Offices Heritage Conservation Strategy* prepared by Australian Museum Consulting in 2014, including Dulwich Hill, Wiley Park, Punchbowl, Belmore, and Campsie. This report looked at 16 early-twentieth century overhead booking offices within the NSW rail network. It found that there are only 12 extant examples of overhead booking offices that have good or fair integrity and representative value. In particular, Dulwich Hill and Wiley Park were highlighted as having high significance and possibly reaching the State significance threshold. The report outlines strategies to conserve the significance of the overhead booking offices, such as retention, adaptive reuse, and mitigation when impacts are required.

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

The conservation management strategy looked at 624 passenger platforms located at 254 stations. The report investigated the various types of platforms at stations within the Sydney Trains assets. It discussed platforms at stations within the study area including: Marrickville, Dulwich Hill, Campsie, Belmore, and Wiley Park. It also provided strategies for conserving platforms.

RPS 2013. *Marrickville Station Upgrade. Statement of Heritage Impact.* Prepared for Transport for NSW.

The Marrickville TAP project was conducted with upgrades to the station including the installation of two new stairs and lifts, new concourse buildings, new canopies, and adaptive reuse of station buildings. The 1917 booking office was relocated along Platform 2.

David Scobie Architects Pty Ltd 2016. *Marrickville Railway Station Conservation Management Plan.* Prepared for TfNSW and Arenco.

The CMP was prepared following the TAP upgrades to Marrickville Station. It outlines conservation management policies and implementation strategies to ensure the conservation of the heritage significance of Marrickville Station. The CMP is currently at draft stage and has not been endorsed by Heritage Council, although the policies have been referred to in this report for the assessment of Marrickville Station.

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

The heritage conservation strategy investigated 68 railway footbridges in the Sydney Trains portfolio, providing specific strategies for conserving footbridges depending on the significance. This report covered eight of the stations in the study area: Dulwich Hill, Hurlstone Park, Canterbury, Campsie, Lakemba, Wiley Park, Punchbowl, and Bankstown. The significance of the footbridges as an element of the station listings is adapted from this report.

Office of Rail Heritage 2012. *Conservation Guide: Railway Station Platform Furnishings.*

Although not specific to the stations within the study area, this document provides a guide to conserving station platform furnishings such as the original bubbler at Belmore Station. It provides an outline for identifying the different types of heritage platform furnishings, and appropriate conservation methods.

Simpson Dawbin Associates 2002. *Campsie Railway Station: Statement of Heritage Impact for easy access and upgrading development.* Prepared for Rail Development State Rail Authority.

Part of the TAP program at Campsie included a new overhead concourse. Remnant elements of the original booking office building were retained within the concourse and the Dutch gable roof profile was reinstated at the street elevation. The original booking hall and northern section of building were removed; as were the ticket windows, ticket collector's cabin; and the majority of doors and windows.

Sydney Water 2005. *Sewage Pumping Station SP0271. Conservation Management Plan.* Prepared for Sydney Water.

The CMP was commissioned by Sydney Water to provide a conservation and management framework for the Sewage Pumping Station SP0271 to facilitate its continued operation and conservation of its heritage values. The report provides a contextual history of Sydney Water and the legislative background to the management of heritage assets, as well as an assessment of significance and conservation policies specific to the site. The CMP was consulted to understand the

elements that constitute the significance of the site and how these would be affected by the project. The project was assessed against the relevant conservation policies of the CMP. The CMP was endorsed by the Heritage Council in 2004 for a period of five years and has since expired.

2.2.4 Direct and visual impacts assessment

This Heritage Impact Assessment has been informed by the document *Statement of Heritage Impact* 2002, prepared by the NSW Heritage Office, contained within the *NSW Heritage Manual,* as a guideline. In accordance with this guide, assessment is based on levels of impact to significance of the heritage item and its elements.

Impacts are identified as either:

- Direct impacts, resulting in the demolition or alteration of fabric of heritage significance
- Visual impacts, resulting in changes to the setting or curtilage of heritage items or places, historic streetscapes or views
- Potential direct impact, resulting in impacts from vibration and demolition of adjoining structures.

Once levels of all three types of impacts are assessed, adverse and positive impacts to aspects of significance are balanced to assess an overall level of impact to the heritage significance of the listed item as a result of the project. Where impacts to heritage significance are assessed as major, discussion is provided on whether the item will continue to meet the threshold of significance necessary for heritage listing.

From a heritage perspective, impacts are only acceptable if sufficient justification is provided, and options which would avoid harm have been explored and discounted. Where impacts are proposed, justifications including information on optioneering has been included in accordance with the *Statement of Heritage Impact* 2002 document. Information on options assessment and justification is provided in Section 5.3. Additional information on how the design was developed taking into account impacts to heritage is provided in Chapter 7 of the Environmental Impact Statement.

Specific terminology and corresponding definitions are used in this assessment to consistently identify the magnitude of the project's direct, visual or potential direct impacts on heritage items or archaeological remains. The terminology and definitions are based on those contained in guidelines produced by the International Council on Monuments and Sites (ICOMOS)[6] and are shown in Table 5. It is assumed that all direct and potential direct impacts are a result of construction. Visual impacts are assumed to be operational unless specified as temporary in which case they are related to construction.

Table 5: Terminology for assessing the magnitude of heritage impact

Magnitude	Definition
Major	Actions that would have a long-term and substantial impact on the significance of a heritage item. Actions that would remove key historic building elements, key historic landscape features, or significant archaeological materials, thereby resulting in a change of historic character, or altering of a historical resource. These actions cannot be fully mitigated.
Moderate	This would include actions involving the modification of a heritage item, including altering the setting of a heritage item or landscape, partially removing archaeological resources, or the alteration of significant elements of fabric from historic structures. The impacts arising from such actions may be able to be partially mitigated.

[6] Including the document *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*, ICOMOS, January 2011.

Magnitude	Definition
Minor	Actions that would result in the slight alteration of heritage buildings, archaeological resources, or the setting of an historical item. The impacts arising from such actions can usually be mitigated.
Negligible	Actions that would result in very minor changes to heritage items.
Neutral	Actions that would have no heritage impact.

2.2.5 Potential direct impact assessment

Vibration arising from construction or excavation work has the potential to impact on the fabric of heritage items, potentially causing subsidence, or affecting structural integrity.

In locations where heritage items are adjacent to demolition, construction or excavation works, an assessment of potential impact through vibration has been undertaken. This is provided in Section 8.0 of this report.

A conservative vibration damage screening level of 7.5 millimetres per second peak particle velocity has been adopted for the project. This screening level has been established with reference to the minor cosmetic damage criteria in *British Standard BS 7385:2 – 1993*. The vibration levels specified in this standard are designed to minimise the risk of threshold or cosmetic surface cracks, and are set well below the levels that have potential to cause damage to the main structure.

The recommended screening level of 7.5 millimetres per second peak particle velocity is also applicable to heritage items unless it is known that the item is already structurally unsound – in which case, a lower screening level may be applicable.

Potential vibration impacts would be assessed by applying the following methodology:

- Where vibration levels are predicted to be below the relevant vibration screening level, potential vibration impacts are considered negligible and no further assessment of vibration-related impacts on that structure would be required
- Where vibration levels are predicted to be at or above the vibration screening level, further investigation would be undertaken to ensure vibration levels remain below appropriate limits for that structure, including:
  - A more detailed assessment of the structure
  - Attended vibration monitoring would be undertaken from the structure's closest point to the vibration source
- Where the building is a heritage building, and the predicted vibration level is above the vibration screening level, the more detailed assessment of the structure would be undertaken that specifically considers the heritage values of the structure and sensitive heritage fabric in consultation with a heritage specialist to ensure it is adequately monitored and managed.

2.2.6 Station building types

The following is based on Sydney Trains' definition of station building types.[7] This terminology is used throughout this assessment when describing station buildings.

[7] Sydney Trains n.d. *Overview of Railway Station Buildings (1856-2009) for S170*

Table 6: Station building types

Type	Description
Type 3: Second class station buildings	Known as 'Second Class Station Buildings', these structures were constructed 1859 – 1890 mostly at metropolitan locations in the 1880s. The common features for these buildings are a large central brick building flanked by attached or detached wing structures. Roofs are generally simple hip and valley roof structures with multiple brick chimneys and sometimes with a transverse gable. The general layout of the building is symmetrical with a central waiting room. The platform awning is supported by timber or cast iron columns, usually with decorative bracketing.
Type 4: Third class station buildings	Known as 'Third Class Station Buildings' or 'Standard Roadside Station Buildings', these structures were constructed 1857 – 1894 mostly at smaller Metropolitan or Regional locations in the 1880s. Metropolitan types were constructed mostly of brick, and Regional types of timber. Common features include: • Roof – Gable sometimes with centre transverse gable; • Floor Plan – Central building with symmetrical layout and wings at one or both ends; • Awning Support – timber or metal posts.
Type 11: Initial island/side platform buildings	These buildings represent the standard plans that were introduced from the 1900s and reissued again in 1913. Most examples date from 1910/20s although some earlier examples exist dating from as early as 1887 which formed the basis for the standard design. All buildings are linear and feature gabled roofs with awnings supported on fabricated metal brackets or timber braces, most with a timber valance to awning ends. The buildings can be grouped as follows: • Pre-1900 Standard buildings: Although displaying similar arrangements to later standard designs, these buildings feature different detailing and awning brackets. • A1 – A4 Standard Buildings: These are small timber wayside buildings predominantly used in country locations. The smallest building was the A1 which had a gabled roof and continuous awning. The building was timber clad with a single waiting room. A2 – A4 were larger versions of the A1 with additional rooms and elements such as fireplaces and internal lining. • A8 – A10 Standard Buildings: These are larger brick island buildings and were the common design used at metropolitan locations during the 1910/20s. A8 was the simplest design featuring a linear building with all rooms contained under the single gable roof with awning extensions at either side. The A9 was a larger version of the A8, with the A10 being the largest with an extension of the gable at one end for covering signalling levers.
Type 13: Second island/ side platform buildings	Constructed 1929 – 1956, with most dating from the Interwar period, these buildings represent a stylistic change from the earlier standard platform buildings (Type 11) of the 1910/20s. The styles of the buildings include Functionalist and simple Art Deco detailing. Many of the buildings have stylistic similarities to other buildings along the same line as many were constructed for new lines completed during the period or for upgrades to existing lines. A 2002 study of Interwar Station buildings groups the station buildings into the following further categories: • Railway Domestic: Distinguished by hipped roofs (usually with Marseille-pattern terra cotta tiles) and domestic building proportions. Some designs also illustrate the Mediterranean influence by the use of coloured terra cotta tiles and arched openings. • Railway Eclectic: Distinguished by the incorporation of Federation-style windows (with coloured glass in the upper sashes), crow stepped gables or other imported influences. • Railway Functionalist: Distinguished by the use of projecting parapets to conceal the roof form, curves in the plan form, cantilevered awnings, steel–framed windows (usually arranged in horizontal or vertical strips of glazing), horizontal string courses, stacked forms and distinct Dudok influences. • Railway Stripped Functionalist: Distinguished by the use of steel-framed windows, projecting gables, cantilevered awnings, banded brickwork (header and soldier courses) and Art Deco influenced features, but without the stacked forms, strip windows or curves in plan.

Type	Description
Type 19: Overhead booking offices (OHBO)	The Overhead Booking Office (OHBO) is a structure located above the platforms and connected via a set of stairs. This structure allowed the platforms to be cleared of existing ticketing facilities and also as a means to monitor the platforms below. Although previously grouped together, there are two distinct types of OHBO: • The earliest of these structures date from 1891, and are small brick buildings located on an overbridge and connected to the platforms by stairs. • The second type of OHBO dates from the 1910 - 1950s and is a timber structure located on a steel footbridge or overbridge.

2.3 Archaeological assessment

2.3.1 Archaeological potential

Historical archaeological potential is defined as the potential of a site to contain historical archaeological relics, as classified under the NSW *Heritage Act 1977*. The assessment of historical archaeological potential is based on the identification of former land uses and evaluating whether subsequent actions (either natural or human) may have impacted on archaeological evidence for these former land uses. Knowledge of previous archaeological investigations, understanding of the types of archaeological remains likely to be associated with various land uses, and the results of site inspections are also taken into consideration when evaluating the potential of an area to contain archaeological remains.

The assessment of archaeological potential contained in this Heritage Impact Assessment is based on analysis of historical plans and readily available secondary sources (refer to section 2.3.3) and archaeological investigations undertaken in the vicinity of the study area.

The assessment is informed by the NSW Heritage Division's 2009 guidelines *Assessing Significance for Historical Archaeological Sites and Relics.*

2.3.2 Research potential

In 1984, Bickford and Sullivan examined the concept and assessment of archaeological research potential; that is, the extent to which archaeological resources can address research questions. They developed three questions which can be used to assess the research potential of an archaeological site:

- Can the site contribute knowledge that no other resource can?
- Can the site contribute knowledge that no other site can?
- Is this knowledge relevant to:
  - General questions about human history?
  - Other substantive questions relating to Australian history?
  - Other major research questions?

In the 2009 guidelines *Assessing Significance for Historical Archaeological Sites and 'Relics'*, the NSW Heritage Division provided a broader approach to assessing the archaeological significance of sites, which includes consideration of a site's intactness, rarity, representativeness, and whether many similar sites have already been recorded, as well as other factors. This document acknowledges the difficulty of assessing the significance of potential subsurface remains, because the assessment must rely on predicted rather than known attributes.[8]

[8] NSW Heritage Branch 2009

A site can have high potential for archaeological remains, and yet still be of low research potential, if those remains are unlikely to provide significant or useful information.

2.3.3 Archaeological assessment

An archaeological assessment has been prepared by station catchment (Section 7.0). An assessment of archaeological potential based on previous land use and subsequent disturbance levels has been included, along with an assessment of potential significance for areas of potential.

2.3.4 Archaeological studies

For precedence, this report considered the Non-Aboriginal Heritage Impact Assessment prepared for Phase 1 of the Metro City & Southwest project and several historical archaeological investigations undertaken within, or close to, the study area that provide evidence which assists in evaluating the potential historical archaeological resource of the study area. In addition, portions of the study area were evaluated in various archaeological zoning and management plans.

Artefact Heritage 2016. *Sydney Metro City & Southwest: Chatswood to Sydenham, Non-Aboriginal Heritage Impact Assessment*. Prepared for Jacobs/Arcadis/RPS.

The technical paper considered the construction and operational impacts on listed heritage items and potential archaeological resources within the study area. It included identification of items and areas of heritage significance that would be materially affected by the project, with consideration of the potential impacts on the values, settings and integrity of heritage items and archaeological resources located within the project area. The paper outlined proposed mitigation and management measures in accordance with relevant best practice guidelines.

Artefact Heritage 2016. *Sydney Metro City & Southwest: Chatswood to Sydenham, Historical Archaeological Assessment & Research Design*. Prepared for Jacobs/Arcadis/RPS.

This report provided a detailed archaeological assessment of potential archaeological resources within the study area, potential impacts from the proposed works, and mitigation measures. Detailed archaeological management units were discussed and mapped for future management of archaeology in the study area. Research questions were provided to form the basis of managing the potential archaeology.

GML 2002. *153-159 Canterbury Road, Canterbury archaeological assessment and research design*. Prepared for ALDI Stores.

Godden Mackay Logan prepared an Archaeological Assessment and Research Design for 153-159 Canterbury Road, Canterbury in October, 2002. 153-159 Canterbury Road, Canterbury is located approximately 55 metres northeast of the study area. It was originally part of the Canterbury Farm Estate, granted to Reverend Richard Johnson between 1793 and 1799. The land was used for farming and sheep grazing until it was sold to Robert Campbell in 1803. It was then occupied by the Rising Sun Inn from c1848 to 1922.

The archaeological assessment concluded that the entire site of the Rising Sun Inn had potential to contain archaeological deposits associated with its occupation including wells and cisterns that were once located at the rear of the building. Archaeological remains associated with the inn were assessed as having high local significance. The report recommended test trenching with potential further investigations if substantial deposits or intact features were identified.

Higginbotham, E. 2000. *Historical and archaeological assessment of the Australian Sugar Company mill, Sugar house Road (formerly Church Street), Canterbury, NSW.* Prepared for Gold Abacus Developments & Whhohouse & Danks Pty Ltd.

Edward Higginbotham and Associates prepared a historical and archaeological assessment of the Australian Sugar Company Mill, Sugar House Road (Formerly Church Street, Canterbury, NSW) in May, 2000. The report focussed on land directly east of the current study area, to the west of Hutton and Church Streets, Canterbury. The Mill was established on 1840 and closed in 1855. Prior to this it was part of Robert Campbell's 'Canterbury Estate'. The site was then left empty until 1884 when it was used as an ironworks by an engineering firm for the railways. The ironworks closed in 1890 and the site used as a butter factory. A large portion of the original property was then resumed for the railway in 1897. The newly dissected property was then used as a bacon factory (1900-08) and then a ham and bacon curing factory (1908-1983). It was during this later phase that many original outbuildings associated with the Old Sugarmill were demolished.

The assessment outlined the various structures associated with the site and its many phases of development. It concluded that there was potential for archaeological remains of the Mill and associated outbuildings to exist within the area. These were assessed as having associative, social and historic significance.

Stedinger Associates 2003. *Additional excavations at the Canterbury Sugar Mill, NSW.* Prepared for Grosvenor Residential Pty Ltd.

Stedinger Associates prepared an addendum report for archaeological monitoring and recording of excavations at the site of the former Australian Sugar Company Mill, Canterbury in 2003. These were carried out 14 metres west of the mill site and approximately 30 metres east of the study area. Excavations uncovered several unrelated fill layers likely associated with each occupation phase at the site. The earliest occupation phase identified being 1884-1890.

A meat hook (associated with a meatworks [bacon and ham factory] that occupied the site between 1900-1908) and several large cast-iron objects were uncovered during excavations. The latter was likely associated with an ironmongery that occupied the site in the late nineteenth century, and are likely to be parts of machinery and offcuts. In addition, a north-south oriented sandstone drain was identified in the westernmost portion of the site. This was assessed as being built during the meatworks occupation of the site or the Australian Sugar Company Mill. The drain was preserved in situ.

2.4 Construction sites assessment

Impact assessment related to construction sites for the project is provided in Section 8.0 of this report. This assessment relates to individual heritage items, with archaeological impacts related to construction sites being assessed in the archaeological assessment in Section 7.0. The impacts of construction sites on built heritage items is provided separately due to the temporary nature of the impacts.

Construction sites for the project would include individual compounds and worksites. The direct and visual impacts of construction sites are assessed in Section 8.0 of this report. This section considers the direct impact of compounds and worksites where these would be located within the curtilage or in the vicinity of heritage items. The assessment also considers temporary visual impacts of construction sites. A description of the proposed construction sites and relevant maps are provided in Section 8.1 of this report.

3. HISTORICAL BACKGROUND

This section provides a historical background for the project area. This will include an overview of early exploration of the area's region, an account of the development of the Bankstown rail line and of the seven key areas comprising the ten localities constituting the project area. The seven key areas are based on original land grants and are as follows:

- Sydenham, Marrickville and Dulwich Hill
- Hurlstone Park
- Canterbury
- Campsie
- Belmore
- Lakemba, Wiley Park and Punchbowl
- Bankstown

Sydenham is included for historical context of the development of the Bankstown Line, although the area is not included in this assessment.

3.1 General history

3.1.1 Early exploration of the region

Exploration to the west of Sydney Cove began soon after first settlement, as it was found that the sandstone soils of coastal Sydney were unsuited to cultivation and it was necessary to find more fertile land.

In 1788, a government farm was established on the banks of the Parramatta River at Parramatta (initially named Rose Hill). A government house was built near the farm, which prompted the development of the town of Parramatta, which was laid out in 1790. Initially the river was the main form of transport to and from Parramatta, but an overland track between Parramatta and Sydney was cleared through the bush between 1789 and 1791. This track formed the basis for 'the road to Parramatta', which was laid out in 1797. By the early 19th century, Parramatta Road was a major thoroughfare for the colony.

The first European exploration of the Cook's River region was led by Captain John Hunter in 1789. Hunter travelled a distance of five miles up the river, and later commented that it was "all shoal water". Later that year Lieutenant Bradley was sent to examine the north-west branch of Botany Bay. He described the eight-mile-long creek he encountered as a "winding shoal channel ending in a drain to a swamp, all shoal water".[9] The river appears to have been named prior to 1798, when Governor Hunter sent a map to England naming the Cook's River.

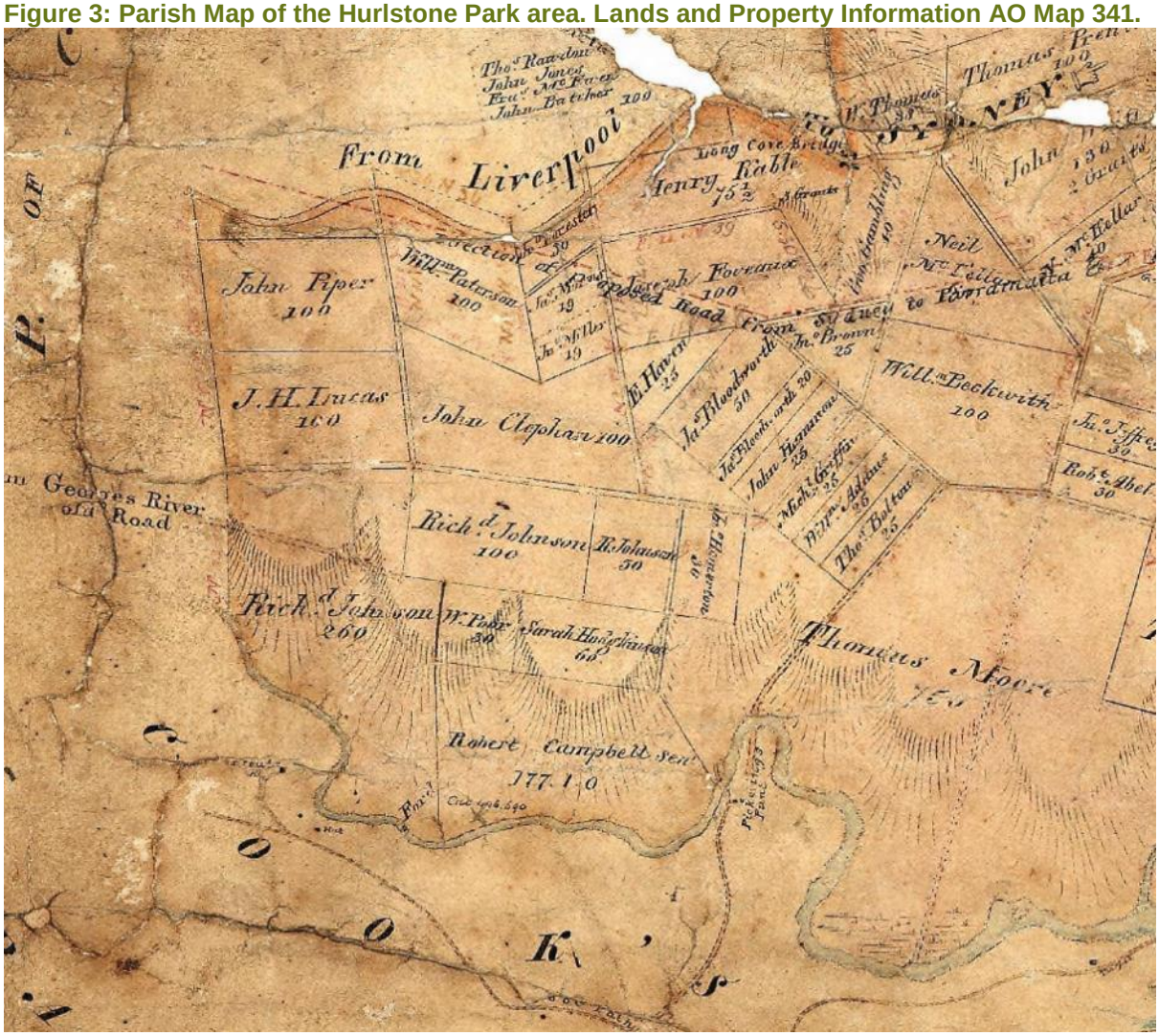
Development of the area north of the Cooks River was relatively slow until the arrival of the railway. The introduction of the railway shifted the mode of settlement from one that was primarily guided by topography to one that was guided by infrastructure. Early parish maps show that the progression of land grants north of the Cooks River (and the relative size of those grants) was primarily guided by the quality of the soil and the development of the road to Liverpool (Parramatta Road) (Figure 3). These maps indicate that the study area ran through Richard Johnston, Thomas Moore and Robert Campbell Senior's land grants, which fronted onto the Cooks River. Although some subdivision occurred, by the advent of the 1880s the landscape was little changed from 50 years previous. Large

[9] Jervis 1951: 14.

landholdings still dominated the area, reflecting the low yield of the land and its lack of rural usability in smaller parcels, despite the growing demand for property in Sydney.

The construction of the Bankstown Line in 1880 changed the nature of the development in the area, and dramatically increased its use value. Despite relative stagnation for much of the nineteenth century, subdivision of the surrounding grants was seemingly epidemic after the construction of the railway. New residential lots were carved out in rapid succession, radiating out from the arterial railway line. Previous focus on rural land use was no longer a decisive factor in the value of the land. Subdivisions were now advertised in terms of their proximity to the railway and its stations.

Figure 3: Parish Map of the Hurlstone Park area. Lands and Property Information AO Map 341.



3.1.2 Development of the Bankstown railway line

Projects to build railways in New South Wales first emerged in 1841. In 1848 a public meeting was held to present a surveyor's report for a route from Sydney to Goulburn. In 1849 the Sydney Railway Company was formed, and the first Sydney station constructed in 1855. The first railway line, linking Sydney to Parramatta, was constructed in 1855. By 1860 the Sydney to Parramatta line had reached Blacktown.

The primary aim of the colony's railways was to allow inland producers to effectively transport their produce to the port of Sydney for export and to open the country up for closer settlement. Improved transport for urban residents was a low priority. A lack of transport was the main drawback for the development of the areas north and west of the Cooks River. From 1880, land speculators began to

purchase farmland in the area south of Cooks River. They petitioned for the government to build a railway to the district to encourage subdivision of the land.[10]

The Sydenham to Bankstown Railway was opened with the initial terminus station at Belmore on 1 February 1895. The line had its origins in Railway Commissioner Goodchap's 1882 recommendation that an additional line was needed between Newtown and Liverpool to relieve traffic on the Southern Line, and to encourage agriculture and suburban settlement. The railway was initially planned as a Loop Line to run from St Peters to Liverpool through the valley of Cup and Saucer Creek south of Canterbury Road (Figure 4).[11] This was intended to relieve crowding at the stations of Homebush and Granville.[12] Other proposals made in the 1880s included Sanderson's line along Wolli Creek and Kennedy's line along the north bank of the Cooks River.[13] These plans did not eventuate, with political interests influencing the decision for a shorter version of Kennedy's line.

Lobbying by local interest groups and land speculators achieved Parliamentary approval by 1890 and construction commenced in 1892.[14] The Bankstown Line was constructed in three stages between 1892 and 1939. The Sydenham to Belmore section was completed in 1895. Sydenham Station had been previously built for the Illawarra line, and was extended to accommodate the new Bankstown Line. This section included Marrickville, Dulwich Hill, Hurlstone Park (originally named Fernhill Station), Campsie, Canterbury and Belmore stations.[15] The line was the first solely suburban line to be built in Sydney.

The construction of the line was undertaken by Proudfoot and Company, who completed the 5.4 miles of railway within eighteen months. The development of the railway line prompted subdivision and business in the region to shift closer to the stations. Shanty towns of tents sprang up along the line, particularly at Canterbury, Campsie Park and Burwood Road. These makeshift villages accommodated navvies, blacksmiths, labourers and their families. During the 1930s, the shanty towns also accommodated those who had been made homeless by the Depression, who were eager to obtain work.[16]

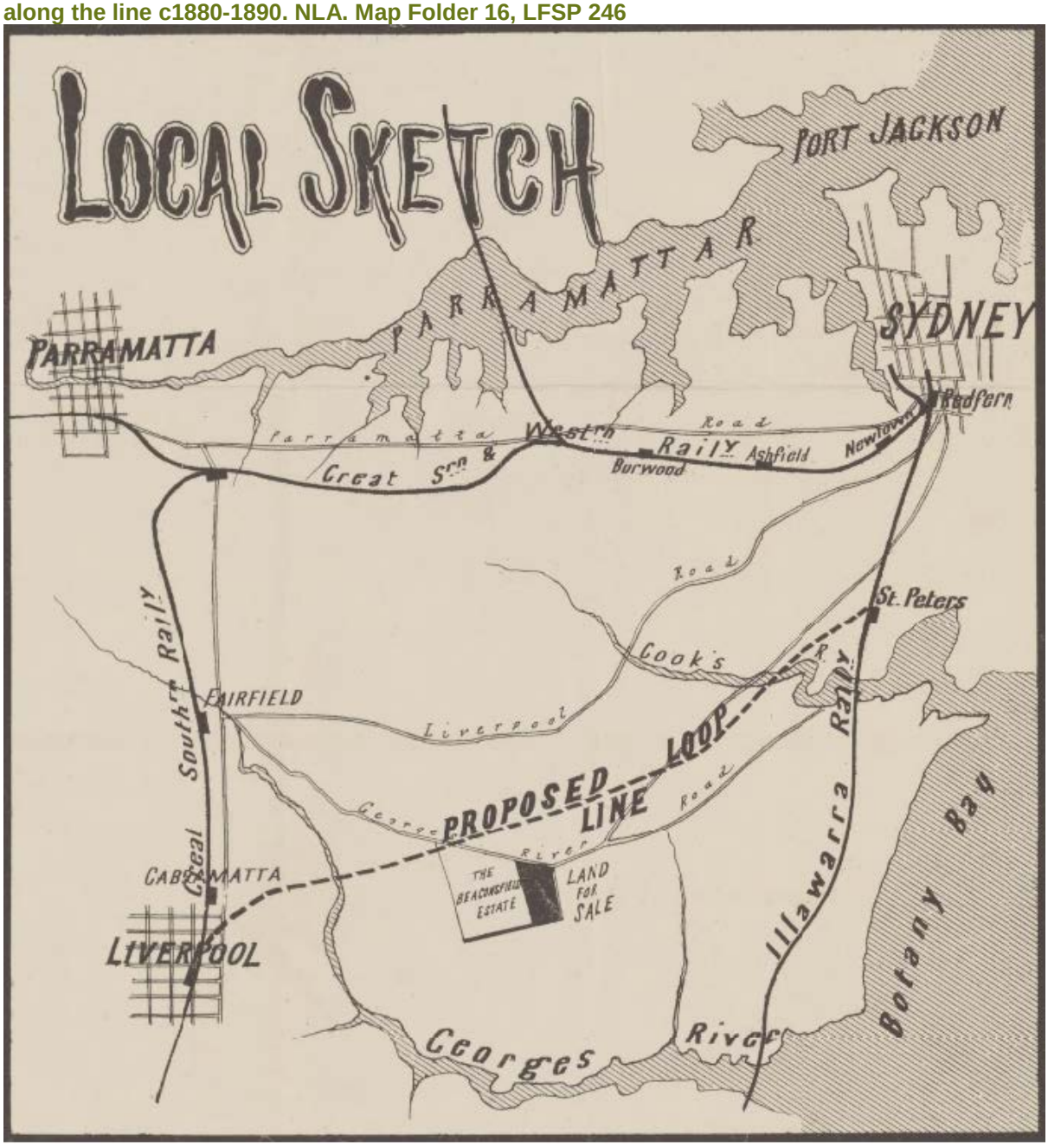
The most important stations on the line, Belmore, Canterbury and Marrickville, were built with impressive near-identical brick buildings (Figure 5). The intermediate stations (Campsie, Dulwich Hill and Hurlstone Park) receiving more modest timber buildings, possibly due to the economic austerity required by the onset of the depression of the 1890s. These were later replaced with brick buildings. The depression also suppressed the profitability of the line and the extension to Liverpool did not proceed. However, suburban development followed in the early twentieth century, particularly during the interwar period when many War Service homes were built west of Canterbury.

The construction contract for the Belmore to Bankstown section was awarded to Monie Bro on 13 November 1907. Bankstown Station was opened as a terminal on 14 April 1909, with Lakemba and Punchbowl Stations also opening at the same date. The extension of the line to Bankstown triggered a huge real estate boom in the area from 1909 until the late 1920s. In 1926, the Bankstown Line was electrified and a maintenance depot was constructed at Punchbowl. A station was constructed at Wiley Park in 1928. In the same year, the line was extended to Regents Park (outside the current

[10] Madden and Muir 2009. *Belmore*
[11] Madden and Muir 2009. *Belmore*
[12] Muir 2013
[13] Muir 2013
[14] State Heritage Inventory "Bankstown Railway Station Group" NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 10 July 12016.
[15] State Heritage Inventory 'Marrickville Railway Station' NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 8 July 2016.
[16] Madden and Muir 1988: 28.

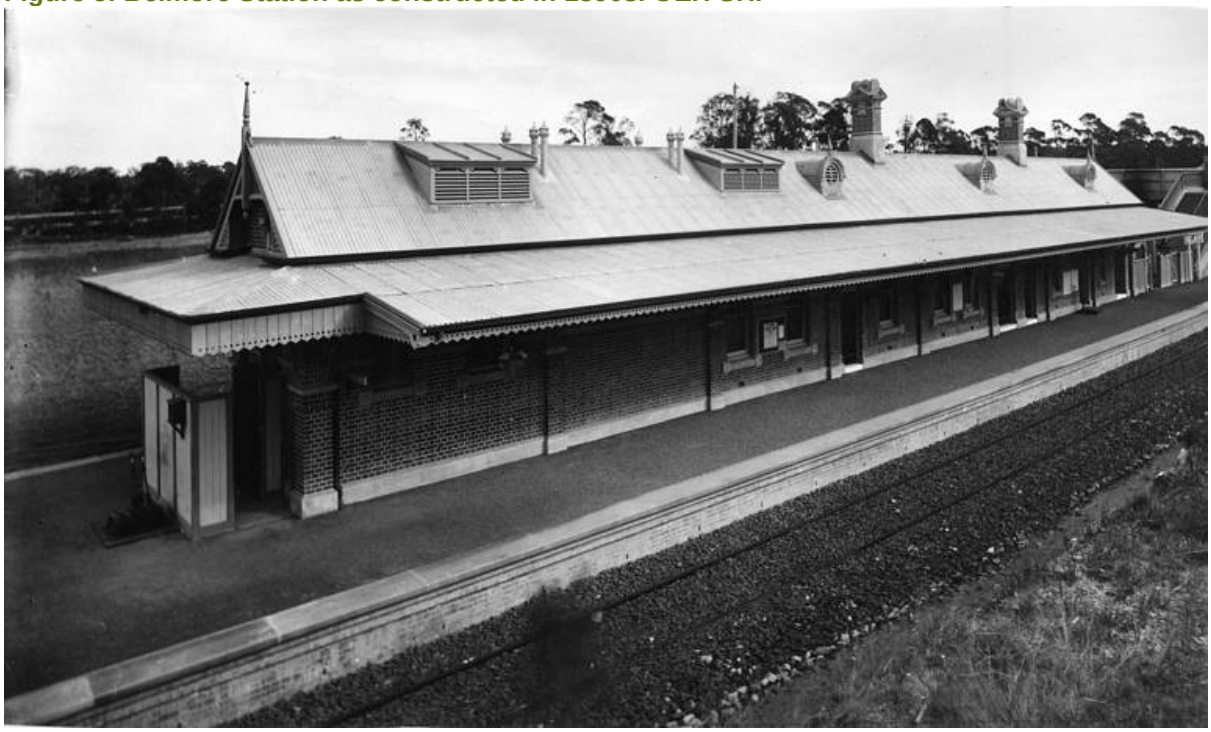
study area) in 1928, making it part of the loop line through Lidcombe, and servicing booming suburban development.[17] Electrification of the line was extended to Regents Park in 1939.

Figure 4: Proposed loop line between St Peters and Liverpool which prompted subdivision along the line c1880-1890. NLA. Map Folder 16, LFSP 246



[17] State Heritage Inventory 'Marrickville Railway Station' NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 8 July 2016.

Figure 5: Belmore Station as constructed in 1890s. OEH SHI



3.2 Key areas of development

3.2.1 Marrickville and Dulwich Hill

Most of Marrickville was previously part of Gumbramorra Swamp. Marrickville contained large residential estates and farms from an early date. During the 1830s and 1840s the outer lying suburbs of Newtown, St Peters, Tempe and Petersham became desirable locations for the construction of rural retreats, due to increasing land prices in the city.[18] In 1799 Thomas Moore received a grant of 470 acres adjoining the swamp and in 1803 a further grant of 700 acres. Moore also purchased adjoining land and by 1807 held 1920 acres, making him one of the largest landowners in the area (Figure 6). His holdings incorporated much of present day Marrickville, Petersham and Dulwich Hill.[19] Douglas Farm, as Moore's Farm was named, was utilised for the growing of maize and wheat and for its valuable stands of timber. Moore was appointed Master Boat Builder in the dockyard at Port Jackson and it is likely that some of the timber from the property went to his shipbuilding yard.

Moore sold his land holdings to Dr Robert Wardell on the 21st of July, 1830.[20] At this time the estate extended from Parramatta Road to Cooks River. Wardell was a flamboyant figure, hosting lavish parties at his home, Sara Dell (originally located on Parramatta Road in the vicinity of the Fort Street High School), and stocking his property with imported English deer for hunting.[21] In September 1834 Wardell stumbled across the camp of three escaped convicts whilst riding along the Cooks River and was murdered. The estate was divided amongst his sisters, Anne Fisher, Margaret Fraser and Jane Isabella Priddle.[22] Wardell's death opened the way for the first era of subdivision in the area[23] and parts of his land began to be sold off soon after his death.[24]

[18] Cashman and Meader 1990: 108.
[19] Cashman and Meader 1990, 40
[20] Cashman and Meader 1990, 40
[21] Meader 2008
[22] Cashman and Meader 1990, 88
[23] *Ibid*.
[24] *Ibid*, 42.

Figure 6: Undated plan of the Parish of Petersham, showing Thomas Moore's grant of 470 acres. The study area was located within this grant. NSW Lands & Property Information, AO Map 341.

Marrickville

Following the subdivision of Wardell's estate, Marrickville became a popular location for farms and market gardens due to the proximity of ample water supplies in the Gumbramorra Swamp. Stonemasons mined the sandstone cliffs along the Cooks River and ridge lines of the Marrickville valley and numerous small dairy farms were established (Figure 7). [25]

In 1855 Thomas Chalder subdivided his 60 acre Marrick Estate, establishing the street grid for what would become the village of Marrickville. Municipal buildings, shops, churches and residences soon followed, bounded by the present-day Illawarra Road, Chapel Street, Fitzroy Street and Sydenham Road. Parts of Marrickville remained well timbered and the area continued to be referred to as Wardell's Bush. [26] By the mid-19th century Marrickville was a thriving rural suburb with a diverse population that included small agricultural properties, residences and grand estates owned by wealthy professionals. An 1895 real estate plan indicates that many of the small residential lots were occupied prior to the construction of Marrickville Station (Figure 8).

By the late nineteenth century many of the market gardens had been replaced by small-scale brick making pits. This brickmaking industry at the time provided greater profits than market gardening, and the loamy soil was mined throughout the Marrickville area to produce, initially, hand-made bricks, and,

[25] Meader 2008a.
[26] *Ibid*.

as technology advanced, steam and machine-made bricks.[27] The area took on an increasingly industrial character, as earlier large residences were demolished, numerous large brickmaking businesses were established, and estates subdivided to provide affordable housing for workers.[28] Other industrial enterprises included woollen mills, steel and metal operations and automotive industries. As a result, the population of the area surged to meet the demand for workers.[29]

As the clays of the area were depleted, the large pits were abandoned, and left to fill with water. Drowning tragedies occurred throughout the district as a result. In the early twentieth century, many of these earlier pits were resumed by the Marrickville Council and turned into public parks.[30]

The process of deindustrialisation began in the 1970s when many of the larger companies moved to cheaper areas or closed down.

Marrickville Station

Marrickville Station was constructed on the first section of the Bankstown Line between 1894 and 1895. The station was constructed to relieve congestion on the Main South Line, and to encourage the suburban development and agricultural development of the area (Figure 9).

The Marrickville Station buildings were designed by the NSW Government Railways and constructed by Alexander Scouller. The platform building represents a period of architectural transition in railway building construction, from the boom time of the 1880s to the standardisation of NSW railway building design from the 1890s onwards (Figure 10, Figure 11, Figure 12).[31]

Some changes were made to the station layout with construction of the Metropolitan Goods Line in 1917. A new Up platform and building were built with overhead booking office, and the Up side of the island platform was withdrawn from use as one of the goods lines now passed it (Figure 13). The platforms were also lengthened at this time.[32] In 1926 the electrification of the railways resulted in smaller changes to the layout of the station. In 1944 the booking office on Platform 2 was altered, and in 1985 a set of stairs from Illawarra Road were constructed.

The opening of the station stimulated residential and commercial development in the immediate area, including the residential subdivision of the Marrickville Heights to the south (Figure 14), Marrickville Station Estate to the north (Figure 15), and Riverdale Estate to the southeast (Figure 15).

[27] *Ibid*
[28] Meader 2008
[29] Meader 2008
[30] Meader 2008
[31] State Heritage Inventory 'Marrickville Railway Station' NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 8 July 2016.
[32] State Heritage Inventory 'Marrickville Railway Station group' NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 8 July 2016.

Figure 7: Dairy at the corner of Carrington Road and Ruby Street, Marrickville 1899. Source: Marrickville Council Library and History Services.

Figure 8: 1895 Chapman & Hazlewood plan of Marrickville: valuable business positions, desirable villa and cottage sites. NLA MAP Folder 100, LFSP 1480.

Figure 9: Detail of c.1885-90 plan of Marrickville, showing Marrickville (now Sydenham) Station, and the proposed rail line on which the present-day Marrickville Station would be constructed. City of Sydney Archives, Historical Atlas of Sydney, Atlas of the Suburbs of Sydney ca 1885-1890 – Marrickville.

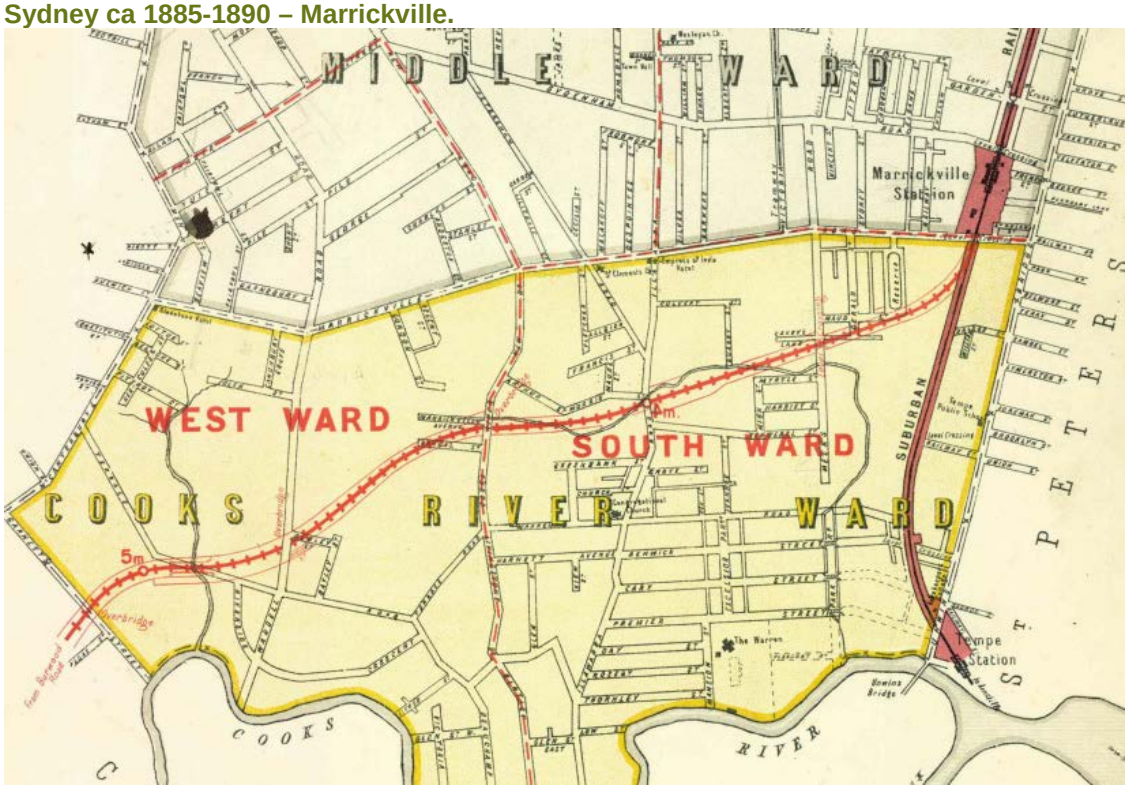


Figure 10: Group portrait at Marrickville Station, c. 1890. NLA nla.pic-vn4697485.

Figure 11: Marrickville Station in 1899. Marrickville Library and History Services.

Figure 12: n.d. unidentified rail worker at signal box of Marrickville Station. Marrickville Library and History Services.

Figure 13: c.1887 Richardson & Wrench Brian's Estate, on the Heights at the Marrickville Railway Stn. NLA MAP Folder 99, LFSP 1457.

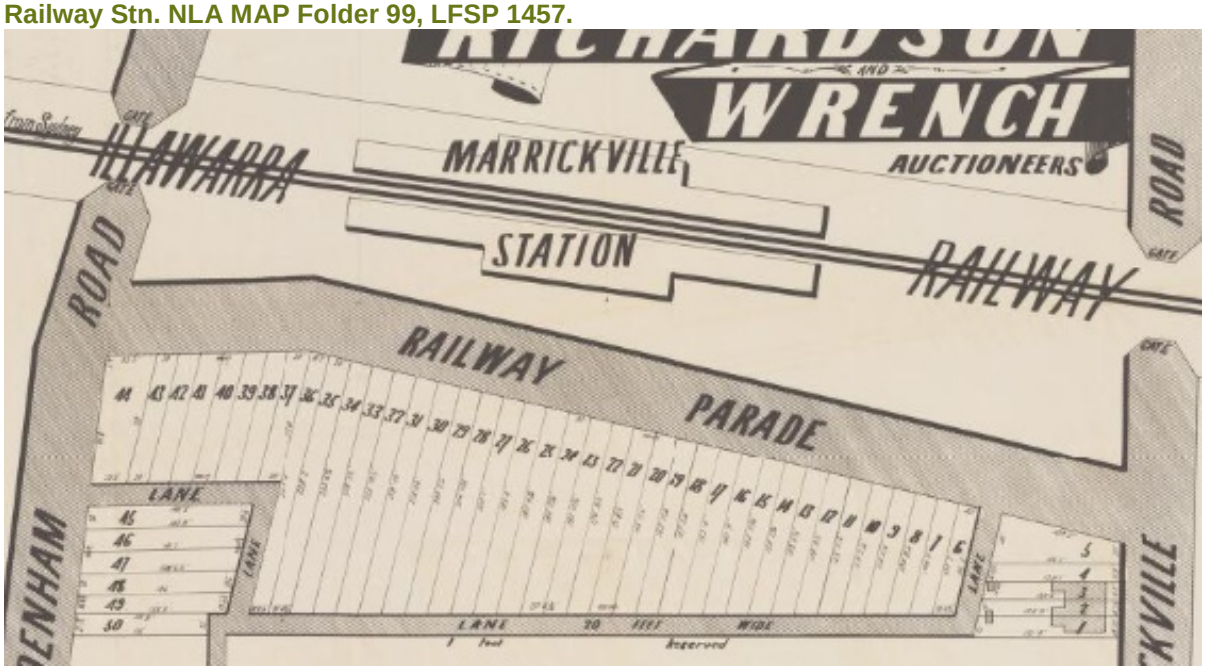


Figure 14: H.W. Horning & Co c.1907 Marrickville Station Estate. NLA MAP Folder 100, LFSP 1499.

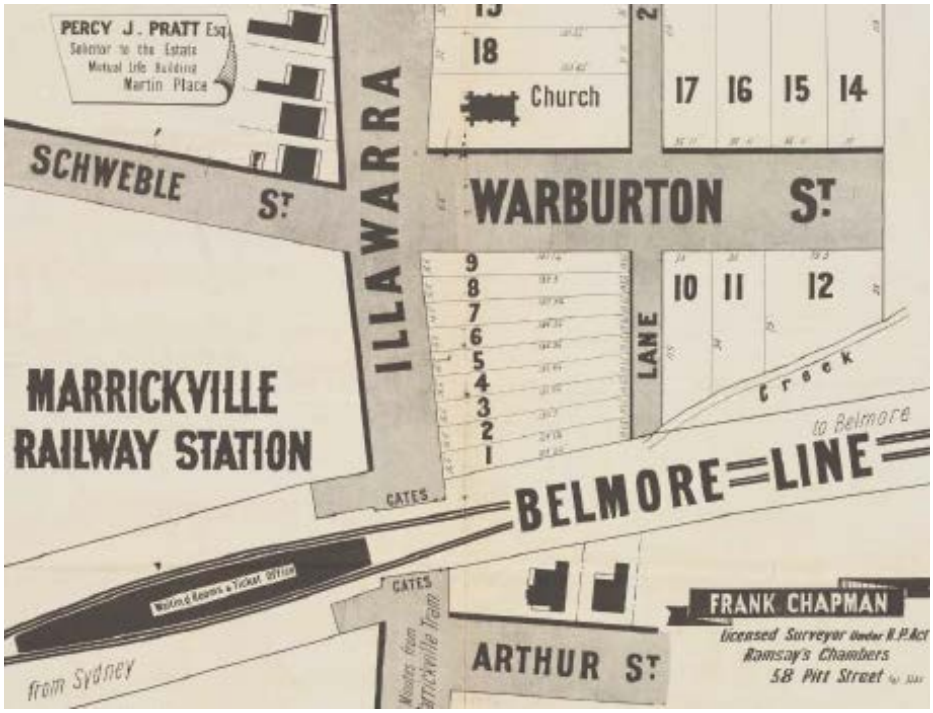


Figure 15: c. 1920 Hardie & Gorman Pty. Ltd Riverdale Estate, Marrickville: 58 allotments: adjoining Marrickville Station. NLA MAP Folder 100, LFSP 1504.

Dulwich Hill

Much of Dulwich Hill, like Sydenham and Marrickville, was originally part of Thomas Moore's 1799 land grant (Figure 6), and later part of Wardell's substantial property. The area was known as Wardell's Bush or Wardell's Hill into the late nineteenth century.

The name 'Dulwich Hill' came from the smaller subdivision of the Dulwich Grove and Dulwich Estate.[33] Like neighbouring Marrickville, Dulwich Hill had a good water supply due to the proximity of the Cooks River and Long Cove Creek. By the mid nineteenth century market gardens, orchards, small brickmakers and potteries dominated the area.

[33] Meader 2008b.

By the late nineteenth century the commercial centre of Dulwich Hill had been established on New Canterbury Road, in the vicinity of the 1889 steam tram and horse-bus that provided transport to Sydney. The storefronts included blacksmiths, butchers, tobacconists, a chemist, produce store and harness makers.[34] Marrickville Road was dominated by large residential estates and gardens, including Marcus Clark's Sefton Hall. When Sefton Hall was demolished in the early twentieth century, the land was subdivided, and several blocks of shops constructed on Marrickville Road. [35]

Dulwich Hill became increasingly industrialised following the opening of the goods line in 1913, and factories such as the Great Western Milling Company, the Western Timber Mill and Sidney Williams & Co Pty Ltd took advantage of the ability to move their goods efficiently.[36] Like Marrickville, the employment opportunities provided by these large factories attracted numerous workers to the area, and land was further subdivided to provide housing (Figure 16). As factories shut down and producers moved to more affordable locations on the suburban fringe, houses, apartments, schools and parks were constructed in their place.

Figure 16: C.1936 photograph of Canonbury Grove, a typical street in Dulwich Hill, north of the railway line. Marrickville Library Service.

A number of the streets in the vicinity of present-day Dulwich Hill (then Wardell Road) railway station were subdivided around 1910, including Challis Avenue, Anderson Street (renamed Kays Avenue), Tamar Street, Albermarle Street and School Parade. The proximity of the railway line made the subdivisions popular, and the lots were sold quickly and were soon built upon.[37] O.S.R. Andrews, a local builder, was very active at this time, building many of the houses in Kays Avenue.

The last extensive subdivision of land in the Marrickville LGA occurred in 1928 at Dulwich Hill. This was the Abergeldie Estate, property of Sir Hugh Dixson, tobacco tycoon and philanthropist, located to the north of the railway line (Figure 17).

[34] *Ibid.*
[35] *Ibid.*
[36] *Ibid.*
[37] State Heritage Inventory 'South Dulwich Hill Heritage Conservation Area' NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 8 July 2016.

Figure 17: Abergeldie House and gardens which was demolished in the 1920s. Source: Inner West Council 'History of Suburbs – Dulwich Hill.'

Dulwich Hill Station

Dulwich Hill Station opened on 1 February 1895 as Wardell Road railway station. It was renamed 'Dulwich Hill' in 1920. The station itself was located some distance to the south from the main shopping strip of Dulwich Hill on New Canterbury Road. This area was originally known as West Marrickville. [38]

In 1935 the original 1895 timber station buildings were replaced. Historic plans dated 1935 show the demolition of the original platform building and the construction of a new brick platform building; a new overhead weatherboard booking and parcels office and bookstall; and the relocation of the stairs to the platform to accommodate modifications.[39] The layout of the station after these changes is evident in an aerial photograph dating to 1943 (Figure 18).

[38] Meader, 2008b.
[39] State Heritage Inventory 'Dulwich Hill Railway Station group' NSW Heritage Branch, Office of Environment and Heritage, Parramatta NSW. Accessed 8 July 2016.

Figure 18: Dulwich Hill Station in 1943. Lands and Property Information, SIX Maps.

3.2.2 Hurlstone Park

The suburb of Hurlstone Park was originally part of a 673 acre estate belonging to Sydney Merchant Robert Campbell. In 1846 Campbell's daughter Sophia inherited the estate, and in 1865 it was subdivided into four large farms.[40] The farms fronted cart tracks that were originally formed by quarrymen accessing sandstone quarries used in the construction of large early buildings in Canterbury, including the Sugarworks (constructed in 1840) and St Paul's Church (constructed in 1859). These roads are today known as Floss Street, Burnett Street and Ford Avenue. [41]

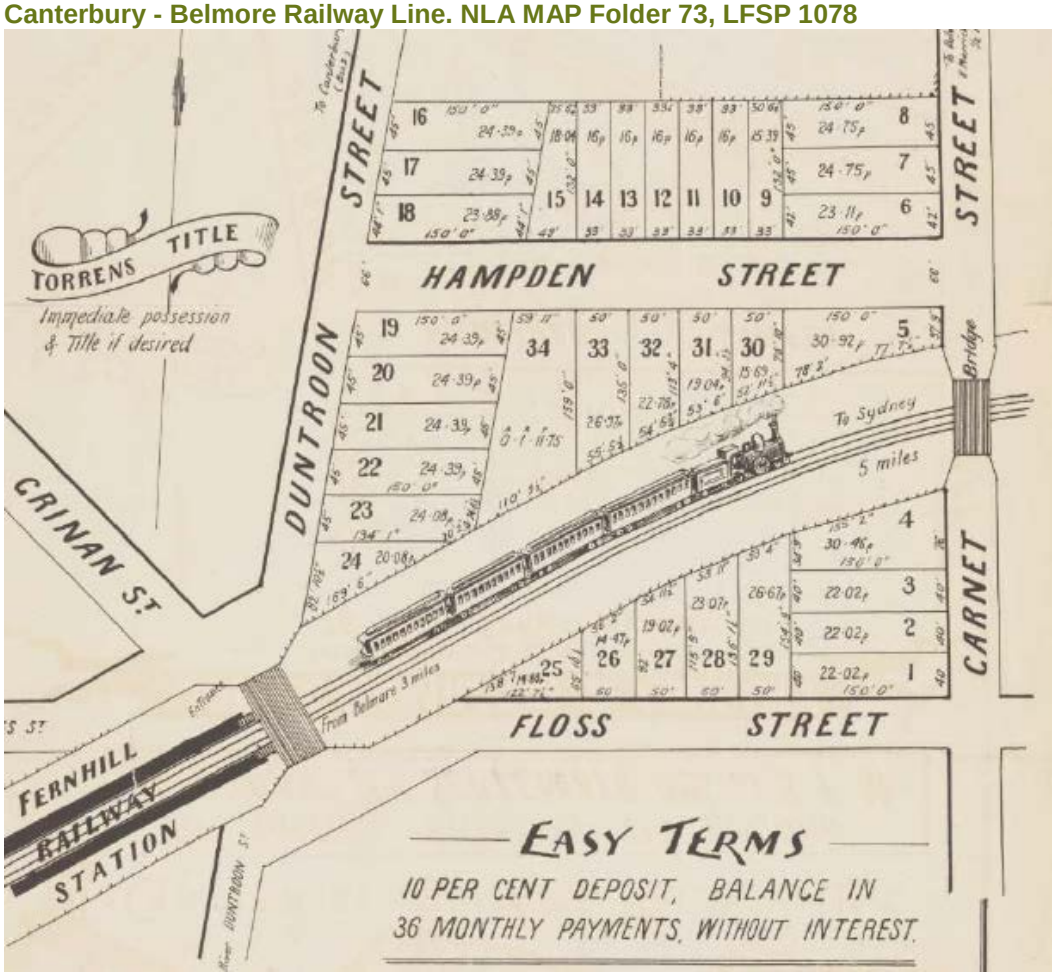
In 1874 the Campbell estate was further subdivided into a number of smaller farms, and Dunstaffenage, Duntroon, Kilbride, Melford and Crinan Streets were formed and named for Scottish castles and landmarks associated with the family.[42] A small creek was originally located at the end of present-day Crinan Street. By the end of the nineteenth century, the land on the south side of Crinan Street from Dunstaffenage Street to the creek was part of Pendlebury's brickworks. Blamire's brickworks, in operation from about 1833, was located on the north side of Crinan Street. Figure 19 shows one of the first subdivisions on the new railway line, in the vicinity of newly formed Crinan Street and within land formerly belonging to Blamire's brickworks. The area appears to be sparsely populated at this time, with only two of the lots, on the corner of Dunstaffenage and present-day Barre Streets, containing cottages. Many of the allotments remained unsold until the Marrickville to Belmore railway was approved. A photograph from the 1890s demonstrates the landscape at the time (Figure 20). Hurlstone Park Station was originally known as Fernhill Station, named for Sophia Campbell's home in England (Figure 21). [43]

[40] Muir and Madden 2008.
[41] *Ibid.*
[42] *Ibid.*
[43] *Ibid.*

Figure 19: c.1880-1899 plan by Arnold W. Love, showing Allotments at Marrickville, Sydney, one of the first subdivisions on the new railway line. NLA.obj-229979389.

Figure 20: A view of the Cook's River in the 1890s, from Canterbury, looking east towards the area that would become Hurlstone Park (centre left of image). City of Canterbury Local History Photo Collection file no. 050\050554.

Figure 21: Detail from the 1895 John C. Hamilton & Company, Fernhill Station Estate, on the Canterbury - Belmore Railway Line. NLA MAP Folder 73, LFSP 1078



At the end of the nineteenth century the primary industries of the area were dairy farming and brickmaking. William Pendlebury built the first shop near the railway station about 1903, and the shopping centre grew rapidly from that time (Figure 22). By 1916, there were about twenty-five shops in Hurlstone Park, including two banks, two estate agents, three confectioners and a pastrycook, three grocers, two butchers, a ham and beef shop, three fruiterers, two drapers, a ladies' outfitter and a seller of musical instruments (Figure 23).

The area expanded rapidly between 1900 and 1918. At this time many of the small farms were subdivided into residential housing estates, stimulating a building boom in the area.[44] The extension of the tramline into the suburb in 1913 also encouraged the development of shops around the terminus on New Canterbury Road, resulting in the development of two shopping centres for the suburb. Prior to this, the primary form of public transport was by horse-drawn bus (Figure 24).

The locality became known as Hurlstone after a local referendum in 1910, when the Postmaster General's Department insisted that the name of the area be changed as there were already two post offices with the same name.[45] 'Hurlstone' was taken from the name of a college that was located on the site of present-day Yeo Park in Ashfield, and is now part of Trinity Grammar School. The suburb became 'Hurlstone Park' to avoid confusions with the Hillston railway station in western NSW.[46]

[44] Muir and Madden, 2008.
[45] *Ibid.*
[46] *Ibid.*.

Figure 22: c. 1903 Richardson & Wrench Jeffreys Estate, Fernhill, Marrickville & Belmore Railway Line, 1st subdivision. NLA MAP Folder 100, LFSP 1491.

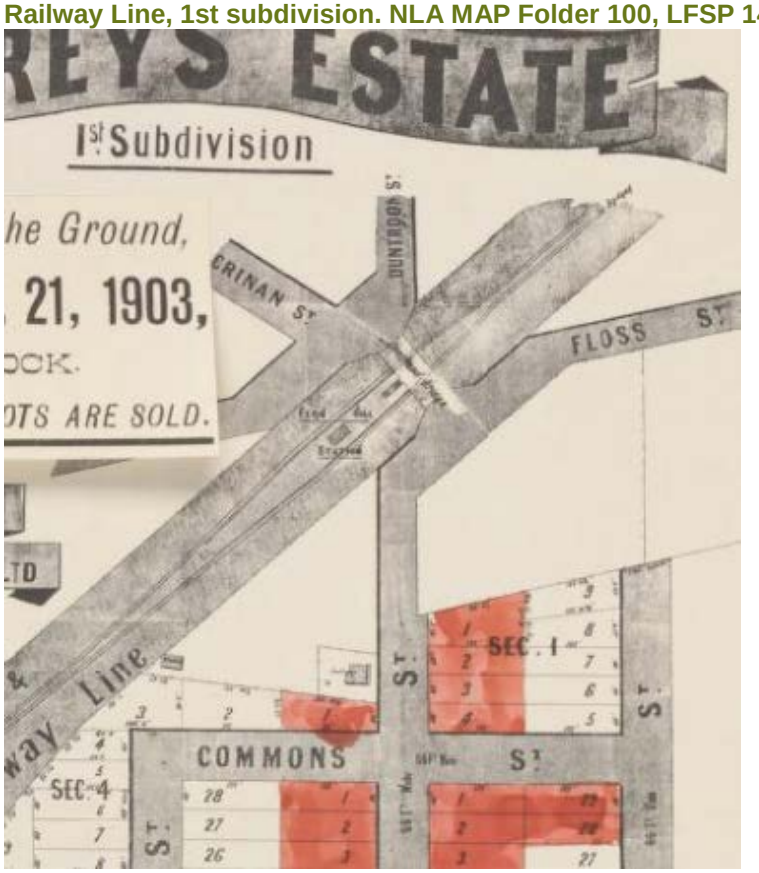


Figure 23: Shops on Crinan Street in Hurlstone Park, looking south-east towards the station, c.1920. State Library of NSW call no. At Work and Play – 02341.

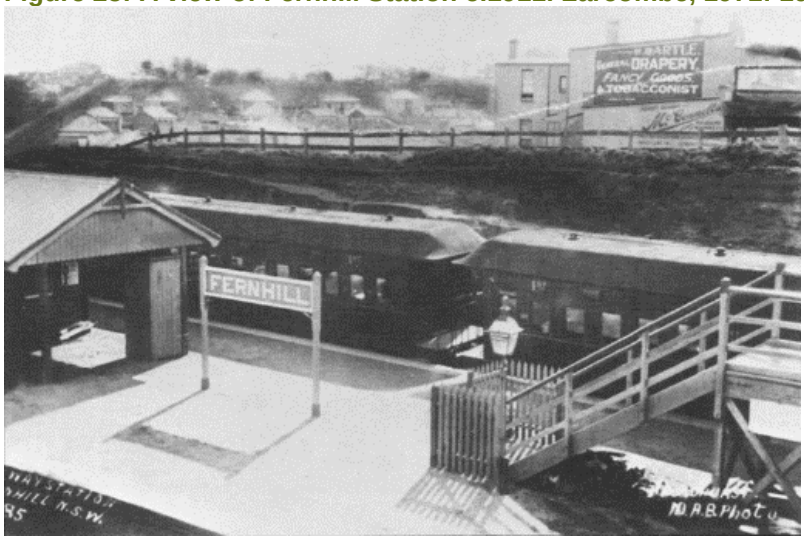
Figure 24: Horse drawn bus on Canterbury Road, Hurlstone Park in 1908. City of Canterbury Local History Photo Collection file no. 050\050249.

Hurlstone Park Station

Hurlstone Park Station was opened as Fern Hill on 27 November 1894 (Figure 25). It was renamed Hurlstone Park on 19 August 1911. In this year the Metropolitan Goods line was built past the station and a new Down platform was built. In 1915 the original timber station building was replaced by brick buildings on both platforms and an overhead booking office. The latter was replaced in the 1980s by a new booking office.[47]

[47] State Heritage Inventory 'Hurlstone Park Railway Station' Accessed 11 July 2016.

Figure 25: A view of Fernhill Station c.1911. Larcombe, 1971: 197.



3.2.3 Canterbury

1788-1841: Early Settlement and Farming

The suburb of Canterbury north of the Cooks River was originally part of land granted to Reverend Richard Johnson (Figure 26 and Figure 27). This grant, initially of 100 acres, was periodically added to throughout the late eighteenth century. Named 'Canterbury Vale,' Johnson successfully farmed the land with the assistance of convicts and hired men until it was sold to Lieutenant William Cox in 1800. At this time the property consisted of 600 acres of land, including two acres of vineyards, an orchard, 150 sheep, a mare, three fillies and some horned cattle.[48] The study area was located at the southern edge of the grant, near the banks of the Cooks River.

William Cox hired Joseph Holt to assist him in maintaining the property. In Holt's memoirs, he refers to his commencing construction of a grand house for Cox, although it is unclear whether this house was completed. By October, 1800, the farm had 24 acres under crop. Three shepherds were employed on the farm, suggesting that Cox was breeding sheep. Two sawyers, three carpenters, two stone cutters and 20 labourers were also employed on the farm.[49]

In 1803 Cox sold his 900 acre Canterbury Farm to the merchant Robert Campbell. In 1812 Campbell offered the estate for rent. At this time the property contained, in addition to Canterbury Farm, nine farms. Canterbury Farm was listed as being mostly cleared, and containing a house and other buildings. Campbell does not seem to have been successful in finding a tenant, and in 1814 the property, now consisting of 1040 acres, was offered for sale. A purchaser was presumably not found, and throughout the 1820s the farms were used for the grazing of Government bullocks.[50] The Campbell's held the land for many years, and when it was finally subdivided and sold off throughout the nineteenth century, it extended from the Cook's River at Canterbury to the Liverpool Road in Ashfield.

The Village of Canterbury dates to 1841, when 66 allotments of Campbell's Canterbury Estate were offered for sale (Figure 26). By November of that year the village contained a school, a building used as a chapel, and a store. Remaining lots for sale were said to be cleared and fenced. A brick kiln was also located on the estate. The under-sheriff of Sydney, Cornelius Prout, constructed Prout's Bridge over the Cook's River in 1841 using convict labour (Figure 28). Prior to this he had operated a punt

[48] Jervis 1951: 17.
[49] Jervis 1951: 18.
[50] *Ibid*: 20.

between Canterbury village and his farm in the south side of the river. The railway station at Canterbury would later be constructed partially within Prout's property (Figure 32).

1841-1855 Establishment of Canterbury and the Australasian Sugar Company

In the second half of the nineteenth century Canterbury was dotted with palatial colonial mansions on large estates. During these years, the area had experienced very little industrial development, and residential development was largely limited to that at Canterbury village itself (Figure 27). The first series of subdivisions began in the 1840's, but were more concerned with dividing the early large land grants into smaller farms.[51]

The primary industry of the area was timber cutting, brick making and sugar works, constructed between 1840 and 1842 for the Australasian Sugar Company on 60 acres of Robert Campbell's original property (Figure 26, Figure 27 and Figure 28). The study area dissects part of the southern extent of the company's land as shown in Figure 27. A number of outbuildings associated with the sugar works were located in this area, although the main mill structure is located outside of the current study area boundary. The Old Sugarmill (located at 2-4 Sugar House Road, Canterbury) is one of the last remaining elements of the site within the landscape today.

An 1841 plan showing '95 proposed allotments adjoining the Australasian Sugar Company's works includes nine buildings and a circular feature labelled 'spot where the coal miners are at work', west of the sugar work's property boundary. Some of these are located within the study area, at the site of the proposed Canterbury Station Catchment construction worksite (shown in Figure 26). A number of structures within the mill's property are also shown to occupy land within the study area and an area now occupied by the current rail line.

Later plans prepared in 1843 and c1850 show a number of buildings occupying what is now Canterbury Road and Church Street (originally George Street and Sugar Mill Road respectively), as well as Robert, Broughton and Close Streets (Figure 29 and Figure 30). Some are located within the study area although they are likely to have been resumed and demolished to make way for the railway in 1895.

[51] Larcombe 1971: 172.

Figure 26: 1841 Plan of 95 allotments at Canterbury adjoining the Australasian Sugar Company's works by W. H. Wells Land Surveyor, showing location of the mill, nearby structures and mining area. Source. National Library of Australia. Note. Plan shows approximate location of structures and may not be an accurate representation.

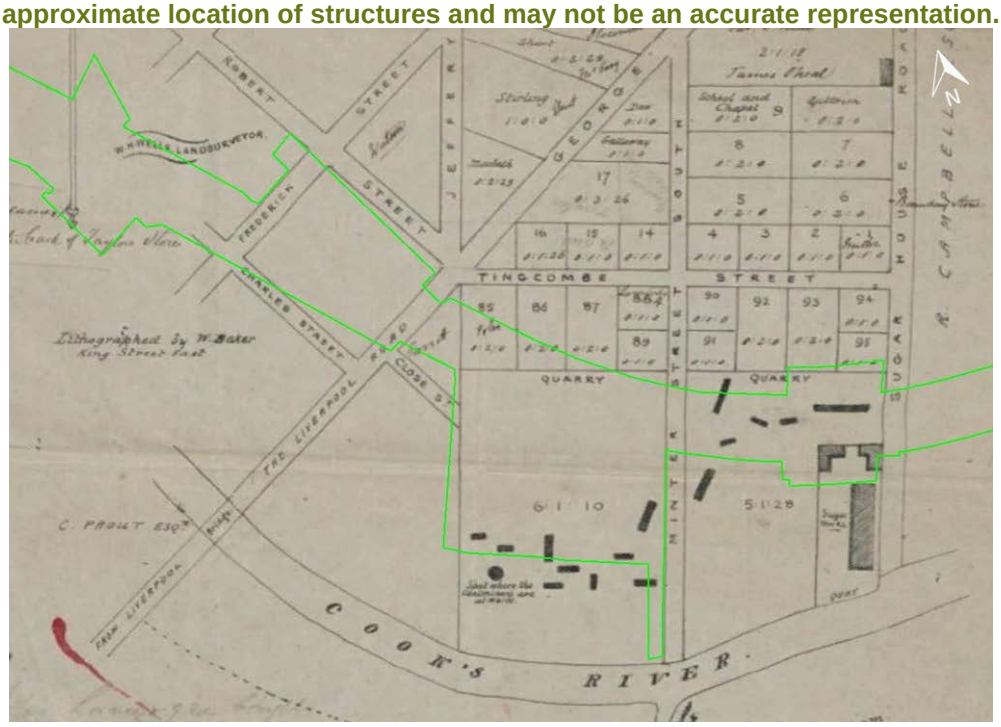


Figure 27 1842 Plan of the Canterbury estate showing land occupied by the Australasian Sugar Company and associated structures. Study area outlined in green. Source. State Library of NSW. Note. Plan shows approximate location of structures and may not be an accurate representation.

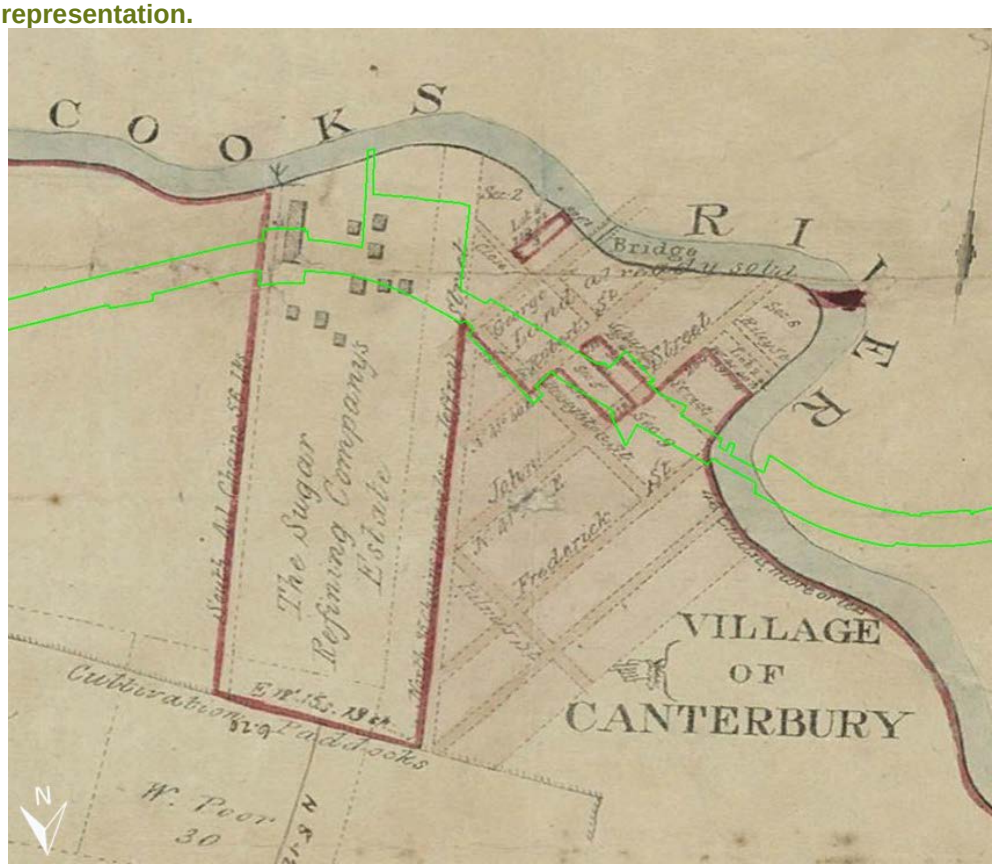


Figure 28 c.1859 Canterbury & Prout's Bridge on Cooks River by Henry Grant Lloyd, showing the Sugar works to the right of the painting. The cottages on the far side of the river to the left of the image are in the vicinity of Robert Street and present day Canterbury Road (George Street). Source. State Library of New South Wales [a5894078 / DL PX 42] (Dixson Library).

Figure 29. 1843 Plan of the Village of Canterbury showing various structures fronting onto what is now Canterbury Road and Robert, Broughton and Close Streets. Source. State Library of NSW. Note. Plan shows approximate location of structures and may not be an accurate representation.

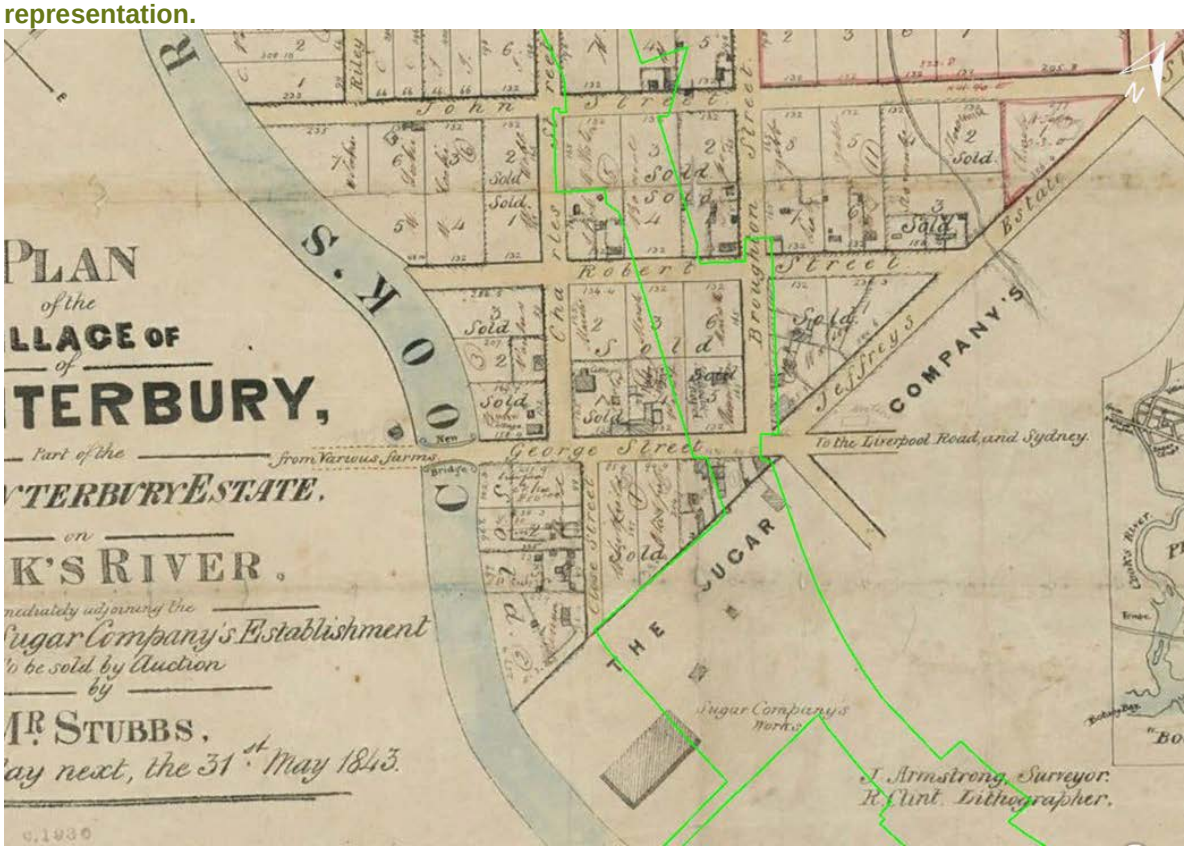
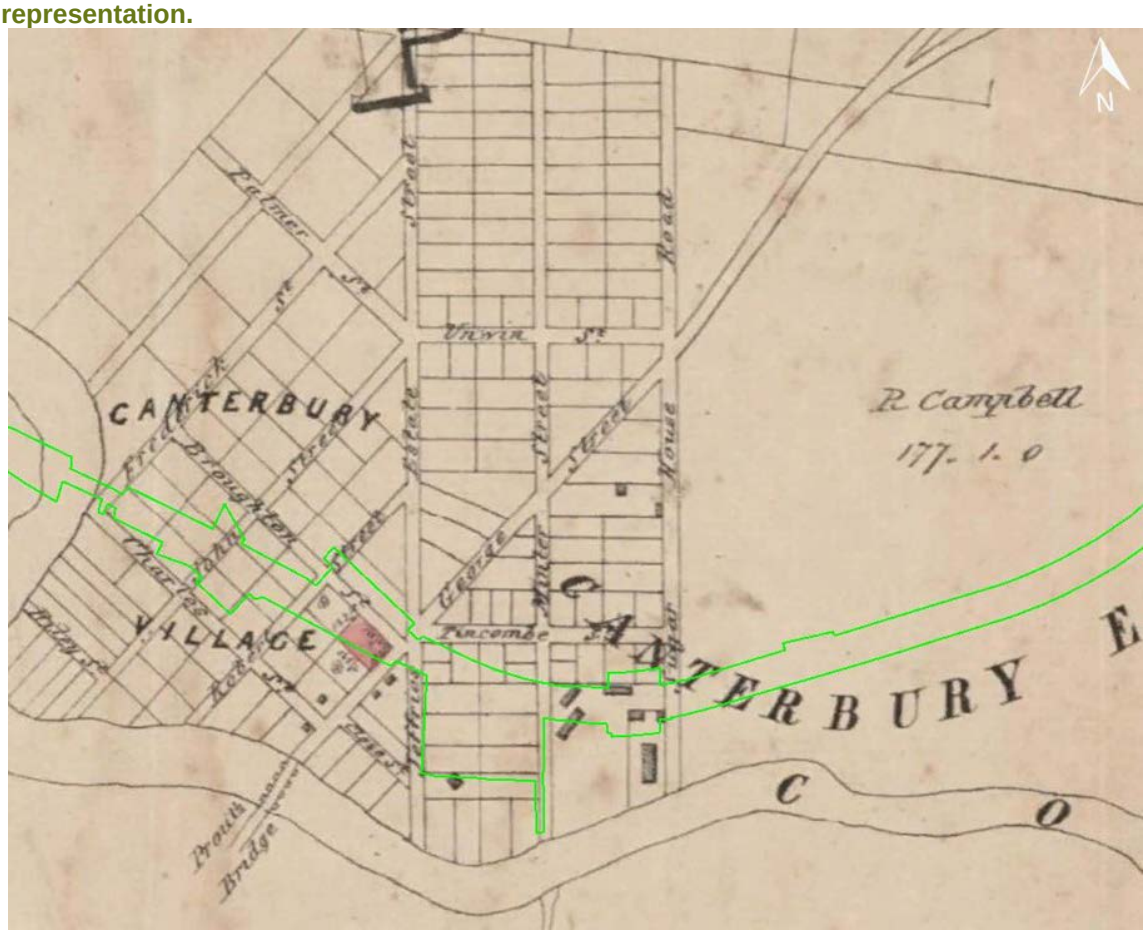


Figure 30: c1850 sketch showing Canterbury estate and Canterbury village with various buildings along what is now Canterbury and Church Street. Source. National Library of Australia. Note. Plan shows approximate location of structures and may not be an accurate representation.



1855-1895: Urban Development

The Australasian Sugar Company's works closed in 1855, and the site was not used again until 1884. This had a negative economic impact on the area, and little development occurred for the next two decades, although a wool washing establishment was later opened on the south side of the Cook's River in 1868 (south of the study area).

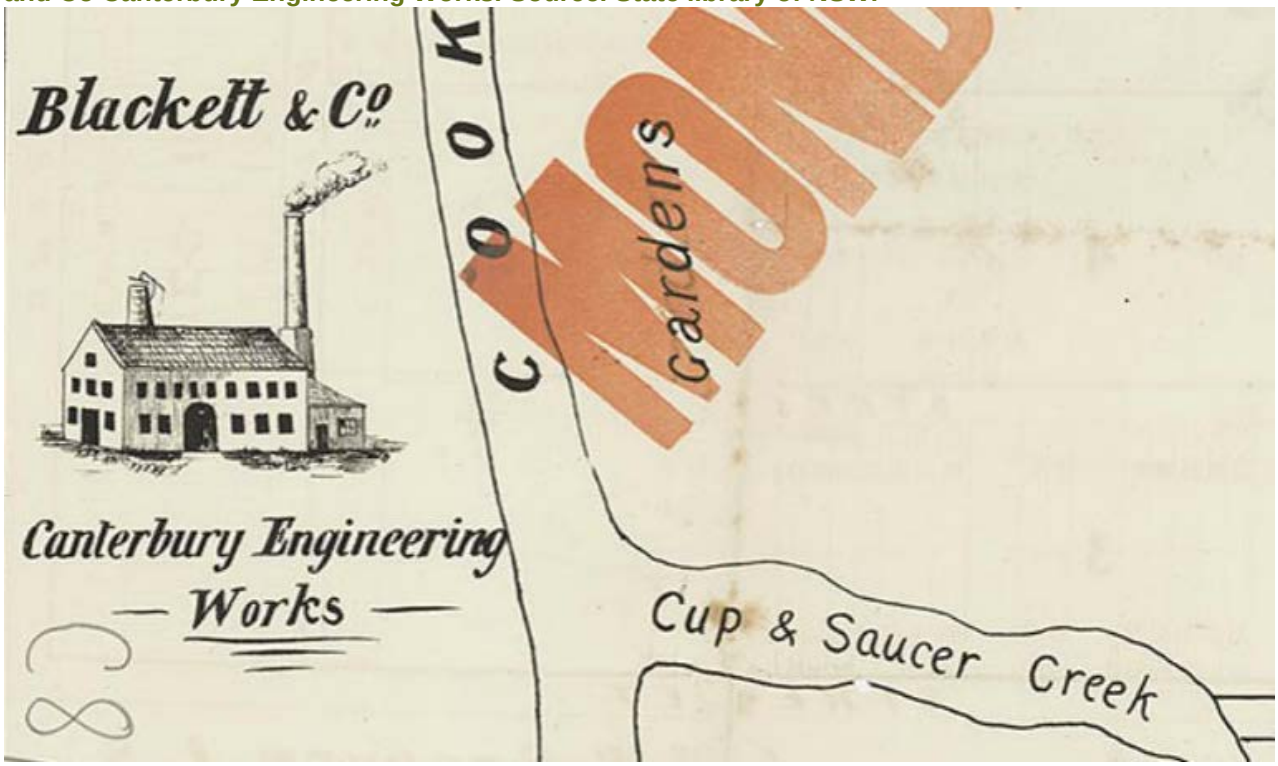
Canterbury changed dramatically in the 1880s, when Sydney experienced a surge in urban development. Initially, sales in the suburb were slow. The poor state of its roads and lack of public transport were accentuated when compared with areas on the rail and tram networks.[52] The first post office opened in 1858, and the first official public school in 1878, and the district slowly developed. Canterbury Race Course, on the northern bank of the Cooks River has been one of Sydney's major racetracks since 1871.

Between 1880 and 1892 the population of Canterbury rose by only 1500, indicating that the area is likely to have retained much of its rural character. Journalists at the time commented on the nature of the area, stating that the large house blocks and older-style residences made it appear 'old-fashioned'. In 1888 it was noted that the residents did not wish for water to be pumped into their homes due to the expense, and continued to use tank and wells.[53]

[52] *Ibid*: 176.
[53] Jervis 1951: 32.

In 1881, the site of the Australasian Sugar Company's works (now consisting of 11 acres, 2 roods and 28 perches, and an adjacent parcel of land containing 2 acres, 2 roods and 26 perches) was purchased by Edward Cox. This was then mortgaged by Edward Clissold, who conveyed the site to Owen Blackett. Blackett then established the Blackett & Co Canterbury Engineering Works on the property. This specialised in producing ironwork for the railways.[54] The ironworks set up production within the original sugar works mill building, as shown in Figure 31. Whether the additional outbuildings extended west into the study area is unknown. The company declared bankruptcy in 1886 although may have continued to operate until 1890.[55]

Figure 31: 1884 Redmans Canterbury Allotments Subdivision Plan showing detail of Blackett and Co Canterbury Engineering Works. Source. State library of NSW.



1895-1943: Canterbury Station, Resumptions and Development

Prior to the arrival of the railway in 1895, Canterbury remained relatively undeveloped due to its isolation from the rest of the city, and much of the study area west of the Old Sugarmill remained occupied by small cottages. To accommodate a rail line through Canterbury, land was resumed and the original street layout slightly altered as evidenced by plans shown in Figure 33 and Figure 34. The original property boundary of the Robert Campbell's estate and Australian Sugar Company works was dissected, and several properties along, and west of, Canterbury Road resumed. It is possible that the area west of the sugar works, that had once been occupied by outbuildings and mining operations was cleared at this time, as they do not appear on later plans.

The opening of Canterbury Station on February 1, 1895, encouraged land sales throughout the area (Figure 33 and Figure 34). The subdivision catering to the new station was called the Silver Park Estate. The station consisted of two impressive polychromatic brick platform buildings (Figure 35). A branch line leading to sidings used on race days at the Canterbury Racecourse was also constructed (since demolished; Figure 36). Extensive cuttings within the existing bedrock took place at this time in

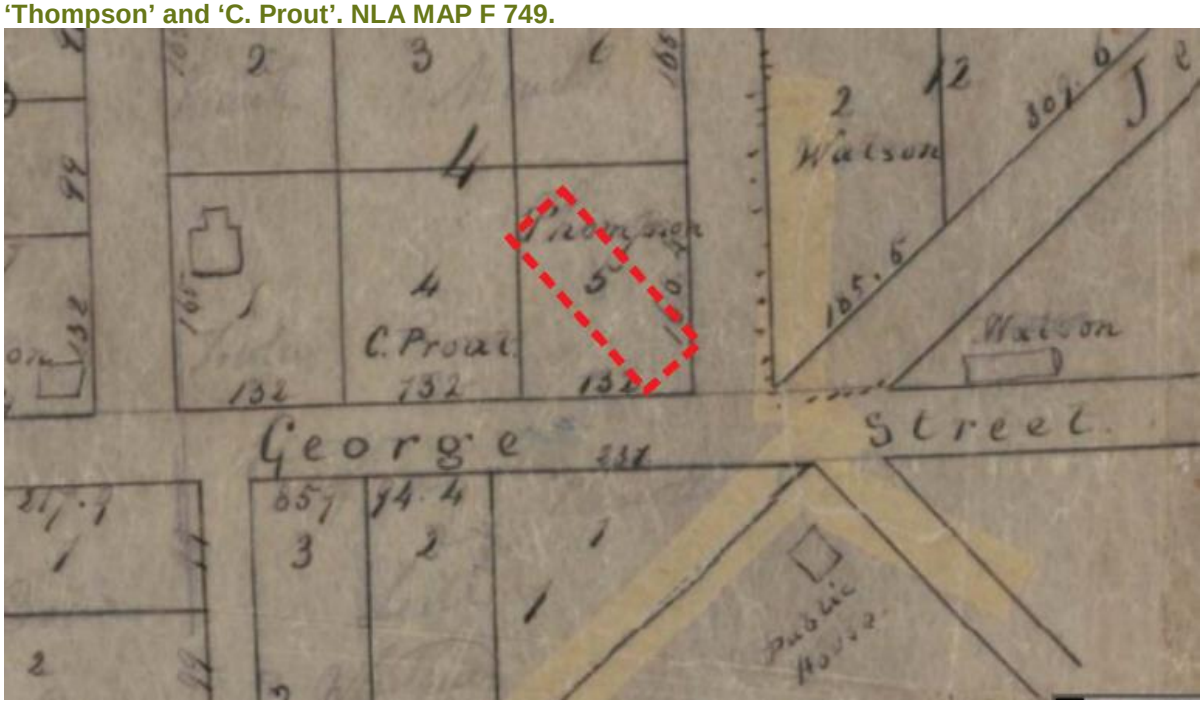
[54] Edward Higginbotham and Associates, May 2000. Historical and Archaeological Assessment of the Australian Sugar Company Mill, Sugar House Road (Formerly Church Street, Canterbury, NSW. Prepared for Gold Abacus Development and Woodhouse and Danks Pty Ltd, pp.12-13.
[55] Edward Higginbotham and Associates, May 2000, p. 15.

order to accommodate the rail line. These are likely to have removed evidence of some structures associated with part of the Canterbury Sugar Company works.

A new building was constructed on Platform 3 in 1915 when the station was expanded in conjunction with the Metropolitan Goods Line. In 1916 a goods line was constructed. This was associated with a goods line and goods shed, to the south of the station. In 1927 the track was realigned. The Down Bankstown track alongside a new Down side platform; the Up Bankstown track alongside the old Up island platform; the Down Goods track replacing the middle storage siding and the Up Goods track replacing the racecourse siding; No 1 to No 7 car sidings at the racecourse were opened and all were electrified (Figure 37).[56] The goods shed and additional buildings were still present in 1943 (Figure 38).

In 1900, land associated with the Old Sugarmill, now consisting of 3 acres and 2 roods was conveyed to Edward Williams Denham, who established the Canterbury bacon Factory. This too occupied the original Old Sugarmill building, east of the current study area. The factory was then sold to J C Hutton, who established 'Hutton's Bacon Factory' (Figure 39). It is unknown if any structures were erected within the study area or more specifically the site of the Canterbury Station Catchment construction site.

Figure 32: Detail from c.1840s plan of Cooks River, Jeffreys allotments, Sydney, with approximate location of Canterbury Station (red dashed line) within lots belonging to 'Thompson' and 'C. Prout'. NLA MAP F 749.



[56] State Heritage Inventory 'Canterbury Railway Station Group' accessed 9 July 2016.

Figure 33: Detail of c.1885-90 plan of Canterbury, showing the rail line and location of Canterbury Station. City of Sydney Archives, Historical Atlas of Sydney, Atlas of the Suburbs of Sydney ca 1885-1890 – Canterbury.

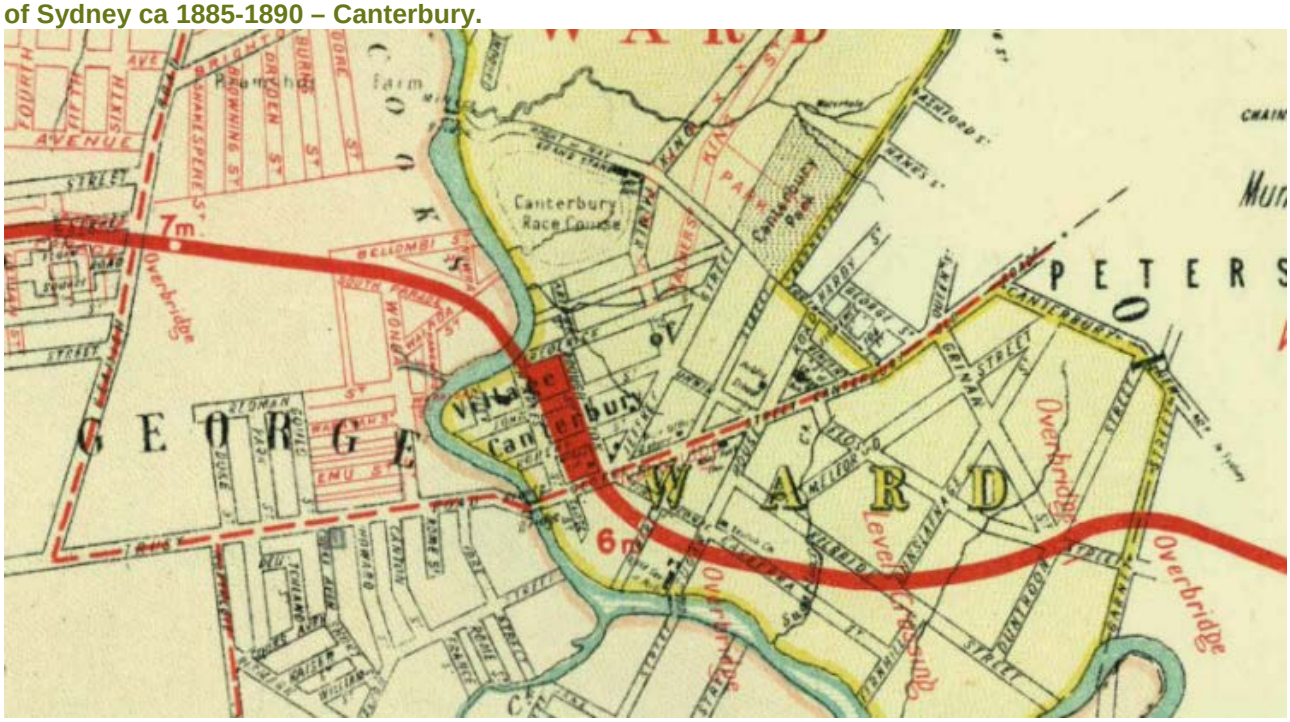


Figure 34: Railway acquisition in the vicinity of Bellombi Street and South Parade, between Canterbury and Campsie stations. The new subdivision either side of the line would be called the Silver Park Estate. SLNSW call no. Z/ SP/ C8.

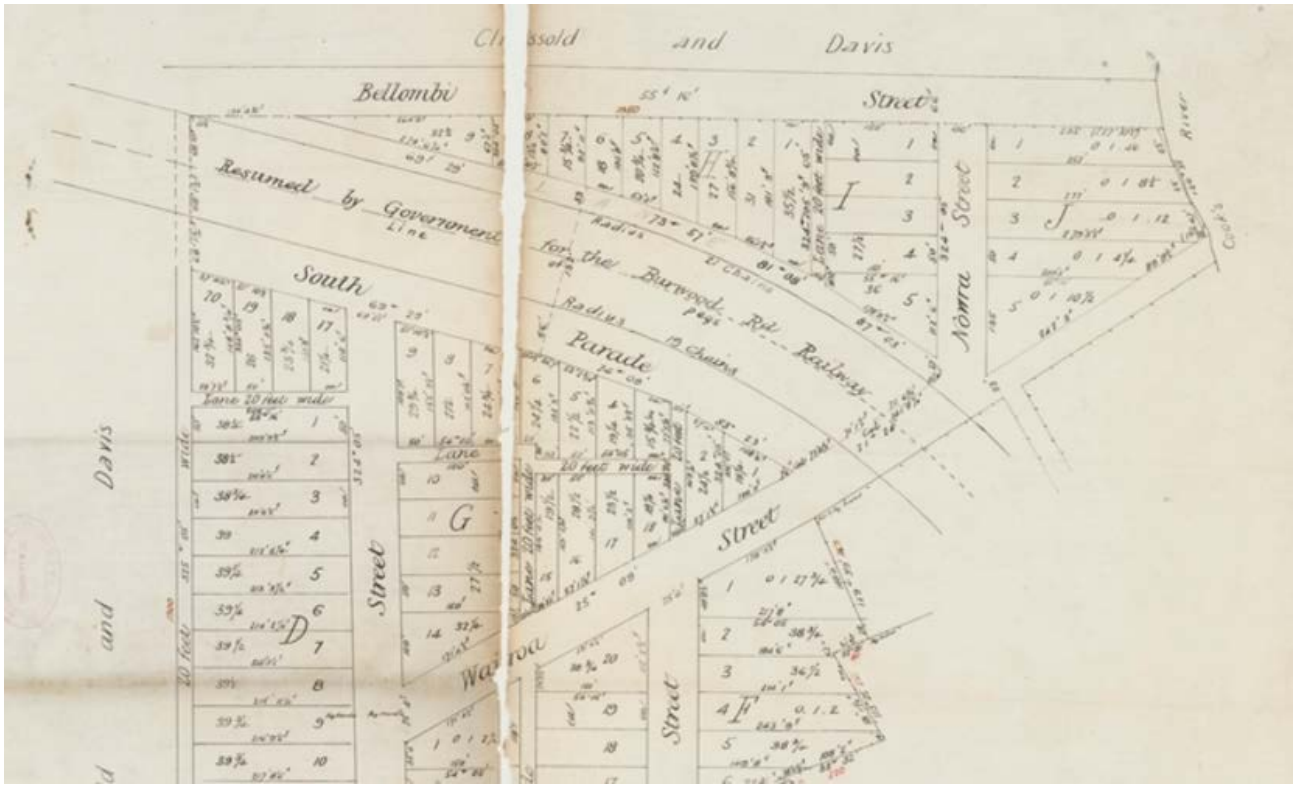


Figure 35: Canterbury Station between in 1916 and 1927. State Heritage Inventory 'Canterbury Railway Station Group'.

Figure 36: Configuration of Canterbury Station with goods platform, race platform and earlier cottages. SLNSW call no. Z/ SP/ C8.

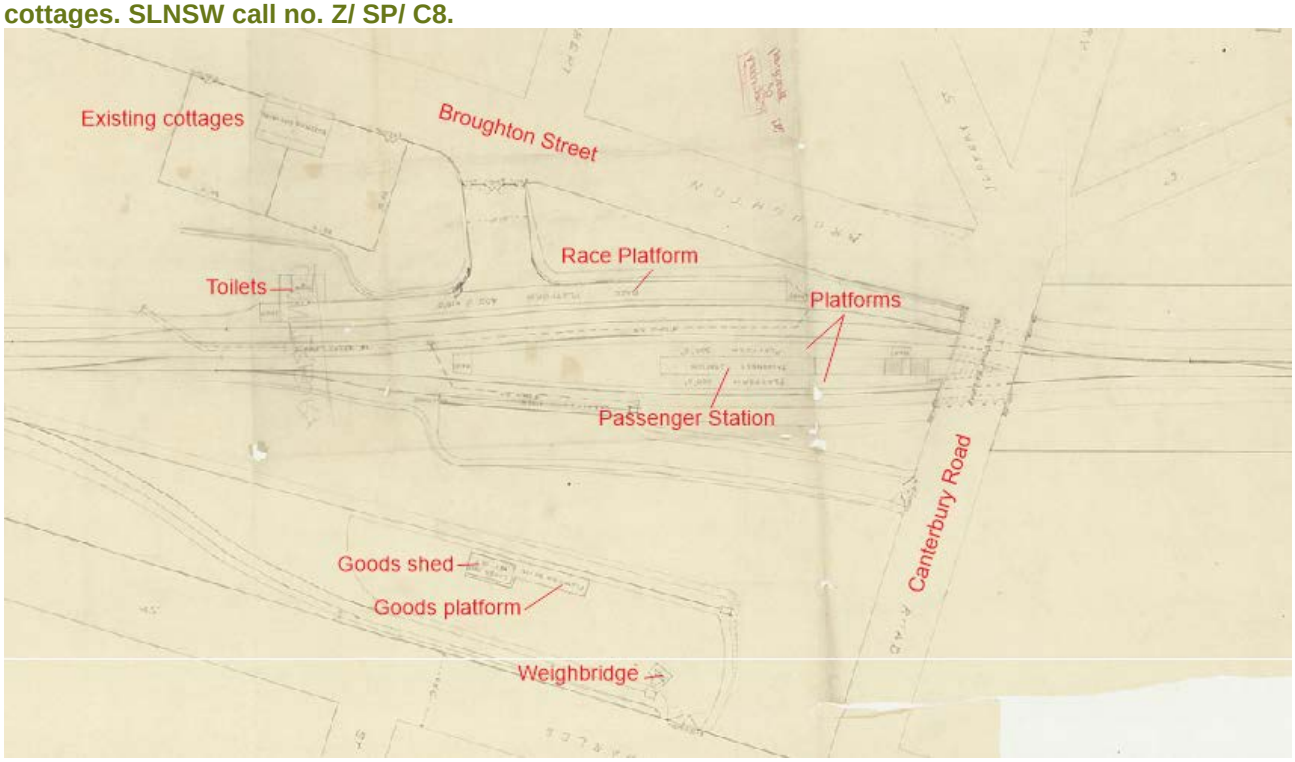


Figure 37: Electrification of the railway line c.1926, Canterbury Station. SLNSW call no. Z/ SP/ C8.

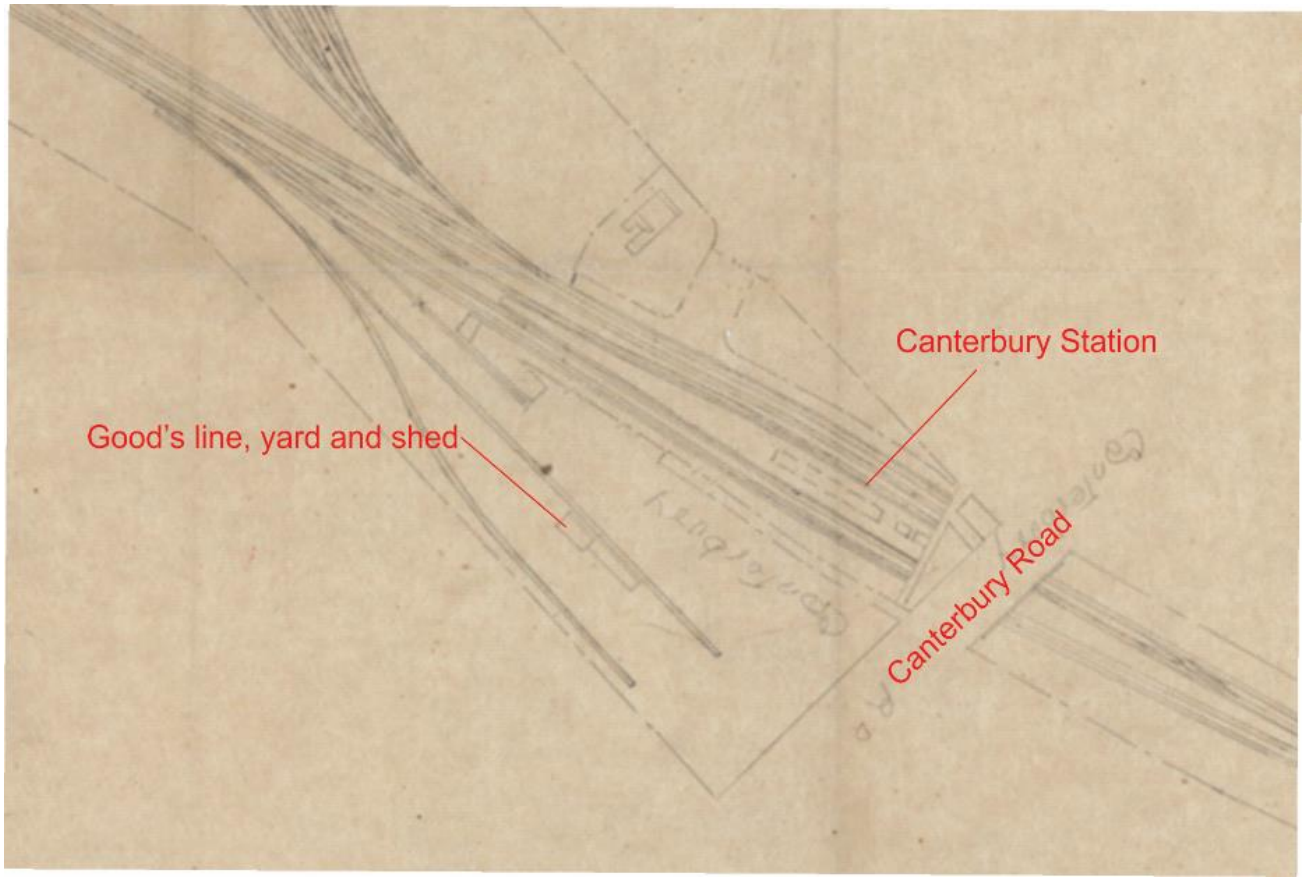
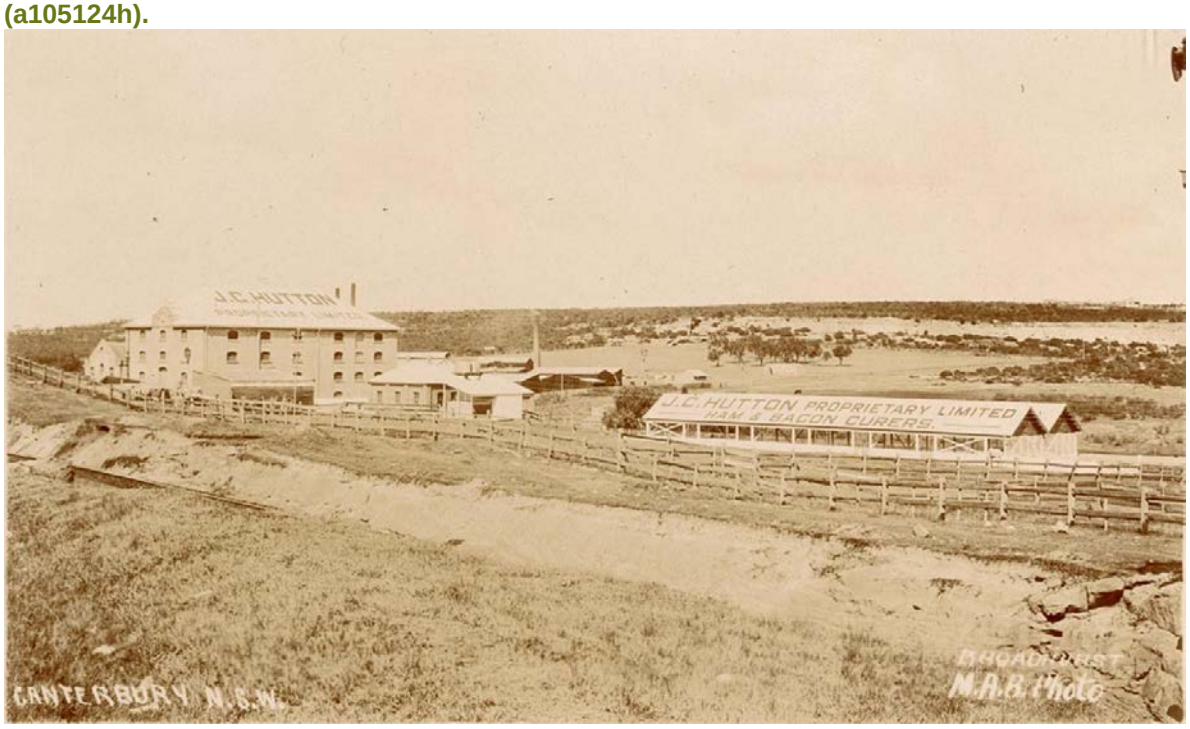


Figure 38: 1943 aerial of Canterbury Station. Source. SixMaps.

Figure 39. Canterbury, N.S.W. showing the J.C. Hutton Bacon Factory and outbuildings, just east of the study area. Likely taken from near the railway line. Source. State Library of NSW (a105124h).



1943-Present: Suburban and Urban Development

By 1943, the majority of Canterbury had been settled and was associated with late nineteenth and early twentieth century suburban subdivisions (Figure 40). Land that had once been occupied by outbuildings and for the sugar works (shown in the 1841 plan) had been cleared and was now occupied by a grassed park bounded by the rail line to the north and Close Street to the south. Buildings associated with the sugar works and later industries continued to occupy land to the east of the study area. Aside from the railway line and station, no structures occupied the study area at this time.

At present, a warehouse and carpark have been constructed within the once empty grassed park. This fronts onto Close Street and is located within the Canterbury Station Catchment construction site. The remaining parkland continues to remain unoccupied and no development or evidence of ground disturbing works have occurred.

Land to the west of Canterbury Road, north and south of the rail line has also been developed since 1943, and appears to be associated with small scale industrial activities. Rapid development has also taken place along Canterbury Road within the last decade, consisting mainly of modern apartments and commercial enterprises (Figure 41).

Figure 40. 1943 aerial showing Canterbury at the time. Land to the west, north and south of the rail line is unoccupied and residential subdivisions take up the majority of land to the north. The original location of the Australian Sugar Company Works is outlined in red. Source. SixMaps.

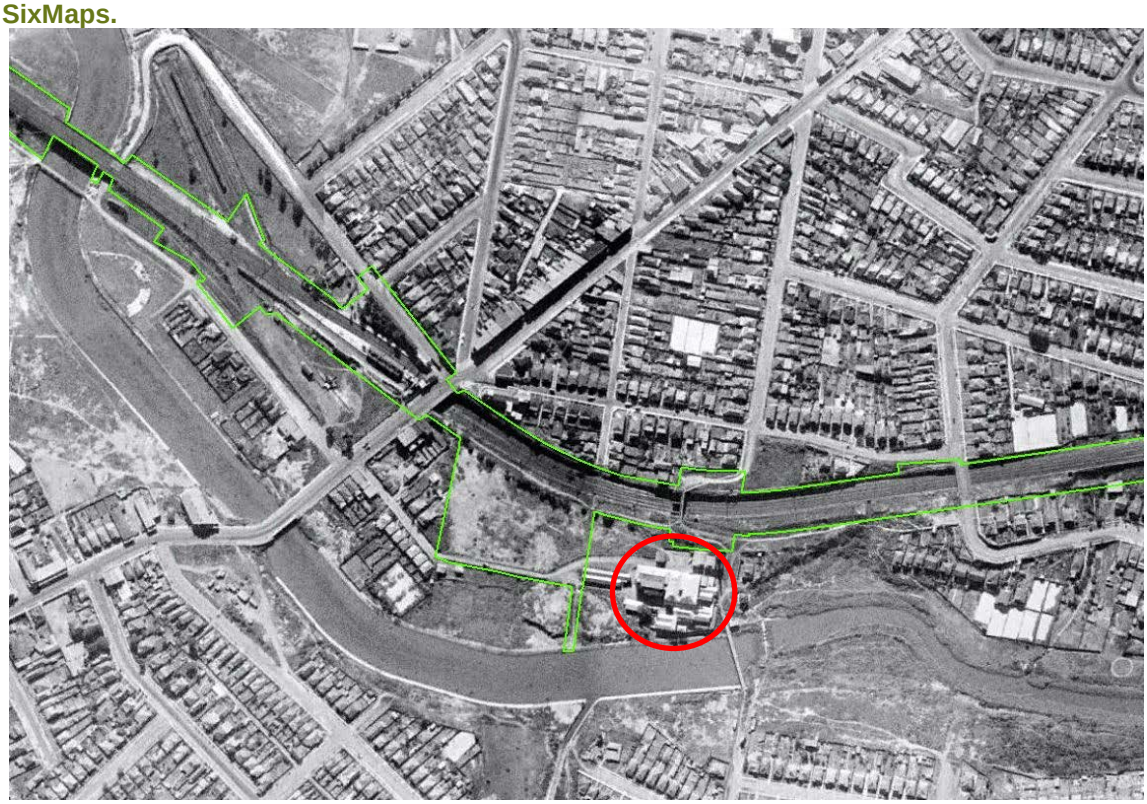


Figure 41. Satellite image showing Canterbury in 2016. Source. Google Earth.

3.2.4 Campsie

The suburb of Campsie is located within Hannah Laycock's 1804 grant of 500 acres. Its northern boundary was today's William Street. A hundred acres were also granted to Laycock's sons William and Samuel. They called their farms "Northumberland Farm" and "Percy Ville" (Figure 42; Figure 44). Laycock called her property "King's Grove Farm."[57] The Laycock's built a house and cleared an access road, which is todays Beamish Street, which cuts through the study area.

The early alignment of Beamish Street, as it would become known in the 1870s, defined the boundaries of the land grants in the area. The study area was originally associated with grants given to John Bentley, John Redman, William Bennett, John Wall and John Price as shown (Figure 42). John Redman, the Chief Constable in Sydney, was granted 100 acres west of Beamish Street in 1809. He called his property "John Farm" and later, in 1817, he bought the northern adjoining farm, called "Stoneless Bay" from Thomas Capon (Figure 43). Capon never inhabited the land, and was based in Hobart.[58] By 1822 Redman's holdings would total 500 acres. The large eucalypts on Redman's farm, cleared by convict labour, supplied the Sydney gaol with firewood for many years.[59] The 1828 census shows that the farmhouse on "John Farm" was tenanted by the sawyer, John Ryan, his family and employees.[60]

Redman died in 1837, and his property was divided amongst his sons. "John Farm" was sold, "St Claire" was kept and "Stoneless Bay" was leased to his widow, Mary, by her son Robert, for a nominal rent. The house she leased remained standing on Harcourt Avenue until the 1970s.[61] In 1846 "John Farm" was purchased by Robert and Hugh Scott, who renamed it "Campsie Farm" (Figure 44).

Figure 42: c.1860s Campsie Parish Map. Lands and Property Information AO Map

[57] Madden and Muir 1988: 2.
[58] Larcombe 1971: 39.
[59] Madden and Muir 1988: 2.
[60] *Ibid*: 6.
[61] *Ibid*: 8.

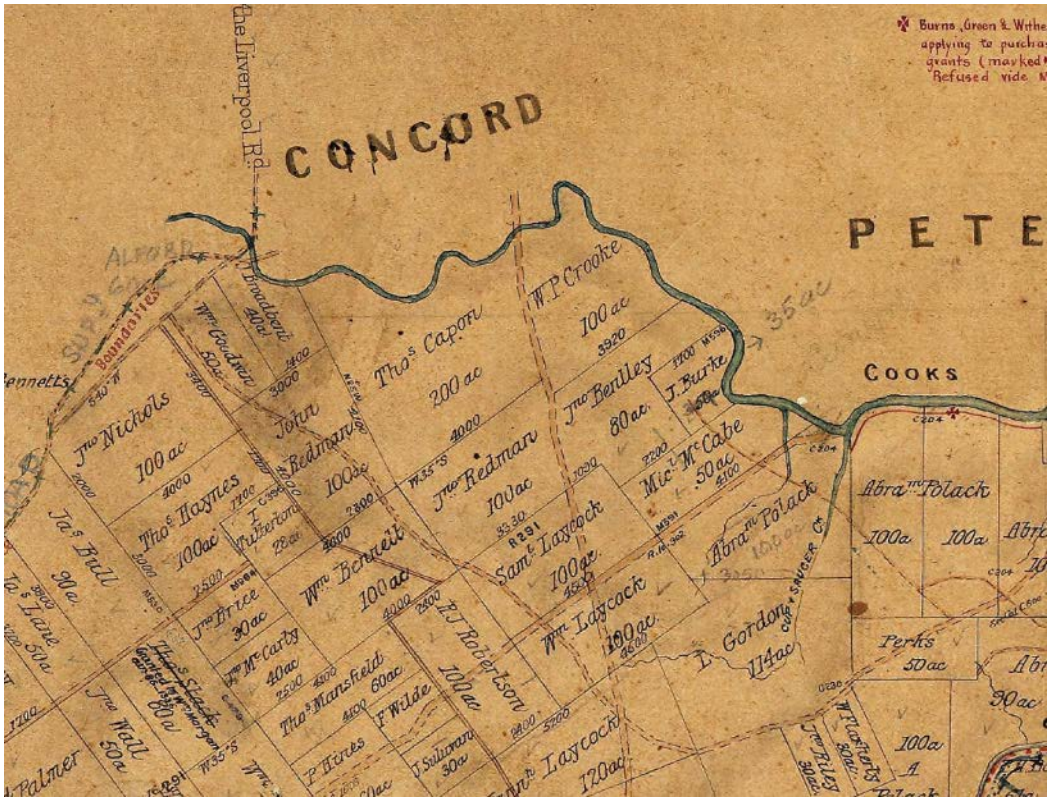


Figure 43: Pre-1822 plan, showing the 'Govt. Road' (Beamish Street). John Redman would later purchase Capon's land grant. State Library of NSW Z/SP/C8.

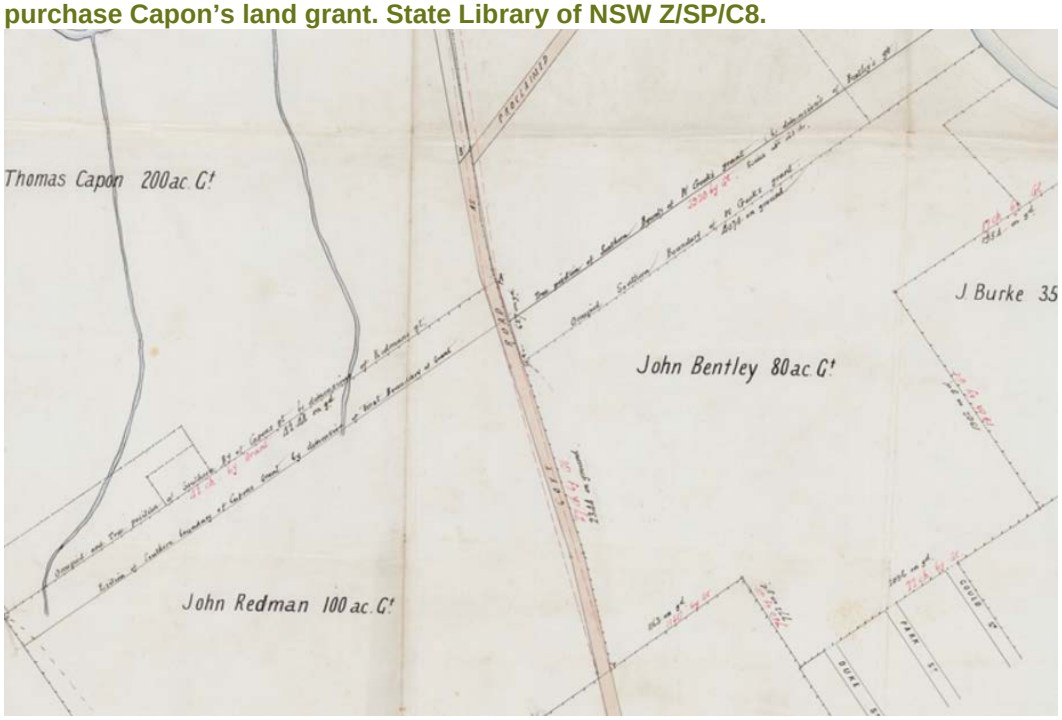
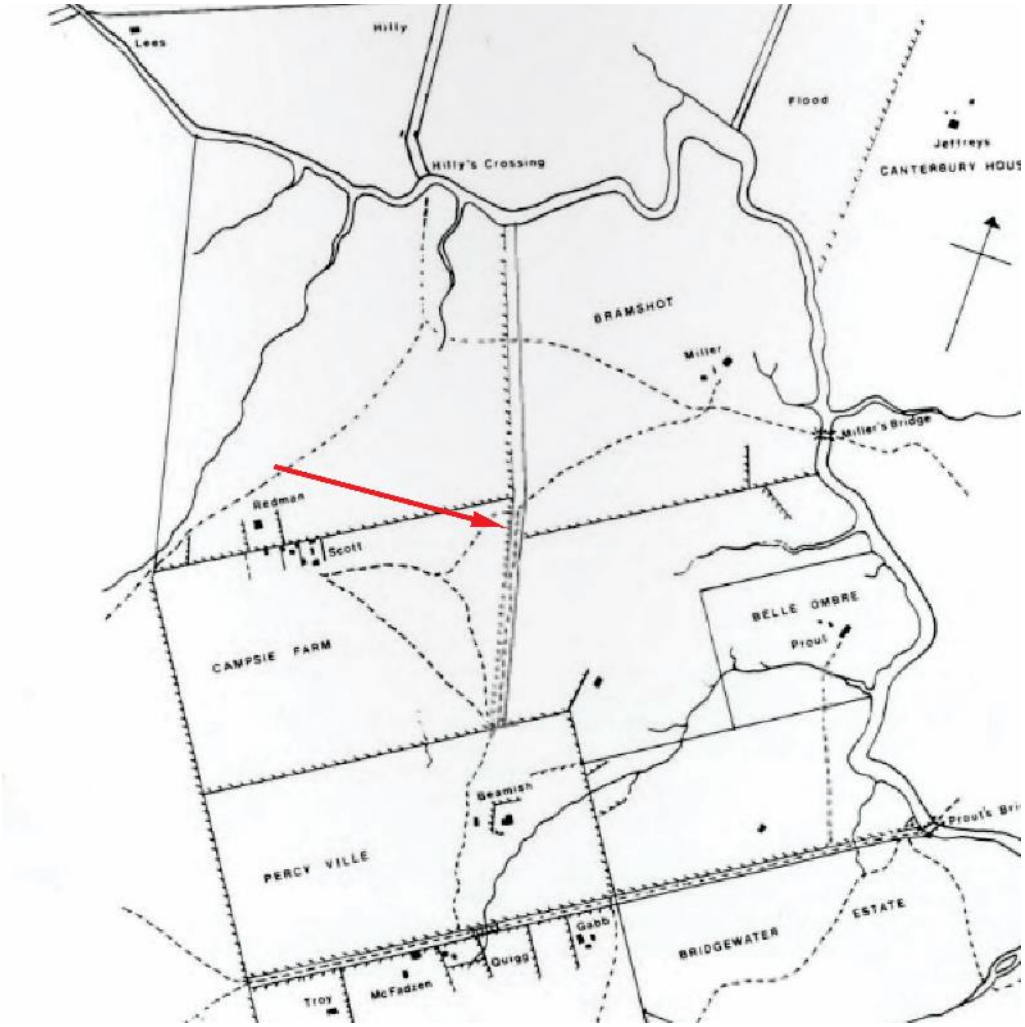


Figure 44: Campsie Farms between 1850 and 1860. The approximate location of Campsie Station is arrowed. Muir in Madden and Muir 1988; 12.



In the 1880s “Campsie Farm” was purchased and subdivided by the Anglo-Australian Investment, Finance and Land Company Ltd, and called the “Campsie Park Estate” (Figure 45). This was typical of many such subdivisions by various building companies operating in Sydney at the time. In January of 1885 a new railway survey line was commissioned, passing directly through the Campsie Park Estate. The Anglo-Australian Company cleared the estate and marked out streets and allotments. The first advertisement in the Sydney Morning Herald for the Campsie Park Estate appeared on 13th October, 1885. The area was depicted in the sale booklet by Gibbs, Shallard and Co. as being rural and idyllic (Figure 46). The subdivision plan at this time did not show the railway line, although buyers were assured in the text that it would be built. The allotments, however, did not sell, presumably due to the lack of certainty over the rail line.

When the rail line from Sydenham to Belmore was built, it passed through the Campsie Park Estate. The estate was then re-subdivided (Figure 47 and Figure 48) and by 1910 the majority of lots within the estate had been purchased and built upon (Figure 49).

Figure 45: Detail of undated plan illustrating the Campsie Park Estate and the proposed railway route. Larcombe 1971: 40-1.

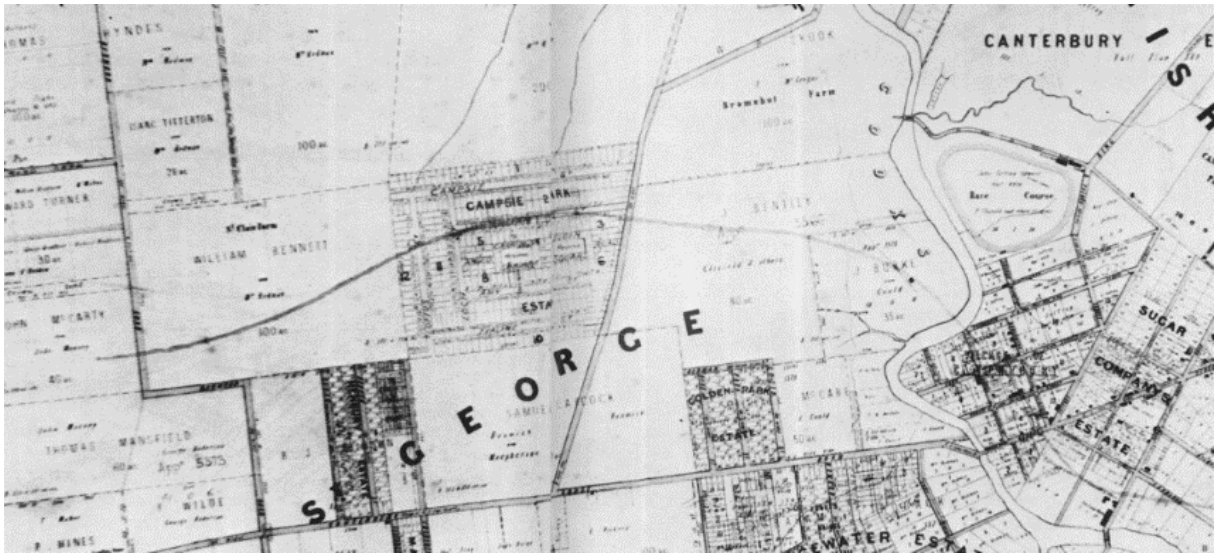


Figure 46: Illustrations from real estate pamphlet for the Campsie Park subdivision, showing Beamish Street (L) and a cottage and orchard adjoining the estate (R). SLNSW call no. Z/SP/C6.

Figure 47: NSW Railways plan showing property acquisitions in the line of the new railway from Marrickville to the Burwood Road. SLNSW call no. Z/SP/C6.

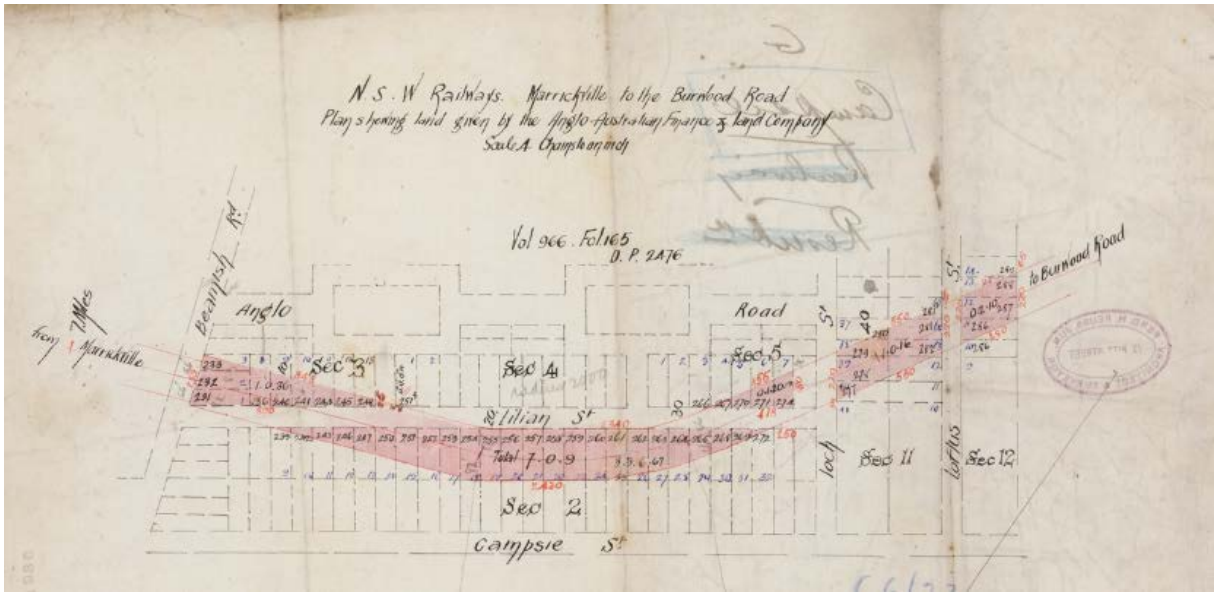


Figure 48: Re-subdivision of the Campsie Park Estate following land resumption for the railway line. SLNSW call no. Z/SP/C6.

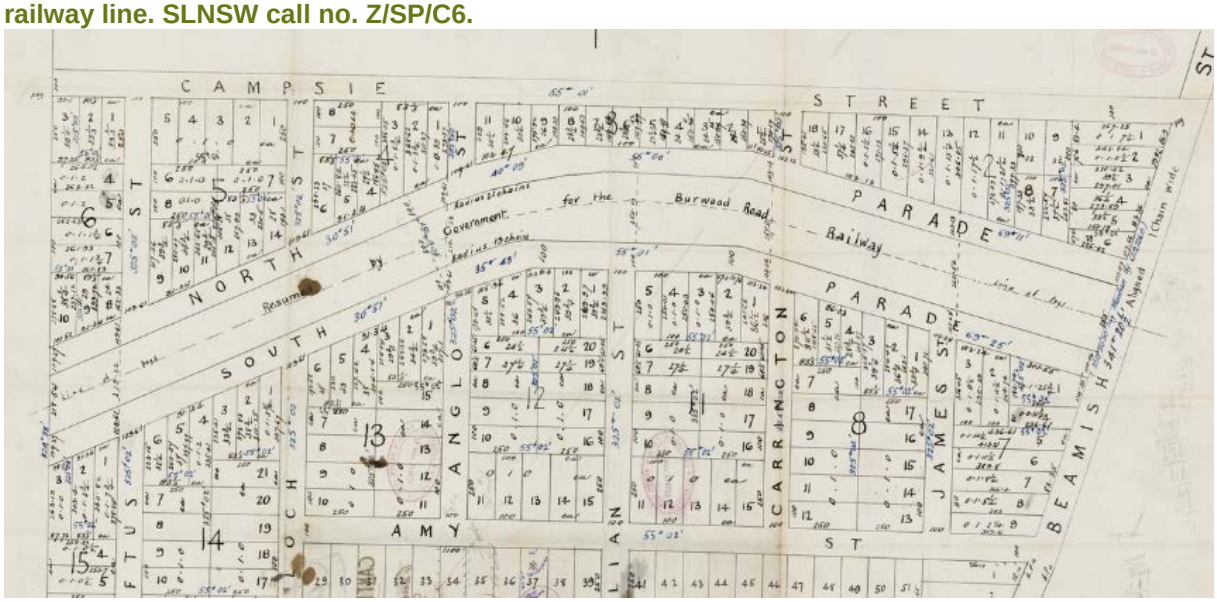
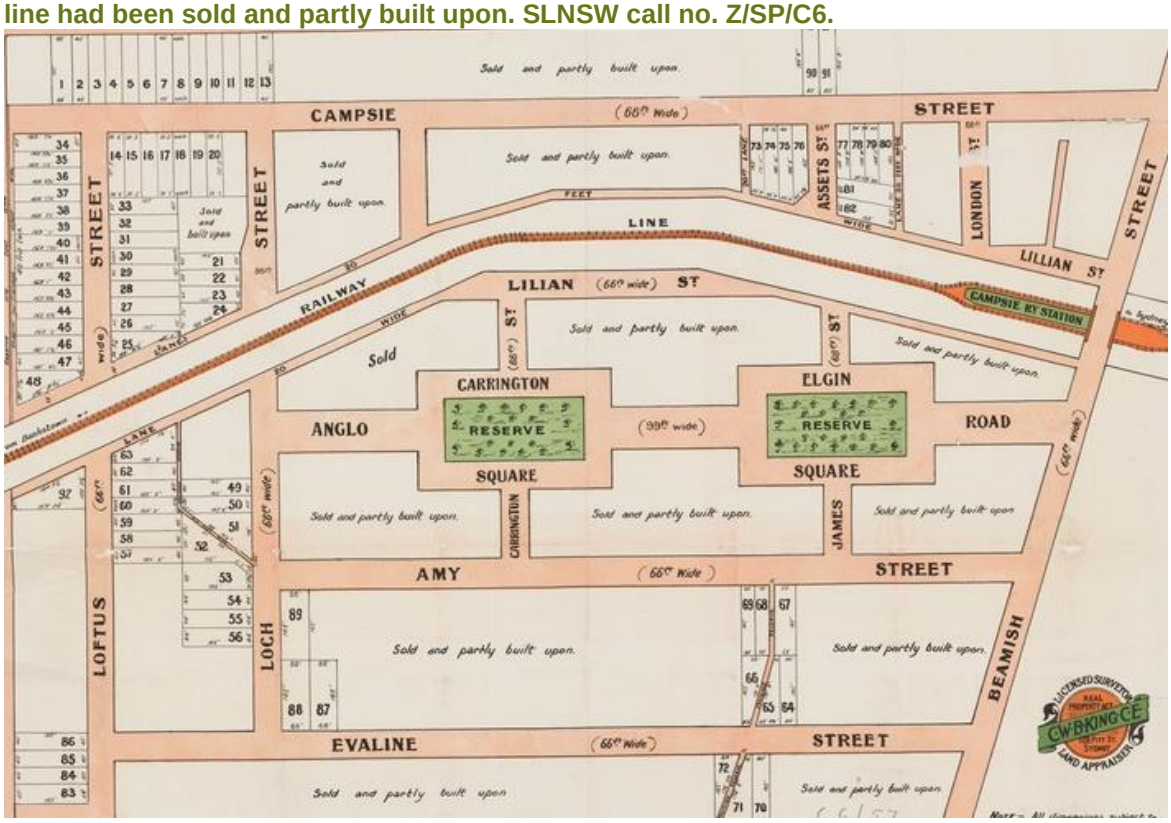


Figure 49: 1910 sales poster indicating that the majority of house lots adjacent to the railway line had been sold and partly built upon. SLNSW call no. Z/SP/C6.



Whilst the railway stimulated some commercial and residential development, overall, development in Campsie was slow.[62] It was not until the early twentieth century that the suburb began to expand, partially due to the opening of schools, banks and churches. The increase in population was also attributed to the many railway workers who had settled in the area following the completion of the line.[63] By 1920 Campsie had about 30 shops, and Beamish Street contained a number of businesses including a pastry cook, fish shop, stationer, painter and decorator, a butcher and ice works, confectioners, drapers, grocers, a fruiterer, plumber, boot maker, bicycle repairer, an estate agent and a hairdresser and tobacconist.

The suburb retained a rural character, however, and slaughterhouses operated on the southern side of Canterbury Road, market gardens were located on the Cooks River, and there were many dairies and orchards throughout the region. Beamish Street itself was not asphalted until the 1930s.[64]

Campsie Station

Unlike the brick platform buildings at Marrickville, Canterbury and Belmore station, Campsie Station consisted of a timber waiting shed 28 feet by 12 feet in diameter (Figure 50). The platform was accessed via an overbridge and steps. A new booking office was constructed in 1905 and the platform extended in 1906 (Figure 51 and Figure 52).

[62] City of Canterbury Library 'Campsie NSW' Accessed 9 July 2016.
[63] Madden and Muir 1988: 38.
[64] City of Canterbury Library 'Campsie NSW' Accessed 9 July 2016.

Figure 50: Plan of Campsie Station. SLNSW call no. Z/SP/C6.

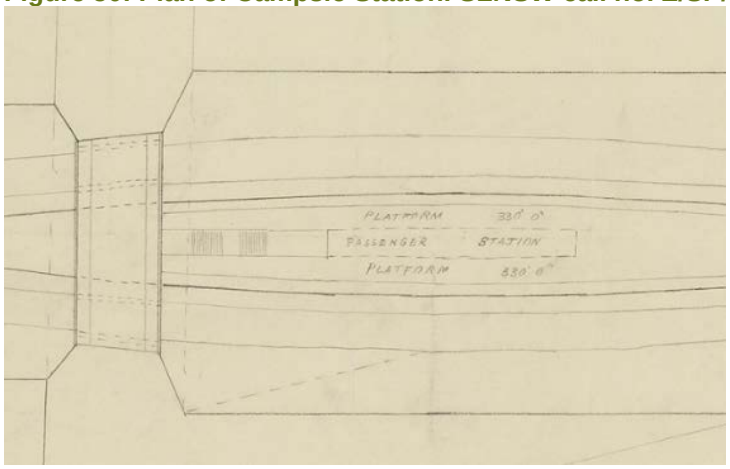


Figure 51: 1908 painting of Campsie Station. Canterbury City Council, Pictorial Canterbury image no. 011001.

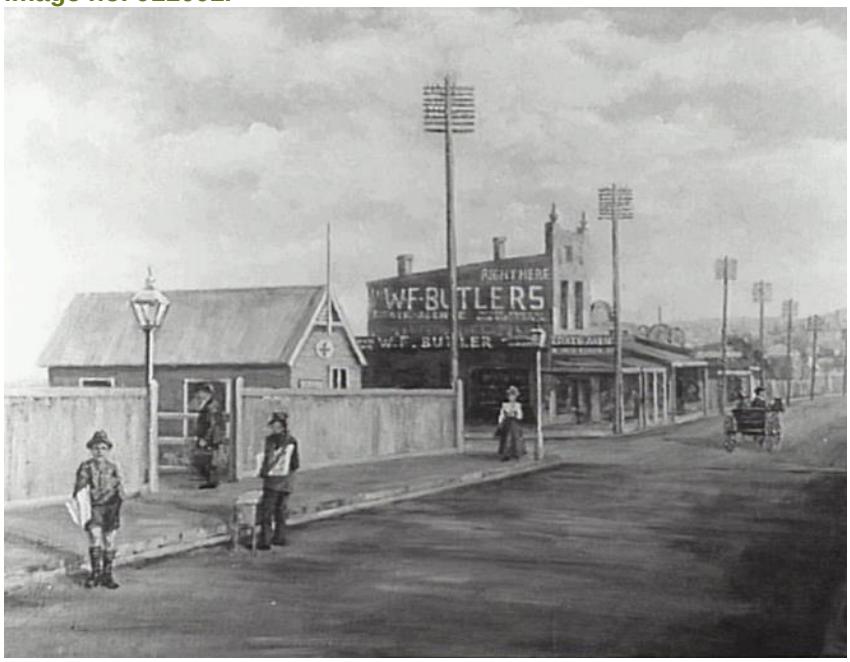
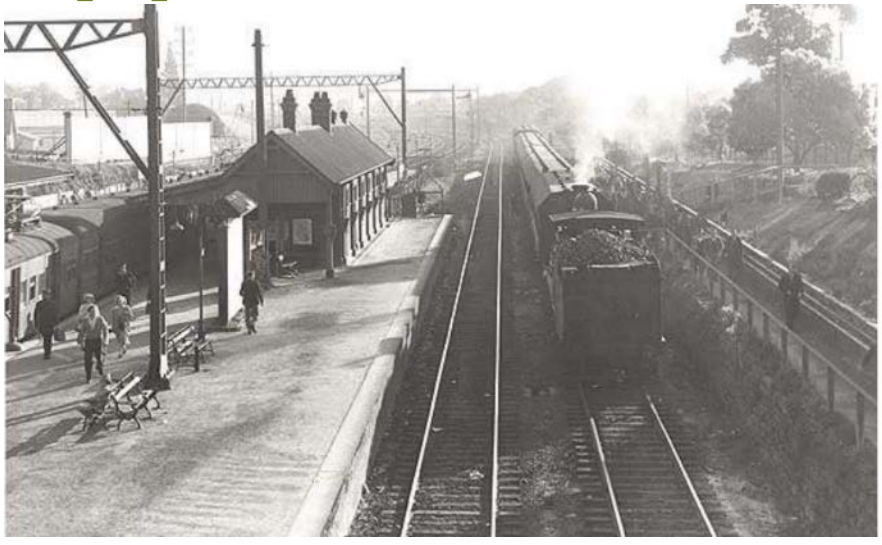


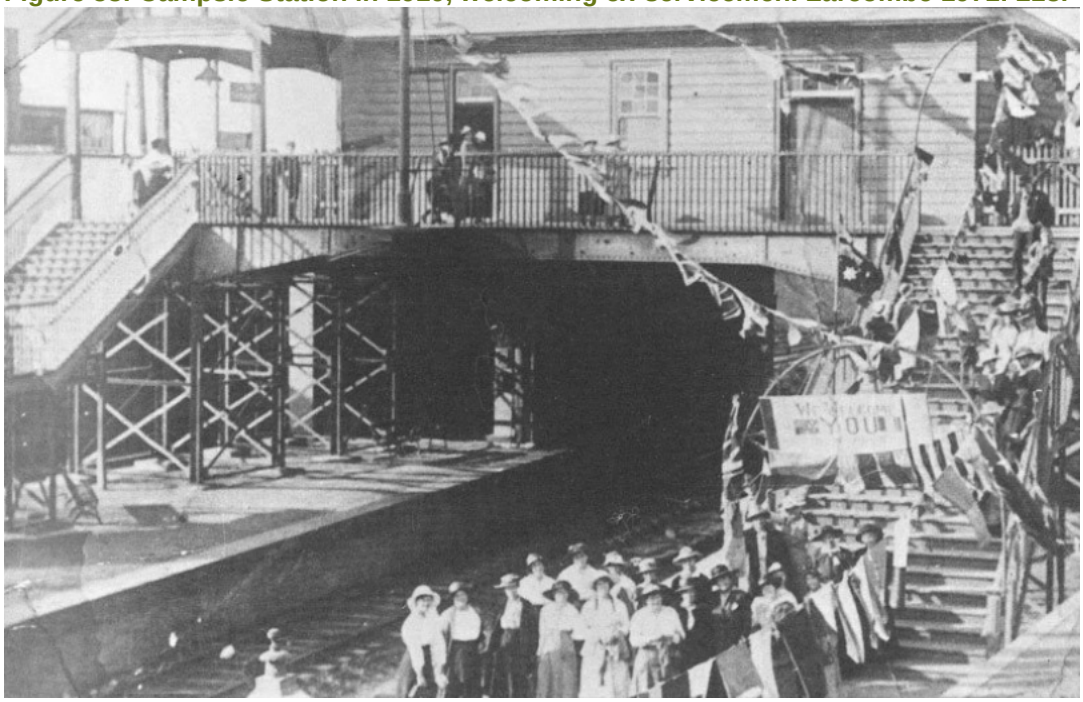
Figure 52: 1909 photograph of Campsie Station. Source: State Records of NSW, item 17420_a014_a014000815.



The present station layout and station buildings date from 1915 and were constructed for the opening of the Goods Lines in 1916 (Figure 529). The new buildings replaced all previous platform structures. The brick and stone retaining wall on the south was also constructed at this time to accommodate the new Down platform. A new jack-arch overbridge also replaced a previous timber bridge to carry Beamish Street across the four railway lines. [65]

A northern side platform was also constructed in 1916 for the Goods line and was used by railway employees so that they could travel to and from the Enfield/ Chullora workshops area. The existing concrete platform and stairs date from c1950. An overhead parcels office was constructed on the footbridge at this time. This was demolished and replaced in 2000.

Figure 53: Campsie Station in 1919, welcoming ex-servicemen. Larcombe 1971: 213.



3.2.5 Belmore

In the early nineteenth century the most direct route between the Cooks and Georges Rivers was via the Punchbowl/Milperra Road, which also served as a convenient access road from Sydney to Reverend Johnson's Canterbury Farm. At this time a track, todays Burwood Road, connected Punchbowl Road with King's Grove Farm to the south-east. The track passed through the area that would become known as Belmore.

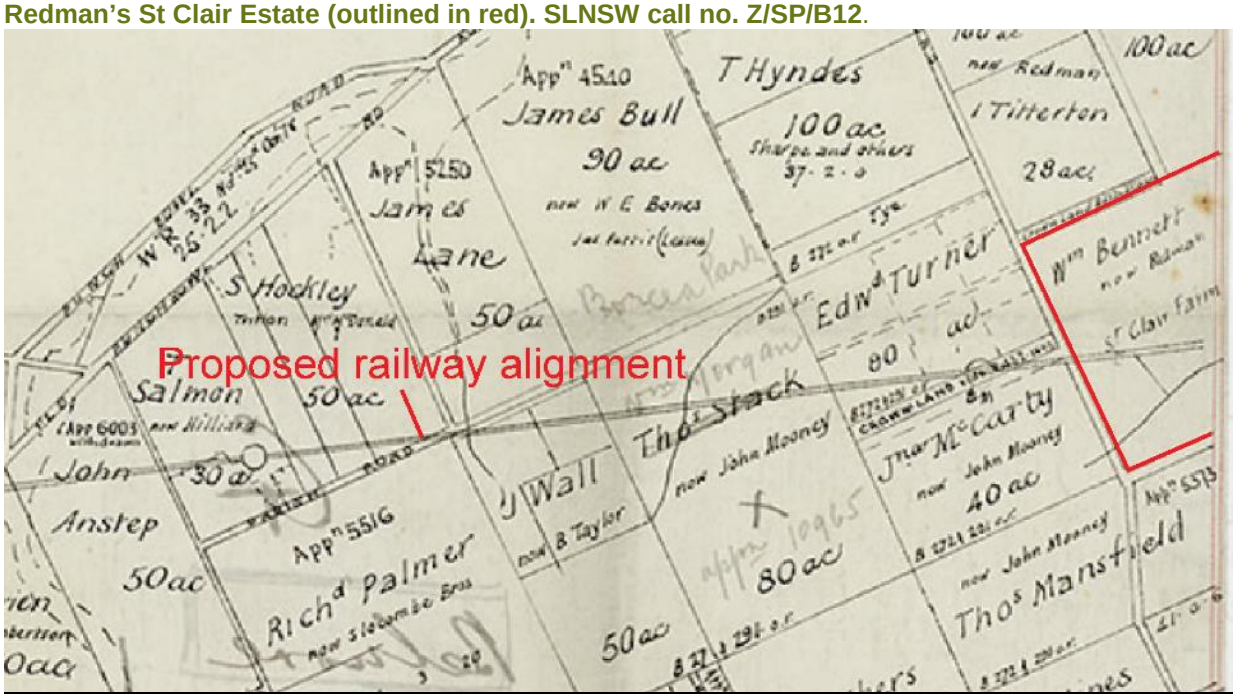
A number of land grants were located in the vicinity, and the timber they provided was cut to supply Sydney with firewood and railway sleepers. [66] Following the clearance of the land, numerous farms were established. Blossom Farm, to the north-west of the present-day railway station, was owned by the Bradburn family. St Clair Farm, to the east of the railway station, was owned by William Redman (son of John Redman of "Johns Farm" near Campsie) and contained a vineyard and grazing paddocks (Figure 54). No known structures occupied the property. A number of small poultry farms were also located throughout the area. [67]

[65] State Heritage Inventory 'Campsie Railway Station Group" Accessed 9 July 2016.
[66] Muir and Madden, 2009.
[67] Muir and Madden, 2009.

1880-1920

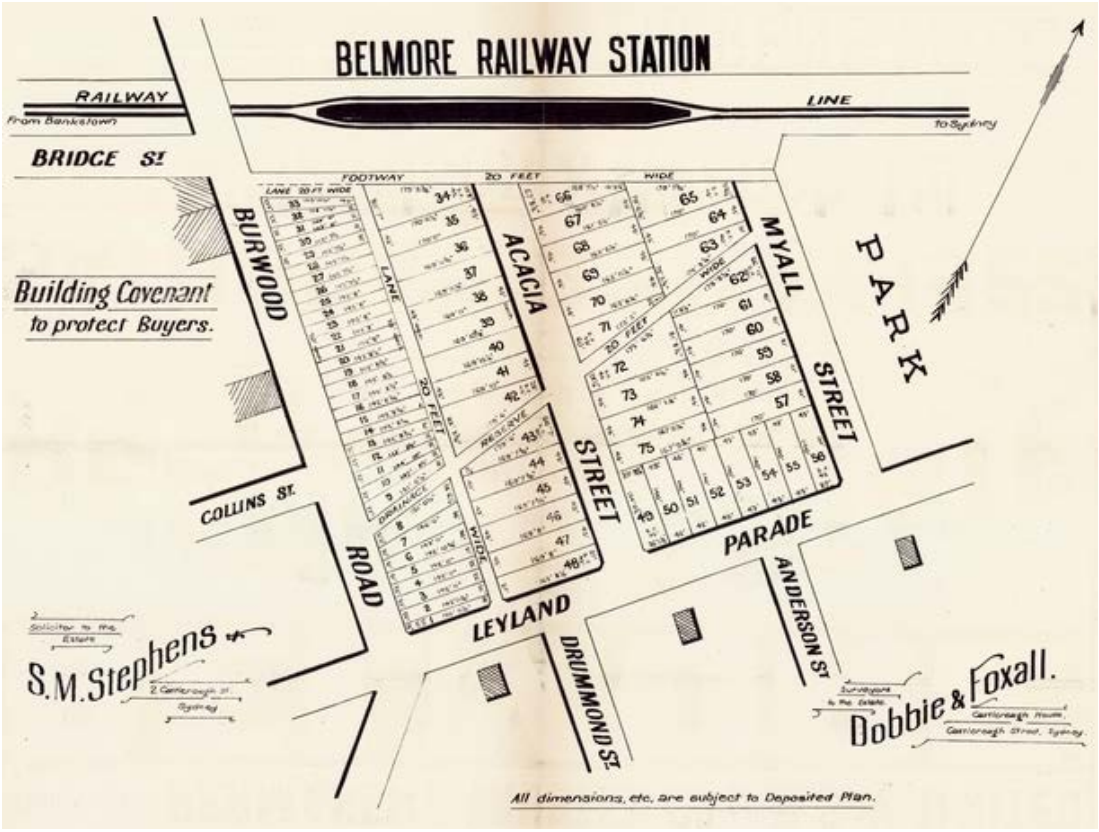
Subdivision of the large estates and farms began around 1880, and accelerated with the opening of the railway line, the first stage of which terminated at Burwood Road. Early subdivisions occurred at Blossom Farm, referred to as the Terminus Estate, immediately north-west of Belmore railway station. In the centre of Belmore, Redman's estates (Figure 55) and Collins' Clear, immediately north-east and south of the station, were not subdivided until after 1911. These early subdivisions consisted of large suburban blocks. There was, however, a shortage of subdivided land in the immediate vicinity of the station, and the suburb centre developed relatively slowly as a result. [68]

Figure 54: Undated plan showing approximate alignment of the proposed railway, and Redman's St Clair Estate (outlined in red). SLNSW call no. Z/SP/B12.



[68] Muir and Madden, 2009

Figure 55: 1922 plan of Redman's Estate subdivision, showing that development on the southern side of the railway line consists or larger blocks of land at this time. SLNSW call no. Z/SP/B12.



1920-present

Following the First World War, between 1920 and 1925, a number of returned servicemen were settled in Belmore, with housing financed by the War Service Homes Commission. Many of the men found work at the new railway yards in Enfield. [69]

The commercial centre of Belmore developed rapidly from this time, with the Post Office opening in 1924, and the Belmore Hotel in 1928. In the latter half of the twentieth century many of the early residences were demolished to make way for apartment blocks.

Belmore Station

Belmore Station is located on the Sydenham to Bankstown Railway line and was opened as the initial terminus station on 1 February 1895 (Figure 56 and Figure 57). Its initial construction name was Burwood Road but it was named Belmore on opening. [70]

The station was built when Belmore was still rural. The station layout featured a typical brick station building on an island platform (Figure 58). A station master's residence was built in 1895 and is still extant at 346 Burwood Road, opposite the station, but is now in private ownership. The original layout of the station catchment is illustrated in a plan dated to 1895, shown in Figure 59.Figure 59.[71] A goods shed was also part of the station catchment and located to the north of the line, near today's Wortley Avenue, within the proposed Belmore Compound Area. What may be a goods platform is

[69] Muir and Madden, 2009.
[70] State Heritage Inventory 'Belmore Railway Station Group' Accessed 9 July 2016.
[71] *Ibid*

located on the opposite side of the rail line, near Bridge Road and within a what is now a modern carpark.

The station was built when Belmore was still rural. The station layout featured a typical brick station building on an island platform (Figure 58). A station master's residence was also built in 1895 and is still extant at 346 Burwood Road, opposite the station, but is now in private ownership Figure 59.[72]

Prior to 1909 there were sidings for the storage of locomotives due to the railway terminating at Belmore. Suburban development intensified post World War I when many War Service homes were built in the area. Sidings at the station were extended during the 1920s for Belmore and Canterbury Councils for the purposes of unloading timber and other material for house construction and municipal works.[73]

Figure 56: c.1900 photograph of Belmore Station. City of Canterbury Local History Photograph Collection.

[72] *Ibid*
[73] State Heritage Inventory 'Belmore Railway Station Group' Accessed 9 July 2016.

Figure 57: Belmore Station in 1901. Canterbury City Council.

Figure 58: Configuration of the Belmore Station. SLNSW call no. Z/SP/B12.

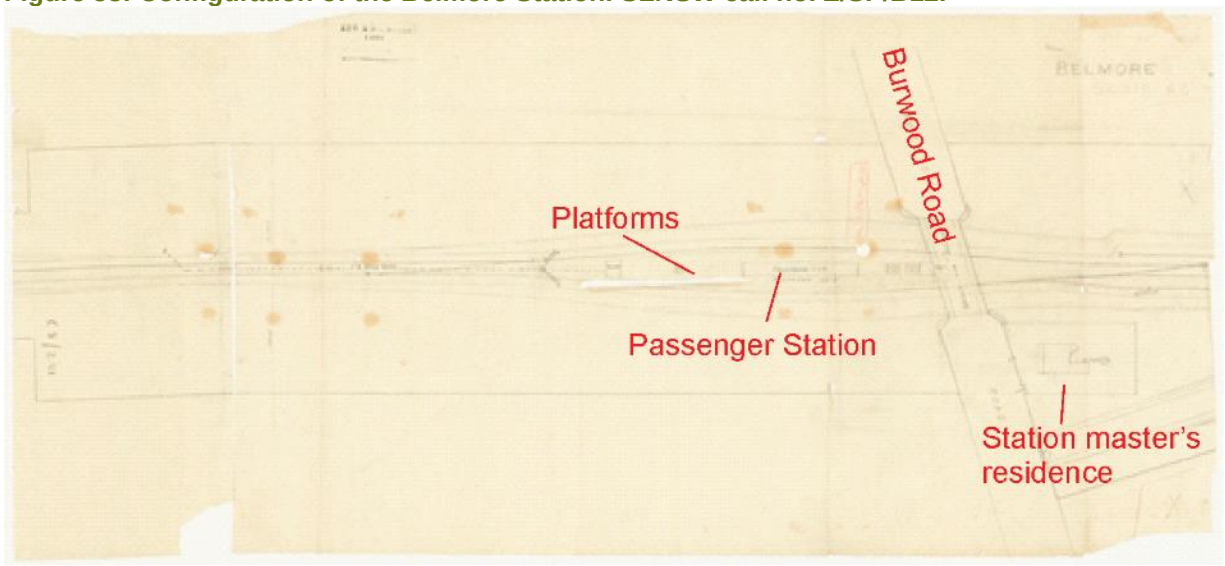
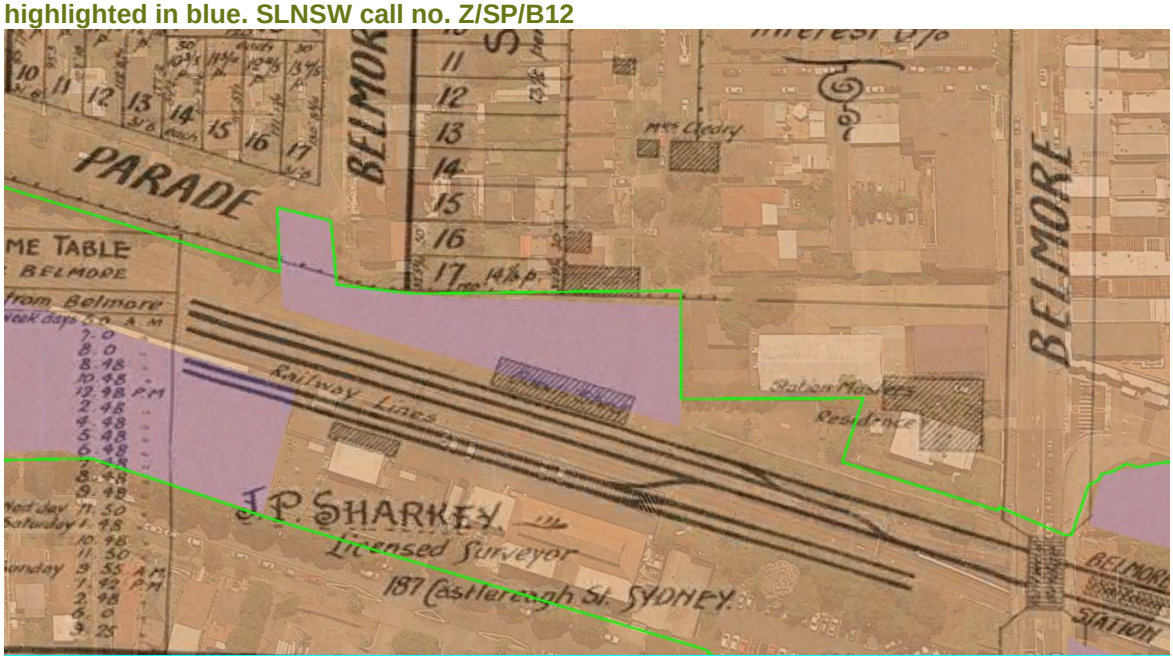


Figure 59: 1895 plan of the Terminus Estate subdivision, showing location of the goods shed, sidings, platform and station master's residence at Belmore Station. Compound areas are highlighted in blue. SLNSW call no. Z/SP/B12



In 1925-26 a number of works were undertaken in preparation for electrification of the line including a sub-station and platform extension. The sub-station is now used as a signals training facility.

The overhead timber booking office at Belmore was constructed c.1937 at the top of the steps fronting onto the down side of Burwood Road to take the ticket selling and parcel functions. The change was also made to most other stations built to a similar configuration. The station master's office remained in the platform building for another forty years, but this function too has now moved to the street level building and the platform building remains largely unused. [74]

3.2.6 Lakemba, Wiley Park and Punchbowl

Lakemba

The suburb of Lakemba was originally located within John Wall's 1831 grant of 50 acres, called "Ashford". In August 1881 Ben Taylor leased "Ashford", before purchasing the property in 1890 (Figure 60). Figure 61 shows Taylors house on this grant prior to the construction of the railway line, consisting of a house and stable building. Additional outbuildings may have occupied land around the main property, and therefore within the study area.

In 1883, Taylor married his second wife Lucy Annie Johnston, the granddaughter of missionaries based on Lakeba Island in Fiji (pronounced Lakemba). [75] Soon after their marriage, Taylor named his house "Lakemba," and by the 1920s it was a substantial two-storey residence to the south of the study area (Figure 62 and Figure 63).

It is possible the stables were demolished to make way for the construction of Railway Crescent/The Boulevarde in the early twentieth century. After the arrival of the railway "Lakemba" was located on the corner of Haldon Street and the newly formed Railway Crescent/The Boulevarde.

[74] State Heritage Inventory 'Belmore Railway Station Group' Accessed 9 July 2016.
[75] City of Canterbury Library, Madden 2014 "Lakemba - Name Origin" Accessed 8 July 2016.

Taylor was a staunch Methodist, and donated the land for the Methodist (now Uniting) Church on the south eastern corner of Haldon Street and The Boulevarde (Figure 63 and Figure 64). “Lakemba” was demolished in the late 1920s or early 1930s to make room for shops.

Figure 60: Undated plan showing approximate alignment of the proposed railway. Wall and Taylor’s grant has been outlined in red. SLNSW call no. Z/SP/B12.

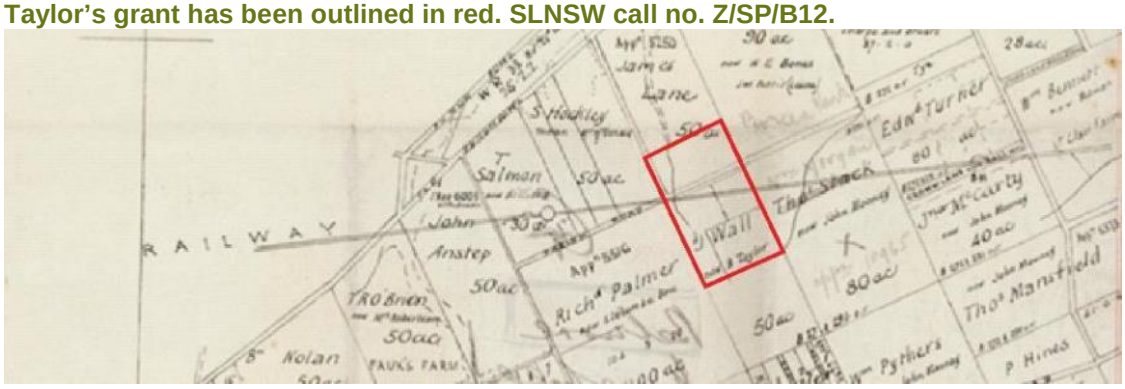


Figure 61: Plan showing the subdivision of the Lakemba Park Estate in 1895, prior to the construction of the railway line and Lakemba Station (outlined in green), showing location of Ben Taylor’s house and stables. SLNSW call no. Z/SP/B12.

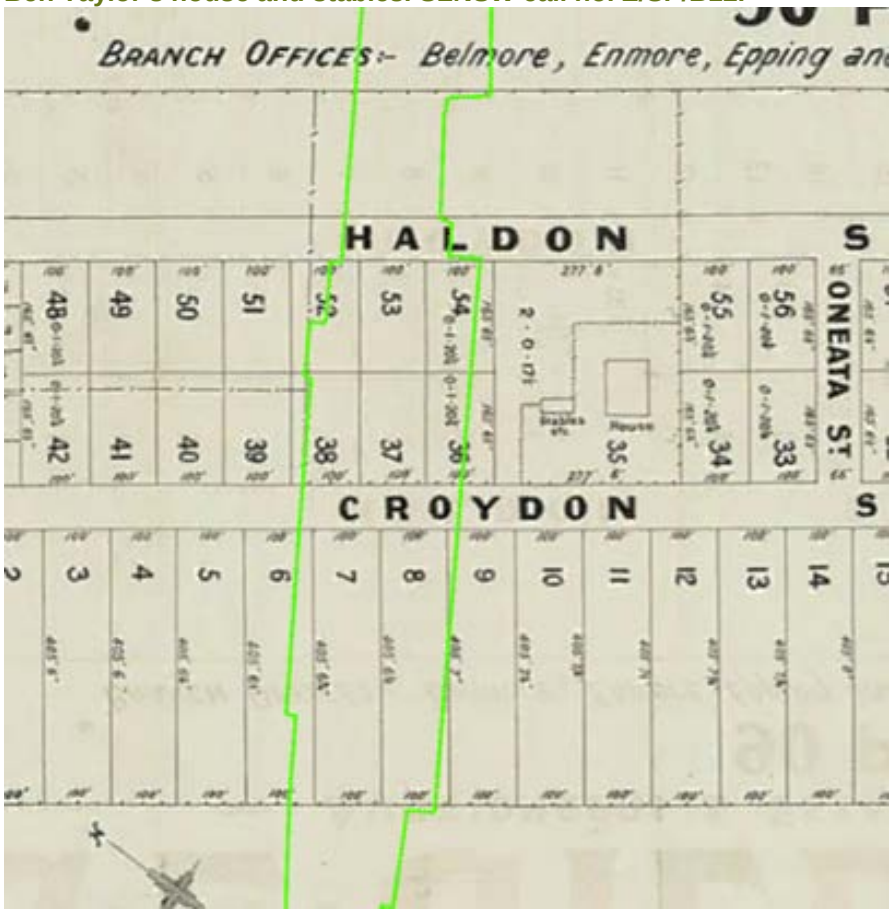


Figure 62: Ben Taylor's "Lakemba" in 1921, during the Anzac Day March on Haldon Street. City of Canterbury, Pictorial Canterbury, image no. 020227.

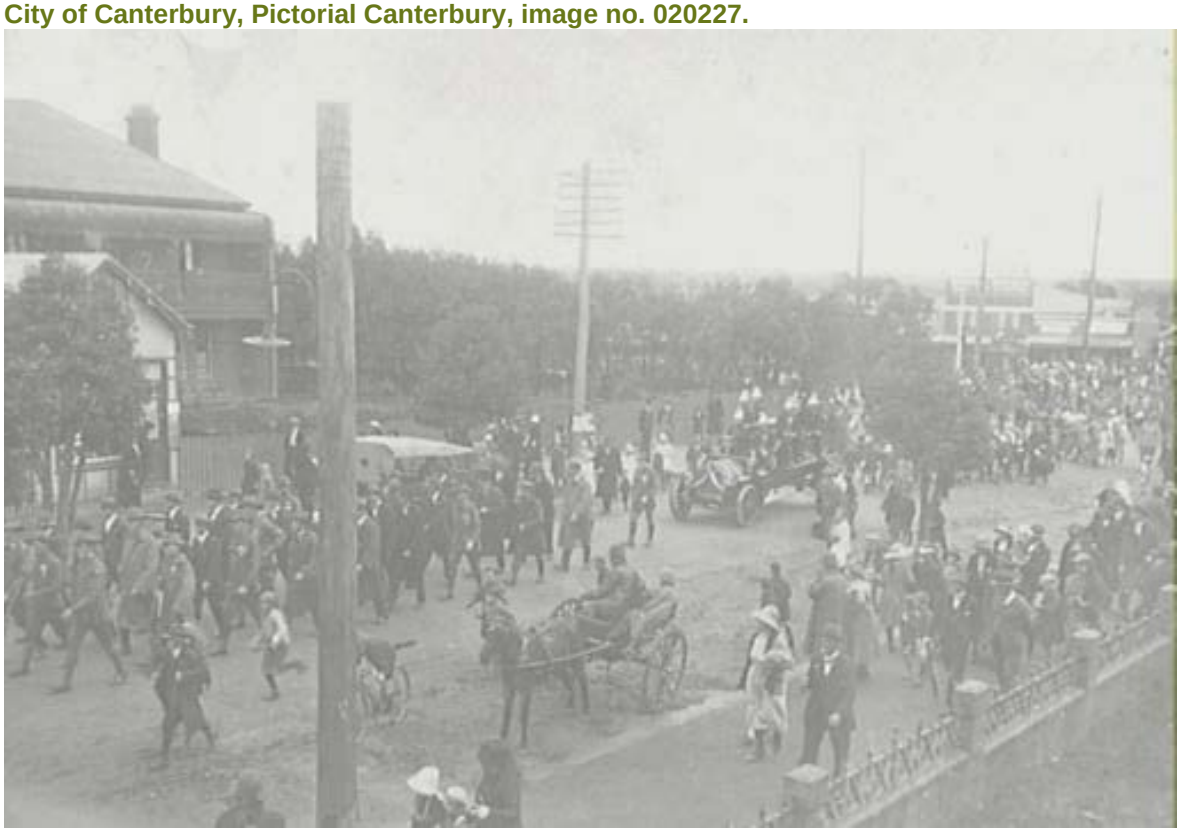


Figure 63: The Methodist Church during construction c.1920, with Taylor's "Lakemba" house in the background. City of Canterbury, Pictorial Canterbury, image no. 210002.

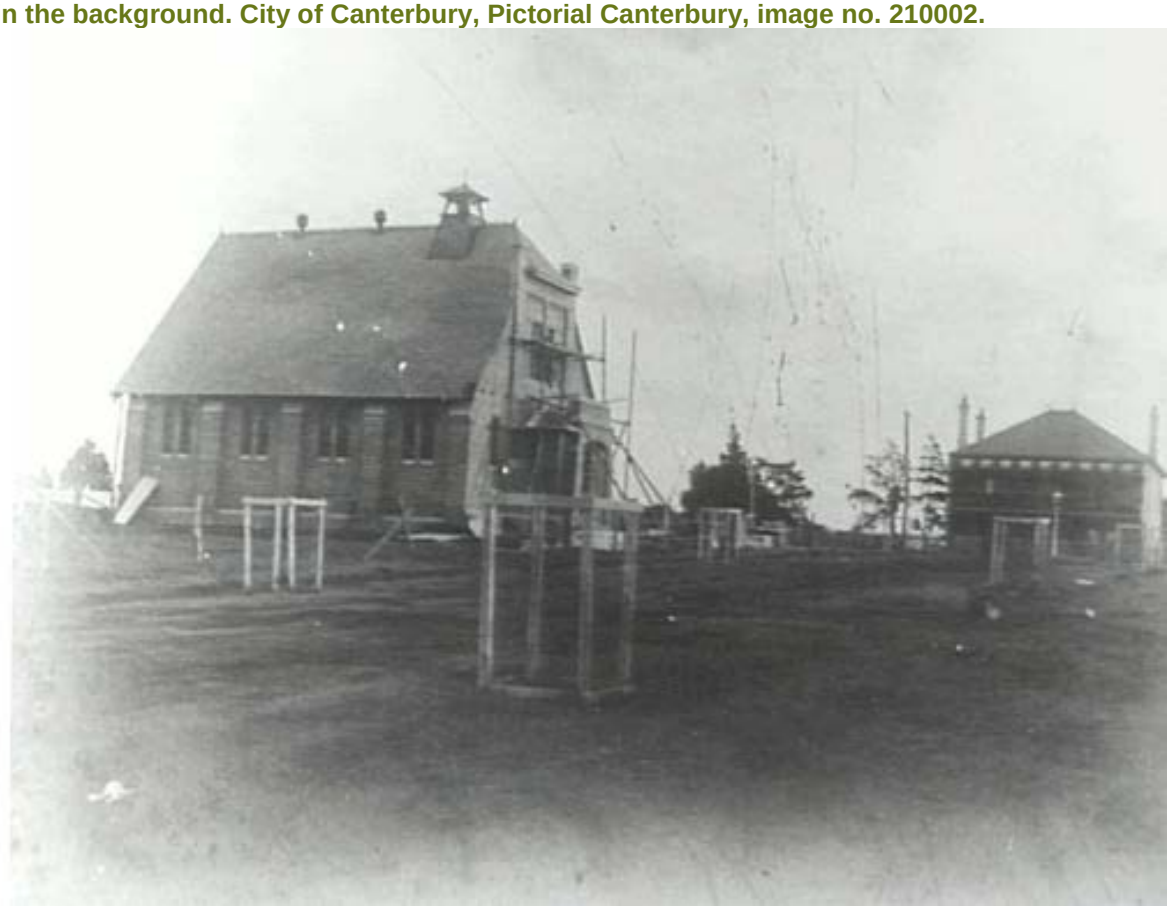
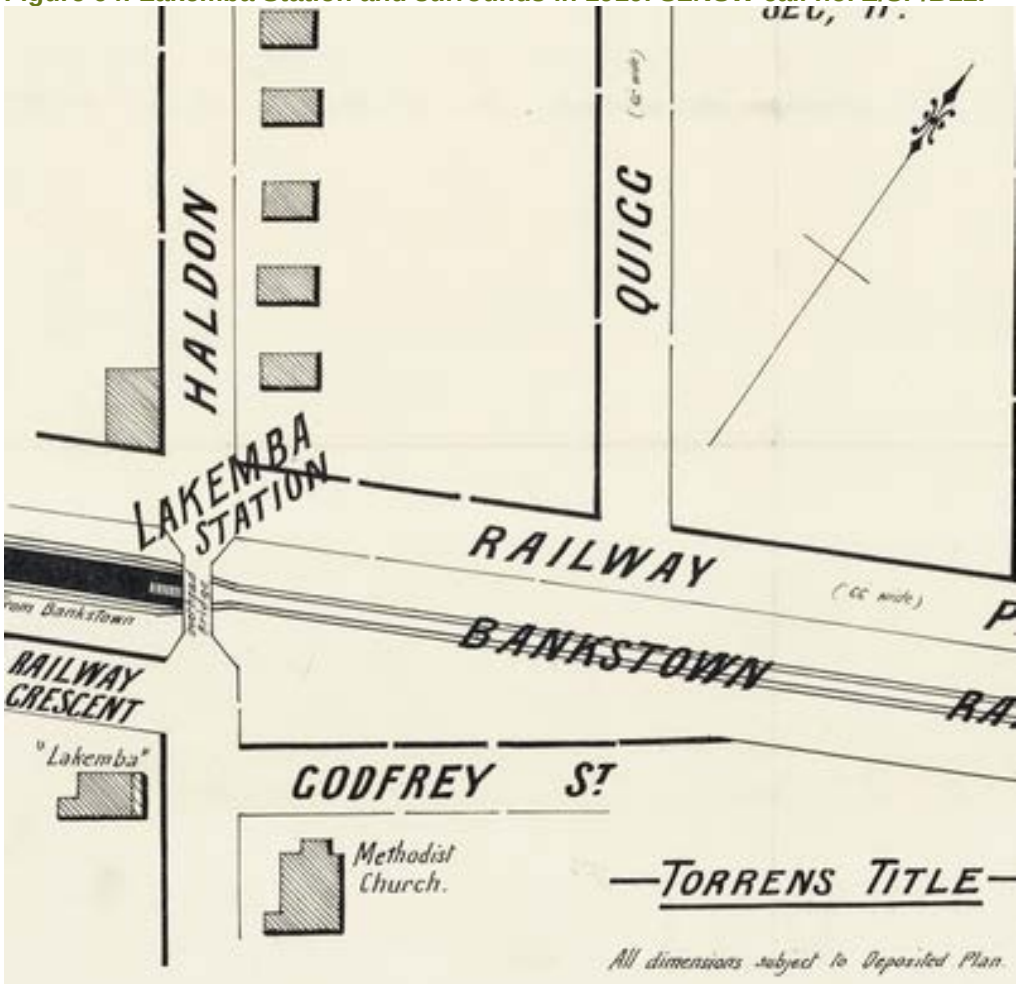


Figure 64: Lakemba Station and surrounds in 1919. SLNSW call no. Z/SP/B12.



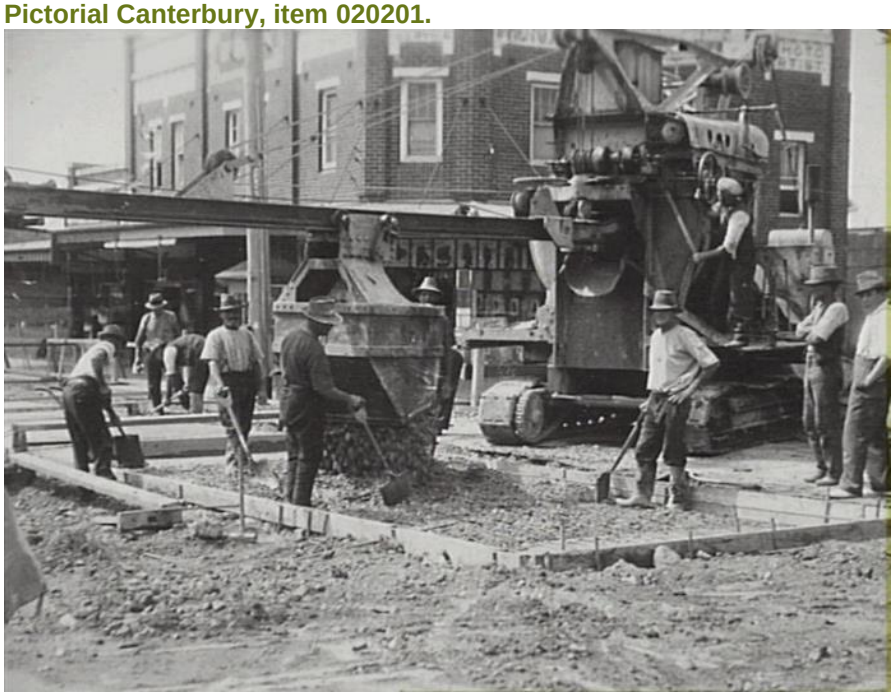
Prior to the arrival of the railway, the surrounding area consisted predominantly of bushland dotted with the occasional small homestead. Early industry included a tannery in Wangee Road, charcoal burning and brickmaking.[76] Commercial nurseries, such as Horton's, and small poultry farms, were also located throughout the area. A piggery was originally located on Haldon Street.[77]

Land values, however, rose dramatically after the construction of Lakemba Station, and shopfronts on Haldon Street were highly sought after by the mid-1920s (Figure 65). In 1932 the Chamber of Commerce (established in 1922), suggested that Haldon Street be concreted, as befitting its status as a busy commercial street (Figure 66).

[76] Jervis 1951: 92.
[77] City of Canterbury Library "Lakemba NSW" Accessed 8 July 2016.

Figure 65: Lakemba c.1920, looking south down Haldon Street from the junction with The Boulevarde. Bankstown Library Collection via Pictorial Canterbury, item 020214.

Figure 66: Lakemba c.1932, concreting Haldon Street. Bankstown Library Collection via Pictorial Canterbury, item 020201.



Lakemba Station

Lakemba Station was opened on 14 April 1909. The original station at Lakemba had an island platform with entrance steps from the Haldon Street overbridge. A small timber station building with a ticket and parcels office was at the Belmore end with a small signal frame on the Bankstown side of the building (Figure 67).

On 24 December 1919, a new brick platform building with cantilever awnings replaced the earlier timber structure (Figure 68) and a signal box was opened at the Bankstown end of the station.

The station was modified for electrification in 1926 and a haunched beam footbridge with overhead booking office erected (Figure 69).[78] The booking office was demolished after fire damage and replaced by a modern metal and glass structure in 2002.

Figure 67: Lakemba Station in c.1910. Bankstown Library Collection via Pictorial Canterbury, items 020204(L) and 020215 (R).

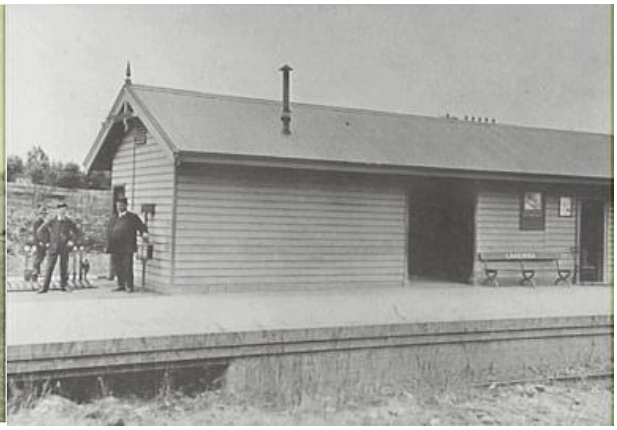
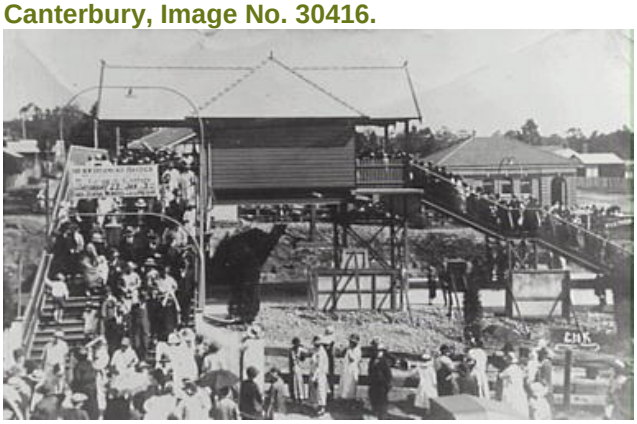


Figure 68: Lakemba Station c.1920. Source National Library of Australia nla.pic-vn4543845-v.

Figure 69: Opening of the overhead bridge. City of Canterbury Library Collection via Pictorial Canterbury, Image No. 30416.



Wiley Park

The present-day suburb of Wiley Park was partially located within 50 acres granted to Johnson (bounded by Defoe Street, Hillcrest Street, King Georges Road and Punchbowl Road). A potter by trade, Johnson was one of the few grantees in the area to live on his grant, named "Pipemaker's Hall".[79] Johnson made a living producing clay pipes made from the white clay found near the property. When Johnson died in 1824, the farm was granted to John Anslep. Neighbouring properties included T. R. O'Brien's "Faux's Farm" (50 acres), 30 acres to T. Salmon and 100 acres to Richard Palmer (Figure 70). Anslep did not occupy the property himself, but leased it to Benjamin Maddocks, who was involved in the clay pipe industry for a short time.

Woodcutting continued to be a lucrative business in the area, with a number of woodcutters moving into the area in the 1860s, including Frederick Pobje, who worked Anslep's grant. These workers lived in slab houses and formed the nucleus of a pioneer settlement. [80]

Wiley Park itself was originally part of a 60 acre grant to Robert Wilkinson dating 1832. The Wiley family obtained the land in 1862. In 1895 John F. Wiley bequeathed 20 acres of the land to

[78] State Heritage Inventory 'Lakemba Railway Station Group' Accessed 8 July 2016.
[79] Madden and Muir 1985.
[80] *Ibid*.

Canterbury Council, to be kept as a new park (Figure 71). As there were few residents in the area at this time, many councillors objected to accepting the land due to the cost of its upkeep. [81]

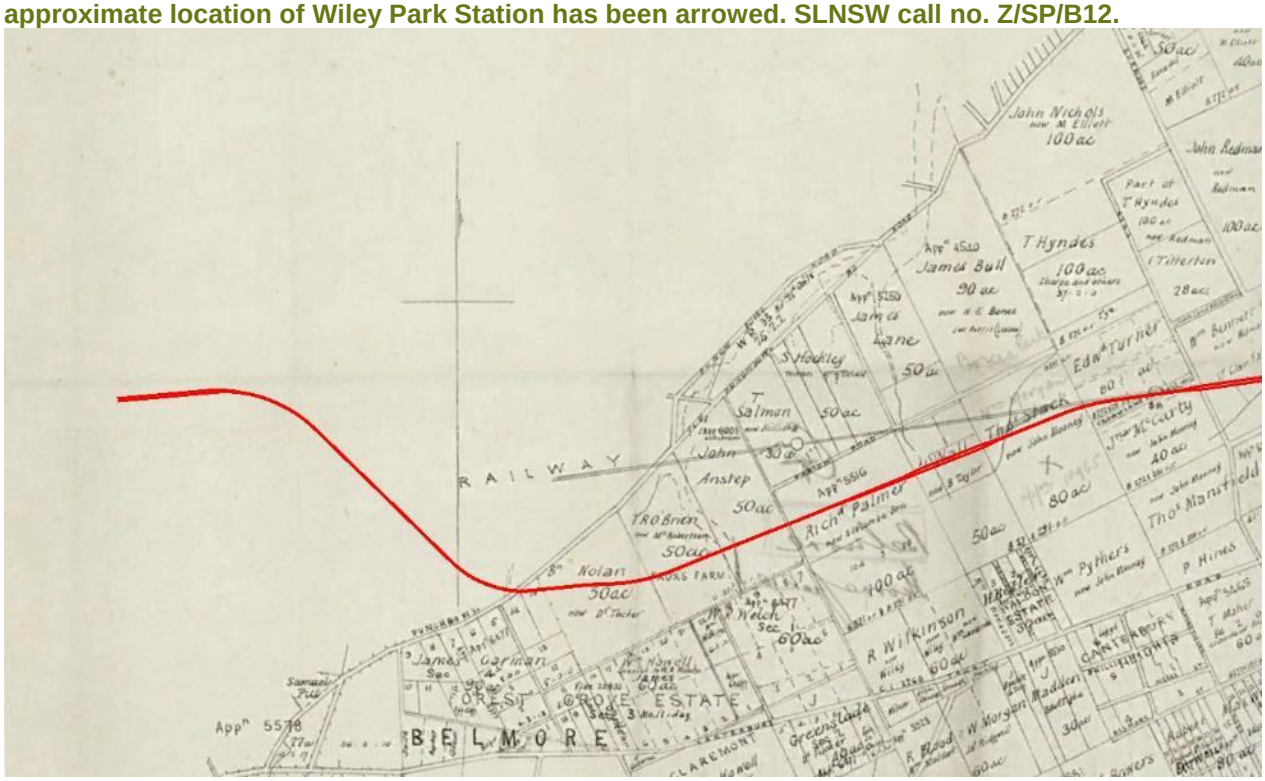
The suburb became known as Wiley Park after the railway was constructed in 1938, following an increase in the population of the area (Figure 72). The new station was constructed on Wiley's Avenue (near King George's Road), which ran from Wiley's original property to the intersection of Canterbury Road and Punchbowl Road (Figure 73). [82] Wiley Park is a predominantly residential area, as can be seen in a 1943 aerial photograph of the area surrounding the station (Figure 74), with a small shopping strip developing on King George's Road in the early twentieth century.

Wiley Park Station

Wiley Park Station was opened on 19 June 1938, much later than other stations on the line. The station was constructed to service growing suburban development in the area during the 1930s and accommodate the need for an interchange at King Georges Road. The station was financed and constructed by the local council (Canterbury Council) and handed over to the NSW Government Railways after completion.

The station was built with an overhead booking office as the major building with ramps leading down to the two side platforms and their small platform shelters (Figure 73). The building on the Up platform appears to have been rebuilt in recent years, and the interior of the booking office has been refurbished. [83]

Figure 70: Undated plan showing approximate alignment of the proposed railway. The approximate location of Wiley Park Station has been arrowed. SLNSW call no. Z/SP/B12.



[81] City of Canterbury Library history pages 'Wiley Park NSW' accessed 10 July 2016.
[82] *Ibid*.
[83] State Heritage Inventory 'Wiley Park Railway Station group' Accessed 8 July 2016.

Figure 71: Men constructing a playground at Wiley Park, c.1920. Bankstown City Library Collection via Pictorial Canterbury, image no. 20203.

Figure 72: Looking south down Denman Avenue, c. 1940s. City of Canterbury, Pictorial Canterbury, image no. 200212.

Figure 73: Wiley Park overhead booking office. Undated photograph. State Heritage Inventory: Wiley Park Railway Station Group".

Figure 74: Wiley Park Station in 1943. Lands and Property Information, SIX Maps.

Punchbowl

The last group of farms to be granted in the Punchbowl area, the “western farms” were granted to William and Henry Howell. Immediately east of the Howell grants was the farm of William Bruce and James Greenslade, who rapidly sold the property to William Richard Welch.[84] At this time, the area was known as Belmore.

In the late 1830s Welch consolidated his farm with the neighbouring property of William Howell, creating his “Forest Grove Farm”. Welch had established a nursery in Pitt Street, Sydney around 1817, and was known as a nurseryman, seedsman and gardener. The Forest Grove farm operated as a large market garden and orchard, watered by large dams located between present-day Beauchamp and Rawson Streets. The Welch’s occupied a cottage on the property, located opposite the end of present-day Tucker Street, south of Wiley Park Station, for the next 35 years (marked as ‘the homestead’ on Figure 75). [85]

In 1841 James Gorman, a publican, purchased 96 acres adjacent to Forest Grove farm (Figure 75). Numerous ironbark trees grew on the property, which became known as “Iron Bark Farm”.[86] After Gorman's death the farm was leased as a grazing run to Henry Kelly who owned extensive property north of Georges River Road.

The population of the area grew slowly until the Canterbury Road was cut through from the Cooks River to join the Punch-Bowl Road in 1855. Timber felling continued to be a lucrative business in the region.

In 1874 Gorman and Welch’s properties were purchased and consolidated by George Alfred Tucker. The possibility of a railway line in the district encouraged numerous land owners to subdivide, and Tucker’s property became known as “Dr Tucker’s Model Farm” when it was subdivided in 1880 (Figure 75 and Figure 79). Many of the allotments were purchased by other land speculators, and Welch’s market gardens were neglected. [87]

As the terminus of the 1895 railway line had been called “Belmore”, when the extension of the line to Bankstown was opened in 1909, a new name had to be found for the railway station serving the district which had been called “Belmore”. “Punch bowl”, the name given to the ford where the George’s River road crossed the Cook’s River, was an old name in the region. The railway station became known as Punchbowl, and the surrounding area also became known by this name (Figure 82). [88]

In 1909, with the opening of the railway line imminent, Arthur Rickard subdivided a portion of the Forest farm into the Emerald Hills Estate (Figure 77). At this time a single house was located on Matthews Street (Figure 77). By 1915, the Sydney Morning Herald was claiming 'The climatic conditions, especially in the district of Punchbowl... are of the best, and many a working man and his family who were once cooped up in the overcrowded suburbs immediately surrounding the city... have been able to secure their little cottage, with plenty of room to keep a few fowls and a vegetable garden large enough to more than supply the family with vegetables free of cost all the year round. The children... have now plenty of room to run about and to drink in the health-giving qualities derived from the pure air obtainable on the Bankstown Line'. Further subdivision of Dr Tucker's old Estate took place between 1912 and 1921, while land further west was settled in the 1920s. [89]

[84] Madden and Muir 1985.
[85] Madden and Muir 1985.
[86] *Ibid*.
[87] *Ibid*
[88] *Ibid*
[89] *Ibid*

Throughout the 1920s and 30s, more new buildings were built in the Canterbury Municipality than in any other local government area in Sydney, despite the onset of the Depression. Despite this electricity and sewerage were late the region.

Figure 75: Plan of Forest Grove, Dr Tucker's Model Farm, Punchbowl, 1880. Lesley Muir via Pictorial Canterbury, item 030245.

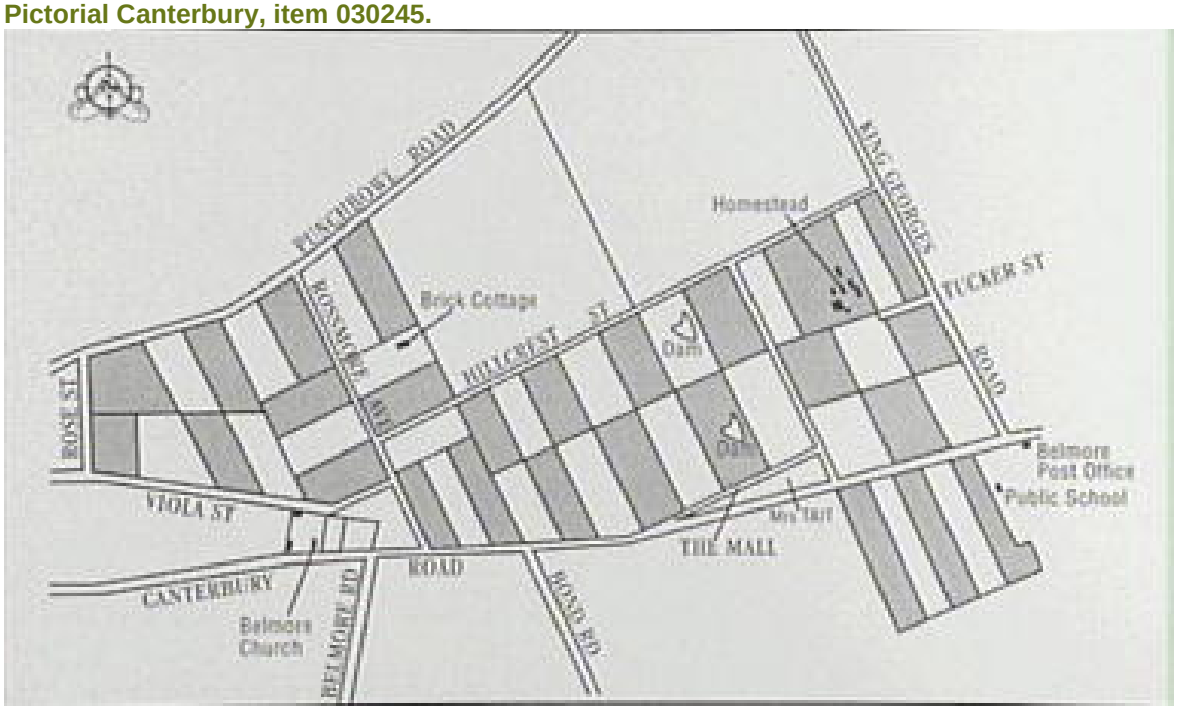


Figure 76: Undated plan showing approximate alignment of the proposed railway. The approximate location of Punchbowl Station, within allotment 14, has been arrowed. SLNSW call no. Z/SP/B12.

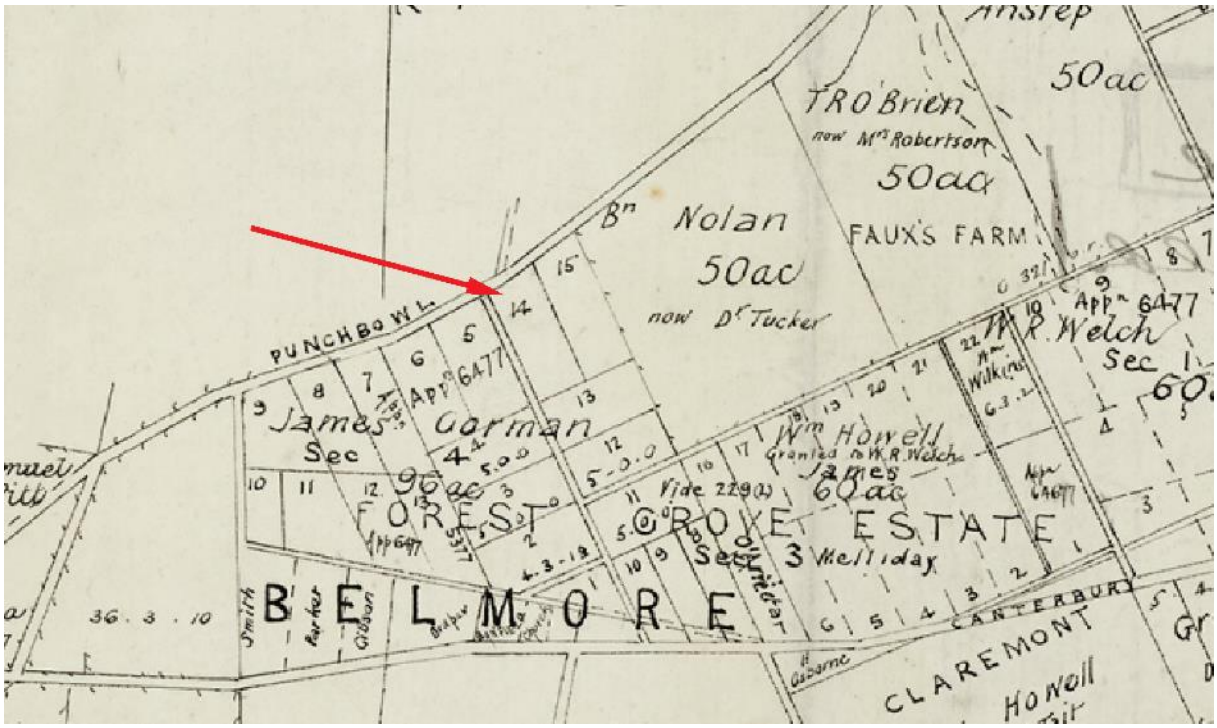


Figure 77: The Emerald Hills subdivision, Punchbowl. SLNSW call no. Z/SP/B12.

Punchbowl Station

Punchbowl Station was opened along with the line extension on 14 April 1909 (Figure 78), at the same time as Bankstown and Lakemba. The contract for construction of station buildings was awarded to G Leggo of Paddington. [90]

A goods siding was built at the station in 1919 (removed 1981), and a station building awning was added in 1924. The Bankstown Line was electrified in 1926, and in the twenties and thirties, the line was one of the busiest in Sydney. Wiley Park Station opened in 1938 to help deal with the influx of commuters.

In 1929, an overhead booking office was built, the platforms were lengthened and the stairway to the Punchbowl Road overbridge was removed. There were further developments in the 1940s, with the construction of a new lamp room and a new parcels office. [91]

A notable railway development in proximity of the station was the opening of an electric train depot in 1926. The depot closed in 1995.

Figure 78: Punchbowl Station c.1909. City of Canterbury Library, Pictorial Canterbury, image no. 15073 ns.

3.2.7 Bankstown

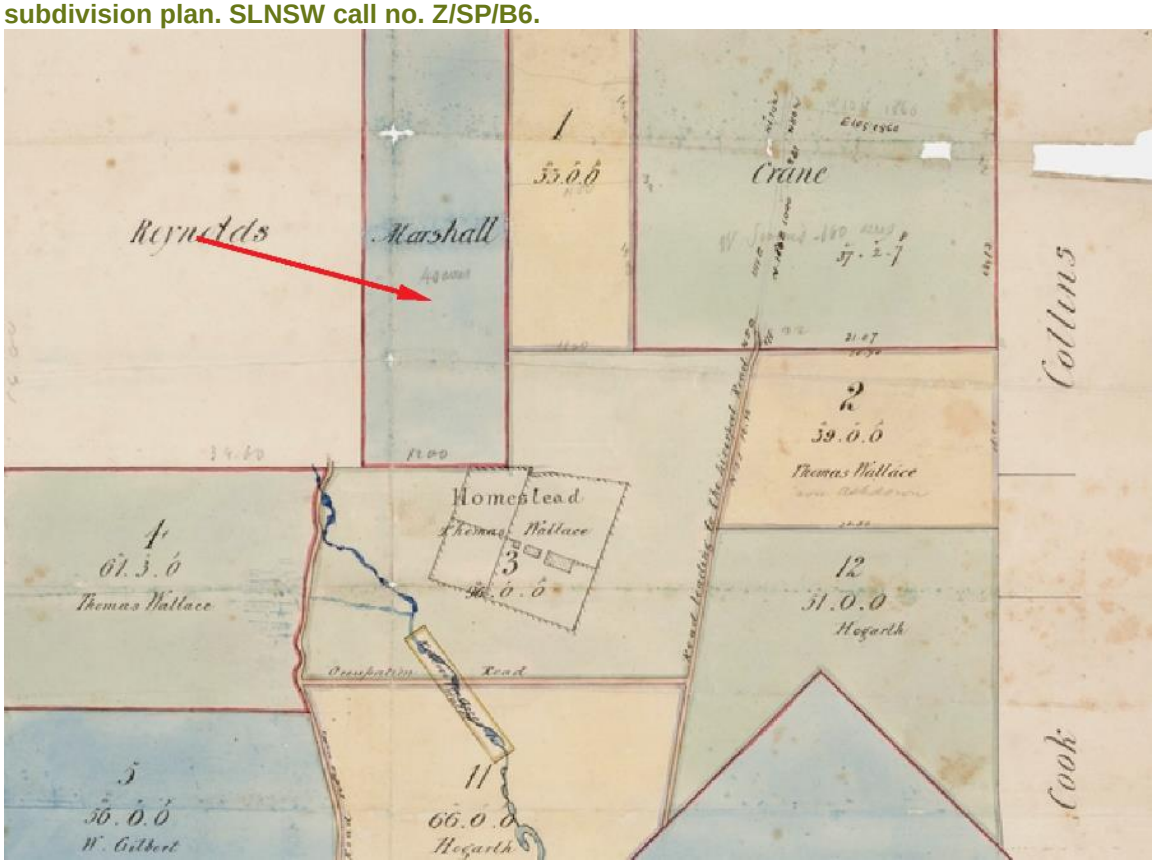
In 1795, Matthew Flinders and George Bass explored the Georges River beyond what had been previously surveyed, and reported favourably to Governor Hunter on the region. In 1798, after visiting the region, Governor Hunter selected a site near the Georges River for a town, naming it “Banks Town”. The town was named after Sir Joseph Banks (1743-1820), the botanist that sailed with Captain James Cook.

[90] State Heritage Inventory “Punchbowl Railway Station Group” Accessed 10 July 2016.
[91] *Ibid*

By 1828 over 2800 hectares had been granted in the districts of Botany Bay, Cooks River and Banks' Town, but only 360 hectares had been cleared and 240 hectares cultivated. Figure 79 indicates that few grantees were occupying their land, with only Thomas Wallace's grant occupied at the time. Wallace, a farmer, died at his property in 1891.[92] The main access roads were the Liverpool and Georges River Roads. The most frequently used river crossing was where the Georges River met the Cooks River at a wide shallow and almost circular valley called The Punch Bowl.

Bankstown's limited population declined during the 1850s gold rush, as men deserted Sydney for the goldfields. Despite the low population, those that remained built churches, schools and a post office. Like the surrounding areas of Canterbury and Belmore, the region was timbered, and consisted of large farms containing scattered homesteads. An 1897 plan of the Adelaide Park Estate subdivision depicts what is likely to have been the common arrangement, a residence with outbuildings on a large block of land (Figure 80). The economy of the region was based on timber cutting, small scale saw-milling, brick and pottery making, the occasional slaughter yard and farming.[93]

Figure 79: Approximate location of present-day Bankstown Station. Undated Bankstown subdivision plan. SLNSW call no. Z/SP/B6.



Bankstown Station was opened in 1909, stimulating a building and population boom. Previously, the town centre had been established at the intersection of Liverpool Road and Chapel Street, located approximately one kilometre to the north. Land in the vicinity of the station became increasingly valuable. The 1909 Greenacre Park Estate subdivision plan (the first subdivision in the area) indicates whilst a number of lots north of the railway line were occupied at the time, including an accommodation house and shop while the southern side of the new line was undeveloped (Figure 89). By 1912, additional lots were offered for sale. Between 1920 and 1930 around 22000 new building sites were created by subdividing thousands of acres of rural land. Speciality stores were being built by the mid-1920s. Despite this growth, much of the region retained its rural nature. A

[92] New South Wales Government Gazette, 10 Feb 1891. Accessed via NLA Trove, 10 July 2016.
[93] Rosen 1996: 72, 78-79.

series of photographic panoramas showing the construction of homes and roads in the Bankstown area were completed between 1917 and 1946 by EB Studios. The photographs suggest that the area remained rural into the early to mid-twentieth century (Figure 82; Figure 83).

Figure 80: The Adelaide Park Estate, with the line of the proposed railway. SLNSW call no. Z/SP/B6.

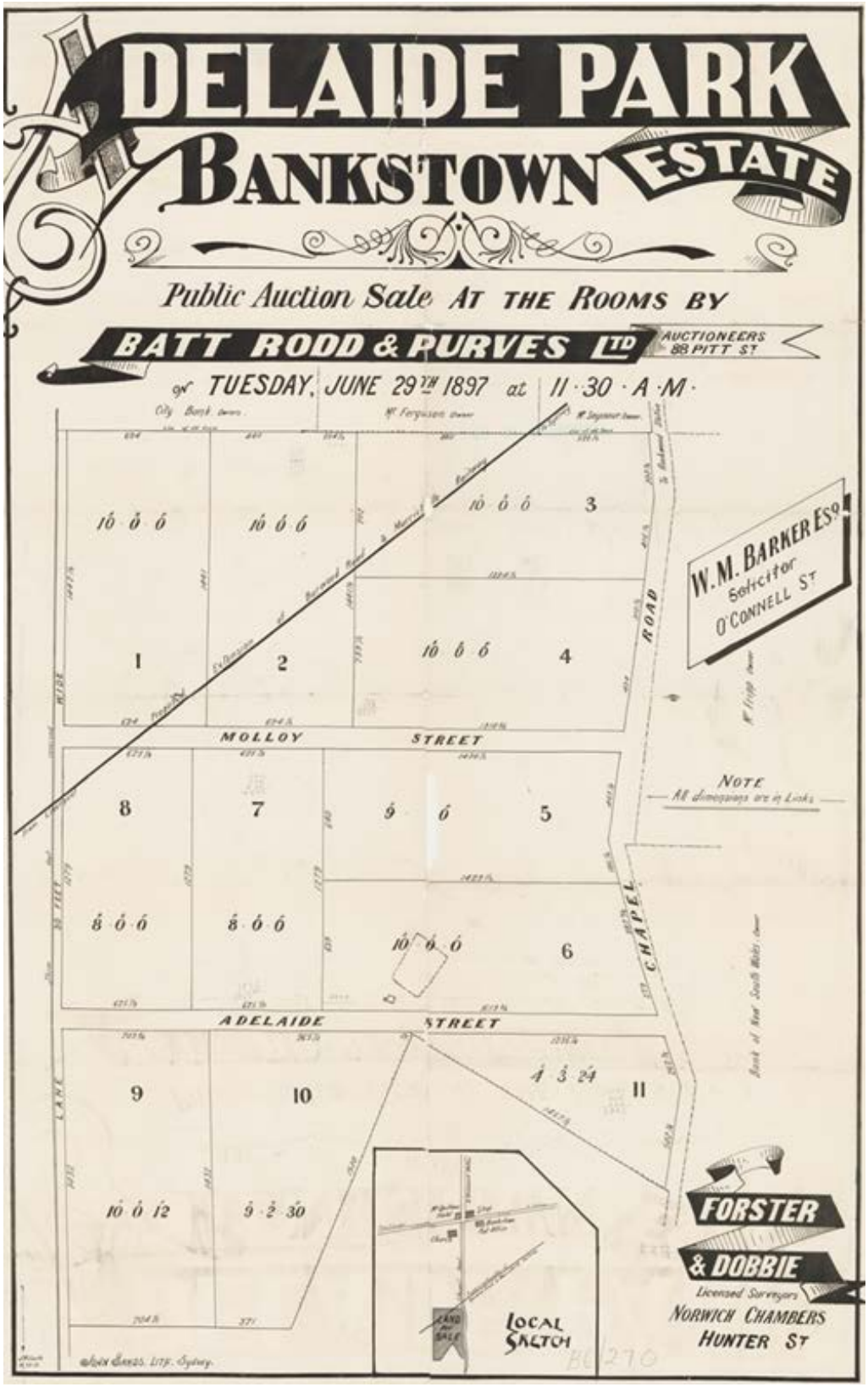


Figure 81: Detail of 1909 plan of the Greenacre Park subdivision plan, showing that a number of lots north of the railway line were occupied at the time, including an accommodation house and shop. State records of NSW, Bankstown Subdivision Plans, call no. Z/SP/C8.

Figure 82: Detail of panorama showing a family inspecting a recently cleared lot. PIC P865/236/6 LOC Nitrate store.

Figure 83: Clearing land for the Bankstown Soldiers Settlement, 1921. State Records NSW, item 8095_a016_a016000001.

Bankstown Station

In February 1901, it was proposed that the Sydenham to Belmore line could be extended to Chapel Road, Bankstown, at a reasonable cost (after having been previously dismissed as too expensive). In 1906 construction on the extension of the railway line commenced, and the new line opened on 14 April 1909. The line was further extended to Regents Park in the 1920s, making it part of a loop line through Lidcombe. Its justification by then being the servicing of suburban development. [94]

The construction contract for the Belmore to Bankstown section was awarded to Monie Bro on 13 November 1907. Bankstown Station was opened as a terminal on 14 April 1909, with Lakemba and Punchbowl stations were also opened at the same date (Figure 84, Figure 85, Figure 86, Figure 87). The extension of the line to Bankstown triggered a huge real estate boom in the area from 1909 until the late 1920s. [95]

The original platform at Bankstown was 145 metres in length (Figure 87 and Figure 88). The tender for the construction of the brick platform buildings was awarded to George Albert Leggo in August 1908. A contract was also awarded around this time for the construction of a Station Master's Residence, which was located on the northern side of the tracks, near the goods yard and a goods shed built to the west of the old Chapel Road overbridge (Figure 89). [96]

During 1910 a single tier water tank on a steel stand was erected on the south side, at the western end of the platform, near the overbridge, for the use of locomotives off terminating trains. The tank was removed in c1970s. In the early 1920s, a pillar water tank and ash pit were provided for the Up track locomotives. [97]

As Bankstown developed into a major centre, the station was extended and modified. A parcels office was opened in 1915 (Figure 90; replaced by a new office in 1925), and platform extensions were constructed when the line was electrified in 1926. [98] In 1948 the Overhead Booking Office, footbridge and existing former Parcels Office were constructed (Figure 91).

Figure 84: Opening of Bankstown Station in 1909. Source: State Records of NSW, 17420_a014_a0140001092.

Figure 85: The opening of the Bankstown Station in 1909. Source: State Records of NSW, 17420_a014_a014001091.

[94] State Heritage Inventory "Bankstown Railway Station Group" Accessed 10 July 2016.
[95] *Ibid*.
[96] *Ibid*.
[97] *Ibid*.
[98] *Ibid*

Figure 86: The opening of the Bankstown Station in 1909. Source: State Records of NSW, 17420_a014_a0140001093.

Figure 87: Bankstown Station in 1909. Source: State Records of NSW, 17420_a014_a0140001094.

Figure 88: Bankstown Station, 1910. State Records NSW, item 17420_a014_a0140001090.

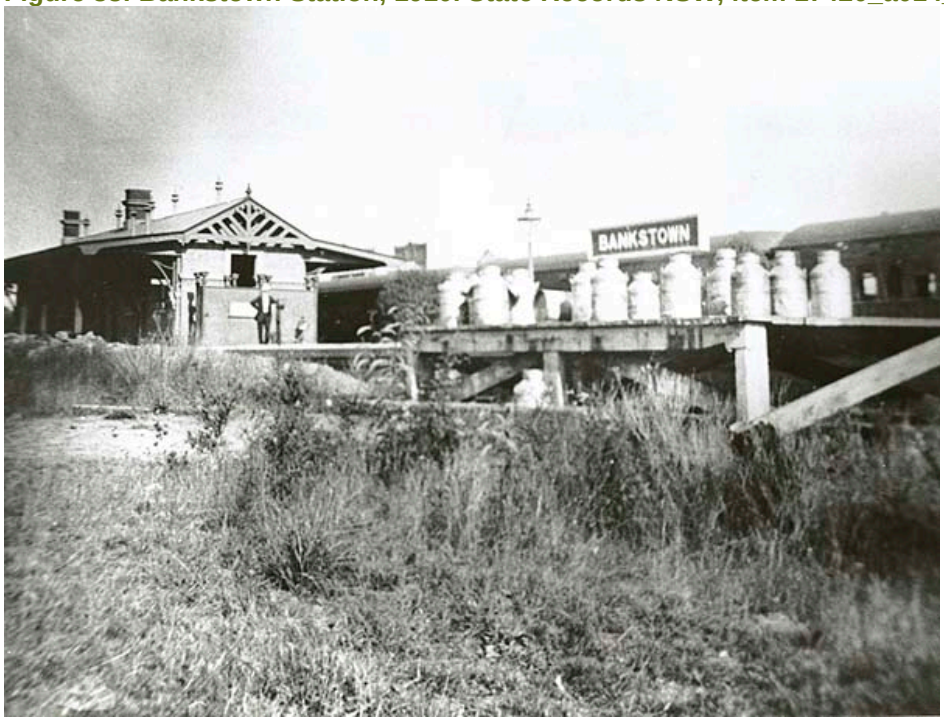


Figure 89: Detail of 1916 plan of the Bankstown Township Estate, illustrating a station masters residence and goods yard. State records of NSW, Bankstown Subdivision Plans, call no. Z/SP/C8.

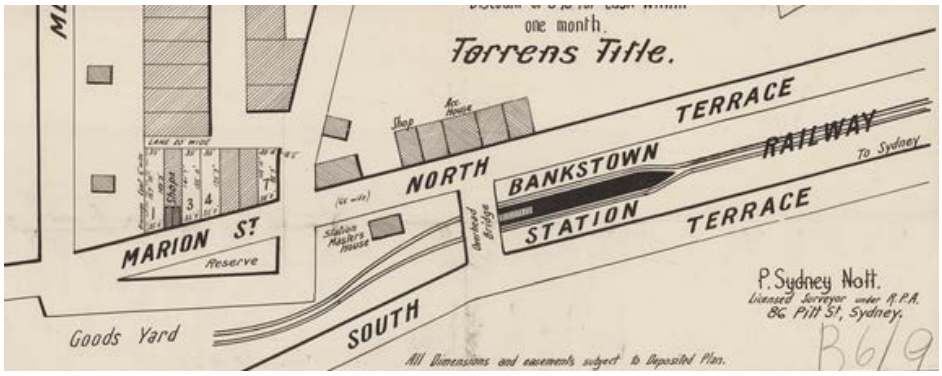


Figure 90: 1923 plan of the platform building and parcels office. Railcorp archive.

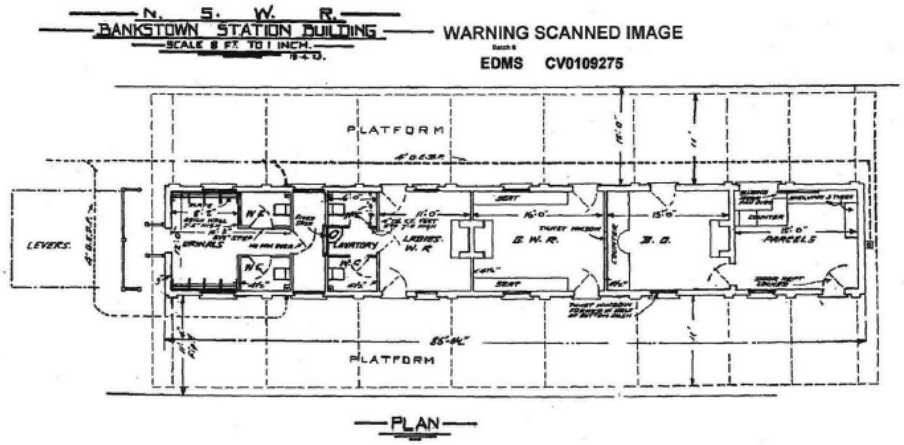
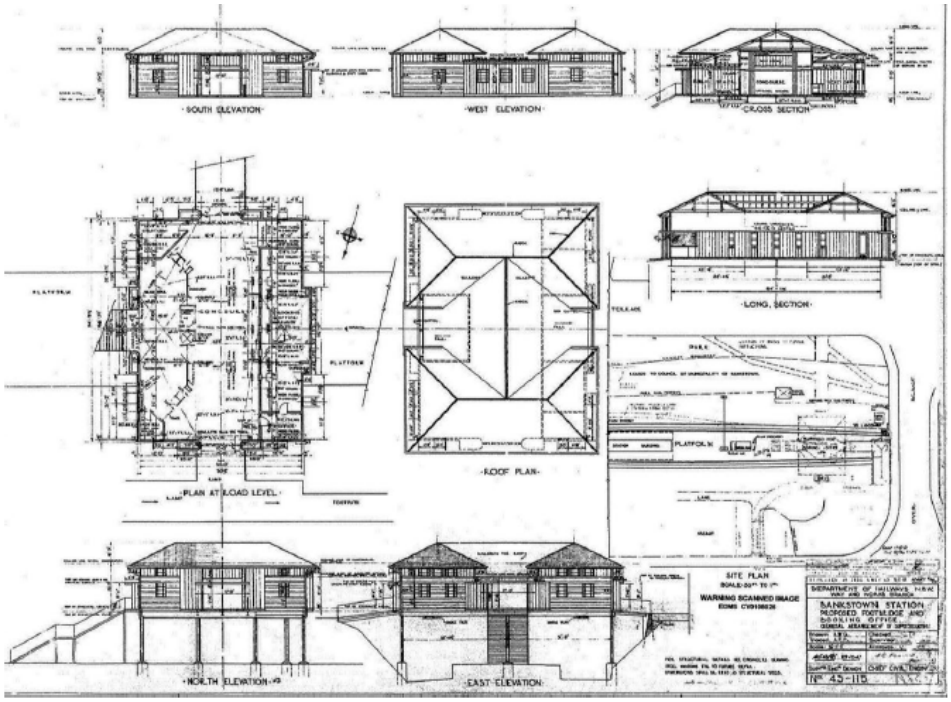


Figure 91: 1947 plans and elevation for the proposed footbridge and booking office. Railcorp archive.



4. STATUTORY CONTEXT

An overview of heritage legislation is provided below along with the register search results applicable to the study area. This outlines the statutory heritage constraints applicable to the project and provides a base format for the heritage assessment in Section 5.0 of this report.

4.1 Heritage legislation

There are several items of legislation, heritage registers and heritage management guidelines that are relevant to the project. A summary of these Acts and the potential legislative implications for the project follow.

4.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legislative framework for the protection and management of matters of national environmental significance, that is, flora, fauna, ecological communities and heritage places of national and international importance. Heritage items are protected through their inclusion on the World Heritage List, Commonwealth Heritage List or the National Heritage List.

The EPBC Act stipulates that a person who has proposed an action that will, or is likely to, have a significant impact on a World, National or Commonwealth Heritage site, must refer the action to the Department of the Environment and Energy and Minister for the Environment (hereafter Minister). The Minister will then determine if the action requires approval under the EPBC Act. If approval is required, an environmental assessment would need to be prepared. The Minister would approve or decline the action based on this assessment.

A significant impact is defined as “an impact which is important, notable, or of consequence, having regard to its context or intensity.” The significance of the action is based on the sensitivity, value and quality of the environment that is to be impacted, and the duration, magnitude and geographic extent of the impact. If the action is to be undertaken in accordance with an accredited management plan, approval is not needed and the matter does not need be referred to the Minister.

Commonwealth Heritage List

The Commonwealth Heritage List has been established to list heritage places that are either entirely within a Commonwealth area, or outside the Australian jurisdiction and owned or leased by the Commonwealth or a Commonwealth Authority. The Commonwealth Heritage List includes natural, Indigenous and historic heritage places which the Minister is satisfied have one or more Commonwealth Heritage values.

National Heritage List

The National Heritage List has been established to list places of outstanding heritage significance to Australia. It includes natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation.

4.1.2 New South Wales Heritage Act 1977

The NSW *Heritage Act 1977* (Heritage Act) provides protection for items of ‘environmental heritage’ in NSW. ‘Environmental heritage’ includes places, buildings, works, relics, movable objects or precincts considered significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. Items considered to be significant to the State are listed on the State Heritage Register and cannot be demolished, altered, moved or damaged, or their significance altered without approval from the Heritage Council of NSW.

Archaeological relics

The Heritage Act also provides protection for 'relics', which includes archaeological material or deposits. Section 4 (1) of the Heritage Act (as amended in 2009) defines a relic as:

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

Sections 139 to 145 of the Heritage Act prevent the excavation or disturbance of land known or likely to contain relics, unless under an excavation permit. Section 139 (1) states:

A person must not disturb or excavate any land knowingly or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, damaged or destroyed unless the disturbance is carried out in accordance with an excavation permit.

Excavation permits are issued by the Heritage Council of NSW, or its Delegate, under Section 140 of the Heritage Act for relics not listed on the State Heritage Register or under Section 60 for relics listed on the State Heritage Register. An application for an excavation permit must be supported by an Archaeological Research Design (ARD) and Archaeological Assessment prepared in accordance with the NSW Heritage Division archaeological guidelines. Minor works that would have a minimal impact on archaeological relics may be granted an exception under Section 139 (4) or an exemption under Section 57 (2) of the Heritage Act.

Definition of works

The Heritage Act defines 'works' as being in a separate category to archaeological 'relics'. 'Works' refer to past evidence of infrastructure. 'Works' may be buried, and therefore archaeological in nature, however, exposure of a 'work' does not trigger reporting obligations under the Act. The following examples are commonly considered to be 'works': former road surfaces or pavement, kerbing, evidence of former infrastructure (such as drains or drainage pits where there are no relics in association), tram and train tracks and ballast and evidence of former rail platforms.

As the Sydney Metro City and Southwest project is subject to Part 5.1 (State Significant Infrastructure) of the EP&A Act, excavation or exception permits would not be required.

State Heritage Register

The State Heritage Register was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The State Heritage Register is administered by the Heritage Division of the Office of Environment and Heritage (OEH) and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

Section 170 registers

Under the Heritage Act all government agencies are required to identify, conserve and manage heritage items in their ownership or control. Section 170 of the Heritage Act requires all government agencies to maintain a Heritage and Conservation Register that lists all heritage assets and an assessment of the significance of each asset. They must also ensure that all items on its list are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the Government on advice of the NSW Heritage Council. These principles serve to protect and conserve the heritage significance of items and are based on NSW heritage legislation and guidelines.

4.1.3 Environmental Planning and Assessment Act 1979

The EP&A Act establishes the framework for cultural heritage values to be formally assessed in the land use planning, development consent and environmental impact assessment processes. The EP&A Act requires that environmental impacts are considered prior to land development and the level of significance of the impact assessed; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The EP&A Act also requires that local governments prepare planning instruments (such as LEPs and Development Control Plans [DCPs]) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required.

The study area falls within the boundaries of the Inner West Council Local Government Area (LGA) and the Canterbury-Bankstown Council LGA. The study area is therefore subject to the Marrickville LEP 2011, Canterbury LEP 2012, and Bankstown LEP 2015.

The aim of the LEP's in relation to heritage is to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings, views and archaeological sites. The LEP's list items of heritage significance within the LGA and specify aims and objectives to be addressed in any development application.

4.2 Applicable heritage listings

4.2.1 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 22 June 2016. 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 7, and maps of the heritage items are provided from Figure 92 to Figure 97 below.

Table 7: Heritage registers search results (with listed railway stations shaded)

Item	Suburb [99]	Significance	Listing	Within project area?
Marrickville Railway Station Group	Marrickville	State	SHR (01186) RailCorp S.170 Heritage and Conservation Register (4801091) Marrickville LEP 2011 (I89)	Yes
Sewage Pumping Station 271	Marrickville	State	SHR (01342) Sydney Water S.170 Heritage and Conservation Register (4571727) Marrickville LEP 2011 (I67)	No
Stone house, including interiors	Marrickville	Local	Marrickville LEP 2011 (I114)	Yes
Stonewalling, terracing and street planting	Marrickville	Local	Marrickville LEP 2011 (I86)	No

[99] Suburbs as per SHI listing

Item	Suburb [99]	Significance	Listing	Within project area?
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
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

Item	Suburb [99]	Significance	Listing	Within project area?
Electricity substation no. 275	Canterbury	Local	Ausgrid S.170 Heritage and Conservation Register (3430425)	No
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
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

Item	Suburb [99]	Significance	Listing	Within project area?
Wiley Park Railway Station Group	Wiley Park	Local	RailCorp S.170 Heritage and Conservation Register (4801946) Canterbury LEP 2012 (I159)	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
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

4.2.2 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 4.2.1, 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 project.

Table 8: Summary of HCAs located within study area

Item	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

4.2.3 Heritage overlays

The following maps provide an overview of the heritage listings applicable to the study area. They have been ordered from east to west, in a city to country direction.

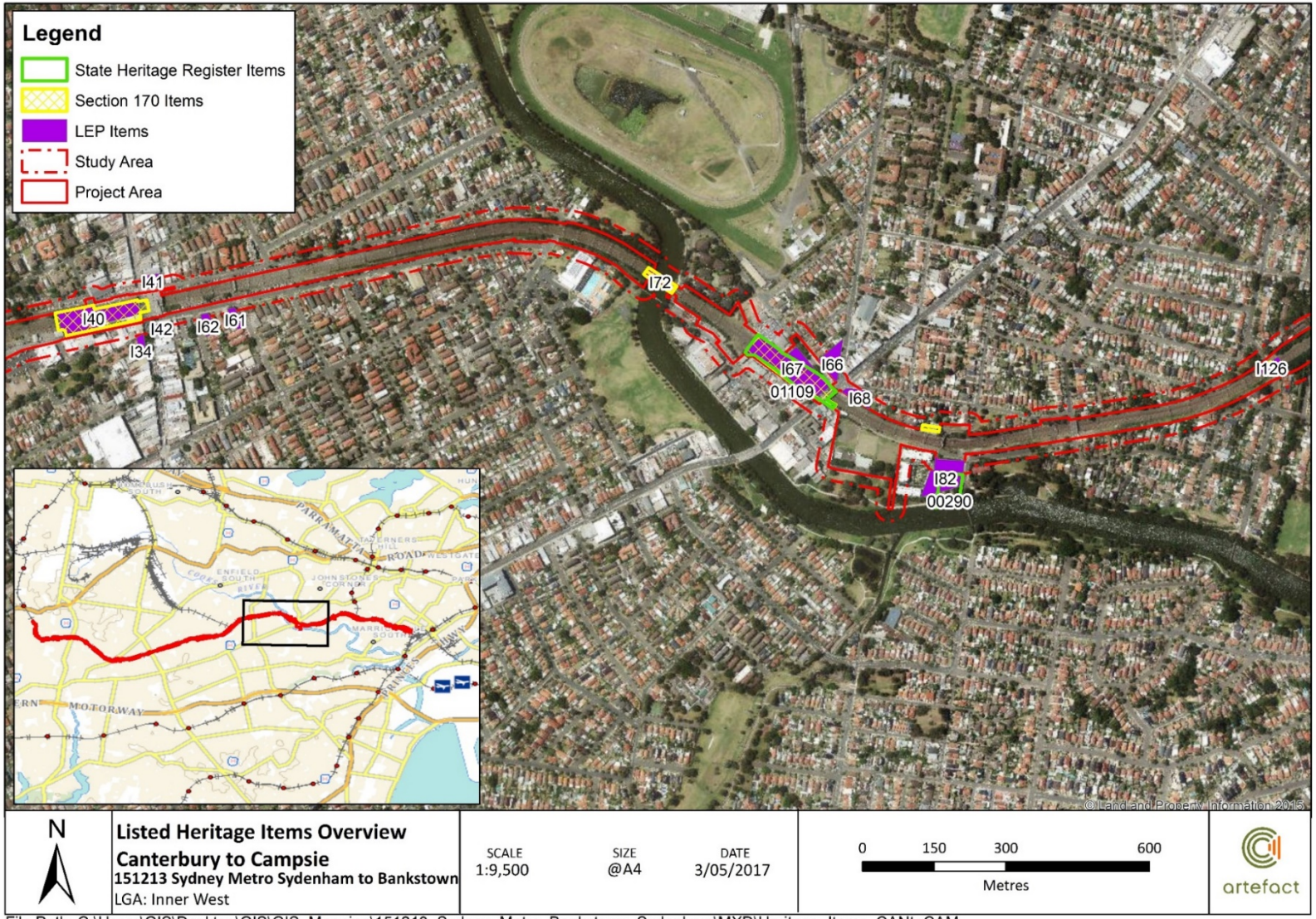
Figure 92: Aerial map showing heritage items within study area: Marrickville

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Items_SYD

Figure 93: Aerial map showing heritage items within study area: Dulwich Hill to Hurlstone Park

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Items_DULtoHP

Figure 94: Aerial map showing heritage items within study area: Canterbury to Campsie



File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Items_CANtoCAM

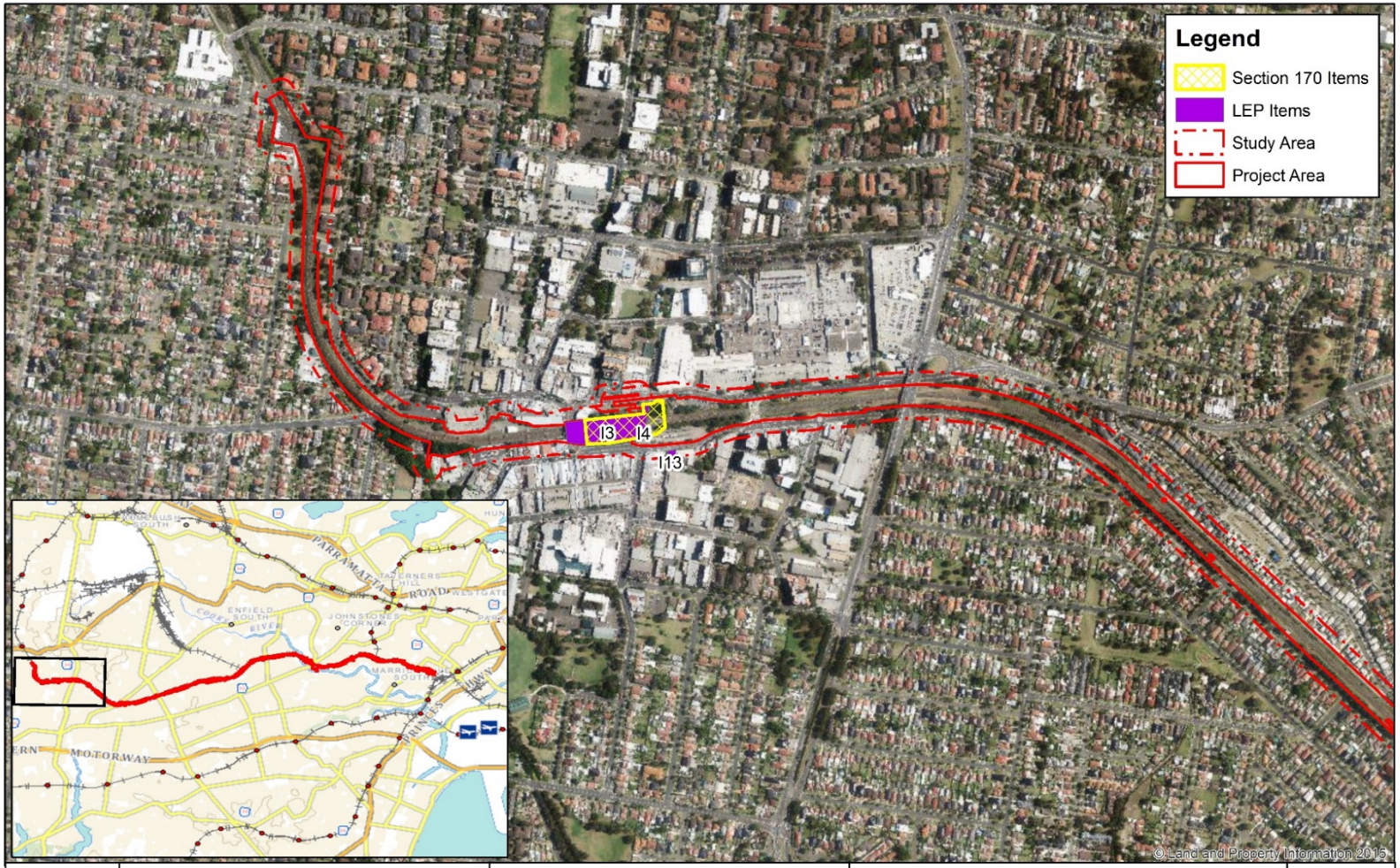
Figure 95: Aerial map showing heritage items within study area: Belmore to Lakemba

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Items_BELtoLAK

Figure 96: Aerial map showing heritage items within study area: Wiley Park to Punchbowl

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Items_WPtoPUN

Figure 97: Aerial map showing heritage items within study area: Bankstown



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5. PROJECT DESCRIPTION

This chapter provides a description of the Metro project. The information below provides a planning and design background to assist in understanding the proposed heritage impacts within the project area. Metro requirements and objectives are outlined as well as descriptions, justifications and drawings of the project for each of the ten station catchments constituting the project area. The ten railway station catchments are situated along the Bankstown Line between Marrickville and Bankstown Stations.

5.1 General design

5.1.1 Key features of the project

The key features of the project, once built, are summarised in section 1.2.2. This includes the key features for track and rail system facility works, metro stations, transport network, surrounding development, and ancillary infrastructure and works.

5.1.2 Design principles and guidelines

Design guidelines and standards

Sydney Metro has developed design guidelines, The *Sydney Metro Sydenham to Bankstown Design Guidelines*, to establish the aesthetic standards for the project and respond to strategic directions, urban design strategies, customer needs, and the initiatives of the local councils. The design guidelines provide guidance on:

- the interface between stations and their surrounding locality, including:
  - station entries
  - transport interchange facilities (bicycle facilities, bus stops, kiss-and-ride, taxi ranks and connections to existing transport facilities)
  - landscaping and other public domain elements.
- rail corridor works, rail cuttings and embankments.
- station and service buildings.

Five design objectives have been developed to guide decision-making and the design process for the project:

1. Ensuring an easy customer experience
2. Being part of a fully integrated transport system
3. Being a catalyst for positive change
4. Being responsive to distinct contexts and communities
5. Delivering an enduring and sustainable legacy for Sydney.

The project would be designed, constructed and operated in accordance with the current standards of the following agencies, as applicable:

- Australian Standards
- Building Code of Australia
- Asset Standards Authority

- Transport for NSW
- Council (for the public domain)
- Sydney Trains
- Roads and Maritime Services
- utility companies or asset owners.

The design would only depart from the specified standards with the agreement of the relevant authority.

Urban design

The design of the project would:

- be consistent with the principles and strategies of the *Bankstown to Sydenham Corridor Strategy: Open space* and the Draft *Sydenham to Bankstown Urban Renewal Corridor Strategy* (Department of Planning and Environment, 2016)
- take into account heritage considerations
- provide for an activated public domain, pedestrian connectivity and fully integrated transport system
- provide safe and convenient interchange opportunities
- explore opportunities for new development including re-purposing existing unused rail land
- incorporate sustainable design considerations such as photovoltaics, natural ventilation and light and water sensitive urban design
- enhance the immediate and broader urban context.

The appearance and visual form of the visible features of the project have been considerations in the options assessment and design definition process. The preliminary design for the project has been prepared in accordance with the above principles. The design would continue to be refined during the detailed design phase, which would integrate all relevant considerations, including:

- security and safety (including consideration of crime prevention through environmental design (CPTED) principles)
- functional and operational requirements
- community and stakeholder input
- the role of the project and the objectives of the Draft *Bankstown to Sydenham Corridor Strategy: Open space and recreation strategy* (Government Architect's Office, 2015) and the Draft *Sydenham to Bankstown Urban Renewal Corridor Strategy*
- urban design and visual impacts
- environmental constraints and sustainability
- access and maintenance requirements
- minimising impacts to heritage.

Design principles for metro stations

The metro stations are part of a wider system requiring consistency between station planning, operations and architecture. Station entries, platforms and circulation elements have been designed to meet operational requirements while ensuring an easy customer experience.

The following design principles have been developed to describe the intention of the design objectives for the metro stations:

- Functionality, accessibility and circulation – ensure that access between the stations, catchments and other forms of transport is safe, quick and efficient and available to all members of the community including those with accessibility issues such as parents with prams and those with a disability.
- Customer information and wayfinding – ensure that movement around stations and catchments is made easy with clear signage and that information about metro services are readily available.
- Safety – ensure the safety of all users of stations and catchments.
- Customer comfort and amenity – ensure that stations function in a way that they do not become overcrowded and that suitable furniture is provided on platforms.
- Heritage and archaeology - identify opportunities for heritage conservation to contribute to the celebration of local identity in station design.

Safety and security

A key metro characteristic is to provide a system that is inherently safe for customers on trains, at stations, and at the interface with the public domain. The safety of passengers and the general public has been and will continue to be a key consideration during the design process.

The following metro features would contribute to the safety and security of customers:

- customer service assistants at every station and moving through the network during the day and night
- station and train design allows for good line of sight to enable passive and active surveillance
- stations and catchments that are designed to be highly visible, active spaces with good lighting and amenity
- ensuring customers can see all the way along the train and move easily between carriages, including wide, open walkways between carriages
- providing platform screen doors at stations which keep people and objects away from the edge, improving customer safety and allowing trains to get in and out of stations much faster.

Other station safety features include:

- CCTV cameras linked to the operations control centre
- an appropriate level of lighting
- emergency help points
- passenger information signage.

The design and layout of each station and stabling and maintenance facility would include consideration of crime prevention through environmental design (CPTED) principles.

Fencing of the rail corridor is being provided/upgraded as part of the project to ensure the safety of the general community. A trackside intruder detection system would also be installed.

The design of the project would also incorporate relevant fire and life safety/evacuation requirements.

5.1.3 Sustainability and environmental considerations

Sustainability in design

One of the objectives of EP&A Act is to 'encourage ecologically sustainable development'. Transport for NSW is committed to ensuring that its projects are implemented in a manner that is consistent with the principles of ecologically sustainable development.

Transport for NSW has applied, and will continue to apply, the principles of ecologically sustainable development throughout the development of the project.

Environmental considerations

The approach to design development has included a focus on avoiding and/or minimising the potential for impacts during all key phases of the process.

Strategic assessment undertaken during the initial option selection included consideration of delivery risk, including feasibility of construction and risks in implementation. Following identification of the preferred option the design of the project evolved over a number of stages which incorporated further consideration of environmental constraints. As a result, the design of the project has been influenced by a number of environmental factors and has generally been designed to:

- minimise direct and indirect impacts on heritage items
- minimise direct impact on property
- minimise flooding impact and flood behaviour
- minimise impacts on protected species.

5.1.4 Common station elements

Sydney Metro stations and catchments are being designed to provide safe and efficient interchange between transport modes, including minimising conflicts between pedestrians, cyclists, buses and vehicles.

Station works

Each metro station would have a number of common elements or design features. These include:

- for some stations a new station concourse and station entrance locations, including:
  - new stairs and ramps
  - new or relocated lifts
- platform works and installation of platform screen doors which would open with the train doors once an arriving train has stopped, and close simultaneously with the train doors) (described below)
- signage and wayfinding within the station and catchment

- station service buildings to house services for each station, including communications equipment, signalling equipment, electrical equipment and other rail systems equipment
- station buildings on platforms or at station entrances, including control and communication rooms, toilets, staff facilities (locker room, toilets and meal rooms), storerooms and offices
- new, upgraded or relocated parking and kerb side facilities within the station catchment, including accessible parking, kiss and ride and taxi facilities
- provision of new and/or relocated bicycle parking facilities
- awnings for shade and shelter at stations
- enhancements to the footpaths in the vicinity of the station entries and interchange areas
- landscaping and street furniture to maintain high quality urban design outcomes.

Platform works

The project includes the modification of station platforms at all stations to allow installation of platform screen doors, and ensure platforms meet the minimum requirements (length, height and gap) for metro trains.

The extent of work to platforms at each station would vary. Platform works may include:

- Replacement of existing platforms - existing platforms would be demolished and replaced with new platforms in their existing or slightly adjusted locations. This would occur where existing platforms need to be upgraded due to their age, or where upgrades are required to meet Sydney Metro standards.
- Fixed or mechanical gap fillers on platforms where required – gap fillers would be installed only in instances where platforms are not rebuilt to meet operational requirements. Gap fillers would ensure that the gap and height difference between the platform and the train is minimised. This could include mechanical gap fillers, which incorporate mechanisms that automatically narrow the gap between the platform and the train when the train arrives at the platform.
- Extension or shift of platform position along existing corridor – platforms would be shifted along the rail corridor (in line with the existing corridor/track) to optimise the platform for the metro trains. At these locations, the existing platforms may be extended to provide for the desired length.
- Change in platform alignment – existing platform structures would be replaced with straighter platforms, with associated changes to the position of the track and other infrastructure. The platforms would integrate with the existing station and would generally remain within the existing railway corridor.

Platforms would be fitted with platform screen doors. These operate similarly to lift doors, in that they only open (with the train doors) once an arriving train has stopped, and close simultaneously with the train doors. Platform screen doors provide an enhanced level of customer safety, as they prevent access to the track by providing a solid barrier along the edge of the platform.

Upgraded stations and platforms have been designed to comply with the requirements of the *Disability Discrimination Act 1992* (i.e. DDA compliant) and *Disability Standards for Accessible Public Transport 2002.* This would include, but not be limited to, works such as ensuring that the platforms slope away from the tracks.

Canopies

The metro style of modern, high quality design which is distinguishable from the historic elements has been used across all station catchments. Canopies have been designed to reduce bulk and height, to meet safety and customer requirements and to minimise direct impacts to heritage structures. Where possible views from the concourse to significant structures have been opened up to allow appreciation of the buildings and their setting.

Originally large scale glass and steel canopies were proposed to extend from the concourses, with medium scale canopies across the platforms. Ribbon canopies have now been proposed to reduce bulk and to respond to stakeholder needs. Design has avoided direct impacts to significant platform buildings by canopy elements. Canopies are in general separated from heritage structures by about two metres, with portions of canopy adjacent to heritage structures glazed to maximise opportunity for views from the concourse.

5.1.5 Ancillary railway works

The following work would also be undertaken as part of the track and rail system facility works:

- adjustment of existing track alignments and overhead wiring along the line to meet Sydney Metro operational requirements, Sydney Trains, and freight operational requirements, whilst Sydney Trains and ARTC continue to operate in the corridor
- adjustment of existing Sydney Trains rail systems, including removal of existing junctions to segregate the metro tracks from Sydney Trains tracks, and removal of any redundant Sydney Trains systems (e.g. signalling, communications)
- utility and rail system protection and relocation works within the construction footprint and public areas.

With the exception of the utility protection and relocation works, these utility and rail system works would take place within the rail corridor.

5.1.6 Bridges

A total of 17 road overbridges and three pedestrian footbridges/walkways (excluding those forming part of station concourses) are located within the project area. A number of the overbridges directly adjoin the stations. There are also 10 underbridge structures that support the rail tracks over roadways and waterways.

Upgrades would be required to a number of the bridge structures to meet current design standards, Sydney Metro operation specifications, and in places to suit the amended track alignment. In addition, all overbridges would be provided with parapet throw screens and vehicle collision barriers to provide an improved level of safety and security for customers.

The project would involve works to each of these bridges, however the type of works required would vary and would be confirmed during the detailed design. Changes to the scope may potentially be required based on investigations that would inform the final design. The bridge upgrade works would generally consist of one or more of the following:

- Bridge replacement – full bridge replacement where required due to track realignment, insufficient widths, structural issues, to improve precinct gradients, or to meet metro standards.
- Strengthening works – strengthening of existing bridge piers, abutments, bridge decks and primary steel elements.

- Protection – providing enhance protection to existing bridge piers, over-height vehicle crash protection beams adjacent underbridge structures, vehicle collision protection to overbridge parapets, and installation of parapet throw screens.
- Widening – widening would generally be required where the track alignment has been adjusted. A combination of existing embankment strengthening and new retaining walls may also be required.
- General maintenance – to ensure long-term durability of the bridge structures, maintenance works would include preparation and re-painting of steel elements and, where appropriate, raking out and re-pointing of masonry, and waterproofing works to bridge decks.
- Retaining wall works – replacement of existing retaining walls or installation of new walls.

The project scope includes replacing two bridges:

- Illawarra Road overbridge at Marrickville
- Albermarle Street overbridge at Dulwich Hill.

Protection and maintenance works are proposed at the following footbridges:

- Church Street/Hutton Street footbridge, Canterbury
- Duke Street footbridge, Campsie.

The work to upgrade bridges is provided in Table 9.

Table 9: Works to overbridges and underbridges

Bridge	Replacement	Strengthening	Protection	Widening	Maintenance	Retaining wall
Overbridge						
Illawarra Road overbridge, Marrickville	●					
Livingstone Road overbridge, Marrickville			●		●	
Abermarle Street overbridge, Dulwich Hill	●					
Wardell Road overbridge, Dulwich Hill			●		●	
Garnet Street overbridge, Hurlstone Park			●		●	
Duntroon Street overbridge, Hurlstone Park			●		●	
Church Street/Hutton Street footbridge, Canterbury			●		●	
Melford Street overbridge, Canterbury			●		●	

Bridge	Replacement	Strengthening	Protection	Widening	Maintenance	Retaining wall
Canterbury Road overbridge, Canterbury			●		●	
Beamish Street overbridge, Campsie			●		●	
Duke Street footbridge, Campsie			●		●	
Loch Street overbridge, Campsie			●		●	
Burwood Road overbridge, Belmore			●	●	●	●
Moreton Street overbridge, Belmore					●	
Haldon Street overbridge, Lakemba			●		●	●
Kings Georges Road overbridge, Wiley Park		●	●		●	
Punchbowl Road overbridge, Punchbowl					●	●
Stacey Street overbridge, Bankstown			●		●	●
Chapel Road overbridge, Bankstown			●		●	
Underbridge						
Meeks Drive underbridge, Marrickville		●			●	
Canal 1/M24, Marrickville					●	
Canal 2/M24, Marrickville					●	
Charlotte Avenue underbridge, Marrickville		●	●		●	
Ness Avenue/Terrace Road underbridge, Dulwich Hill			●		●	
Sewer line underbridge, Marrickville					●	
Foord Avenue underbridge, Hurlstone Park					●	
Cooks River/Charles Street underbridge, Canterbury			●		●	
Wairoa Street underbridge, Campsie			●		●	●

Bridge	Replacement	Strengthening	Protection	Widening	Maintenance	Retaining wall
Pedestrian access to Belmore Sports Ground		●		●	●	●
North/South Terrace underbridge, Bankstown				●	●	

The following sections outline the methods that would be used to upgrade bridges and replace road decks on bridges, where required.

Parapet replacement and waterproofing of bridge deck

In general, only partial closures of bridges would be required to replace parapets and waterproof the bridge deck. In some locations, where the roadway is narrow, full closures would be required. Works would be undertaken during possession periods to ensure the safety of workers and customers.

For bridges that would remain partially open during construction, works would involve:

- relocation of services on the bridge to a new alignment (some services would be terminated at the bridge abutments)
- existing parapets removed down to the existing bridge slab
- asphalt surface on bridge removed to the bridge deck
- bridge deck to be cleaned and waterproofed
- precast parapet sections to be positioned with the use of cranes and fixed to the bridge deck, throw screens would be preinstalled prior to installation
- asphalting surface applied to roadway along with any line marking
- bridge tie-ins adjusted to match the new bridge roadway surface levels
- bridge reopened to traffic
- footpaths to be periodically closed to allow for the reinstatement of services within the bridge
- fencing and traffic barriers on either side of the bridge would be adjusted to the new bridge parapets.

Bridge replacement and widening with new abutments

For bridges that would be closed during construction, works would involve:

- relocation of services on the bridge to a new alignment (some services would be terminated at the bridge abutments)
- closure of bridge to all traffic, including pedestrians
- removal of asphalt surface of bridge down to the concrete deck
- installation of new abutment extension piles, using piling rigs. A drill rig would be located on either side of the bridge to improve the program time

- excavation of the new abutment would occur during possession period
- demolition of bridge deck would occur during possession period
- installation of new bridge beams to span the tracks
- installation of concrete slab
- waterproofing of bridge deck once concrete is cured
- installation of bridge parapet
- installation of screens on bridge
- installation of asphalt surfaces
- installation of bridge drainage
- adjustment of road levels on either side of bridge to match the bridge
- installation of line marking
- relocation of services relocated at start of work back to the bridge.
- installation of make up panels at each corner of the bridge from the new bride parapets to the existing alignment fencing.

Bridge replacement works would require closure of the bridge for about three months. Construction would mainly be undertaken during possession periods, however some works would be undertaken outside possession periods.

5.1.7 33 kilovolt high voltage feeder

To provide power supply to the new traction substations, a 33 kilovolt high voltage feeder needs to be constructed between the rail corridor at Campsie Station (connects to the Campsie traction substation) and the existing Ausgrid Canterbury electrical substation, located about one kilometre south of Canterbury Station in Earlwood.

The electricity feeder route would be about 3.5 kilometres long, and would be constructed within the following road reserves:

- Beamish Street
- South Parade
- Phillips Avenue
- Canterbury Road
- Fore Street
- Burlington Avenue
- River Street
- Spark Street
- Mooney Avenue.

The alignment would also traverse Hughes Park to the south of the substation. The indicative alignment is shown on Figure 1.

Construction of the high voltage feeder (as outlined in the EIS Section 7.2.3) would generally be trenched along the alignment. The use of horizontal directional drilling to install the cable would potentially be used in the following locations to minimise impacts:

- at Canterbury Road which is a Roads and Maritime Services road with high traffic volumes
- at Elise Street between River Street and Karool Avenue due to a substantial change in elevation between the two streets.

The alignment also crosses Cup And Saucer Creek on Fore Street, Canterbury, via an existing bridge. This crossing would involve the integration of the feeder into the bridge structure with works within the creek not required. The final design of this crossing would be confirmed further during detailed design.

5.2 Station works

5.2.1 Marrickville Station

Design description

Marrickville Station is located east of the Illawarra Road overbridge. The station area is bound to the north by a multi-storey residential apartment building, located on the corner of Illawarra Road and Byrnes Street, to the south by Station Street and residential dwellings fronting Leofrene Avenue, and to the west by Illawarra Road. The station entrance is on Illawarra Road.

Marrickville Station was recently updated as part of Transport for NSW's Transport Access Program. The key works proposed as part of the project are shown on Figure 98 and summarised in Table 10.

An artist's impression is provided in Figure 99.

Table 10: Marrickville Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance from Illawarra Road would be retained and upgraded, including retention of existing lifts. • The existing at-grade entry from Station Street to platform 2 would be retained and upgraded to include a new entry canopy.
Platform details	• The existing heritage listed platforms would be straightened and extended to the east.
Station buildings	• The existing station buildings, including the recently completed elevated concourse would be retained. • New station buildings would be provided on platform 1. • Heritage station buildings on platforms 1 and 2 would be retained . • The former booking office on platform 2 would be retained and relocated to east of the building on platform 2. • New retail space would be provided in Station Street (the use of the space would be subject to a separate approval process).
Station area	

Feature	Description
Public transport integration	• All bus stops would be retained in current location, including southbound stop on Illawarra Road which was recently relocated as part of upgrades to the station.
Access	• A new shared zone in Station Street would be provided, allowing access to the southern station entrance, with this entrance and the shared zone forming a new station plaza. This would form part of an active transport corridor. • Signalisation of Warburton Road, Schwebel Street and Illawarra Road intersection is proposed, including installation of pedestrian crossings. • The existing signalised crossing of Illawarra Road outside the station would be removed. A zebra crossing would be provided on Illawarra Road immediately north of Arthur Street. • The existing cycle route along the southern side of the rail corridor would be rerouted along Schwebel Street, Leofrene Avenue, and Riverdale Avenue. • A new accessible ramp would be provided from the southern station entrance to Schwebel Street along Station Street.
Kerbside uses, bike parking	• New kerbside facilities would be provided within the new Station Street shared zone/plaza area on both the northern and western sections of the new shared zone. • A new bike storage/parking area would be provided along the eastern side of the Station Street plaza with the existing facility retained.
Car parking	• Loss of one on-street parking space due to new kerbside facilities.

Indicative layout

The following drawings provide an indicative layout of Marrickville Station.

Figure 98: Marrickville Station – indicative layout of key design elements

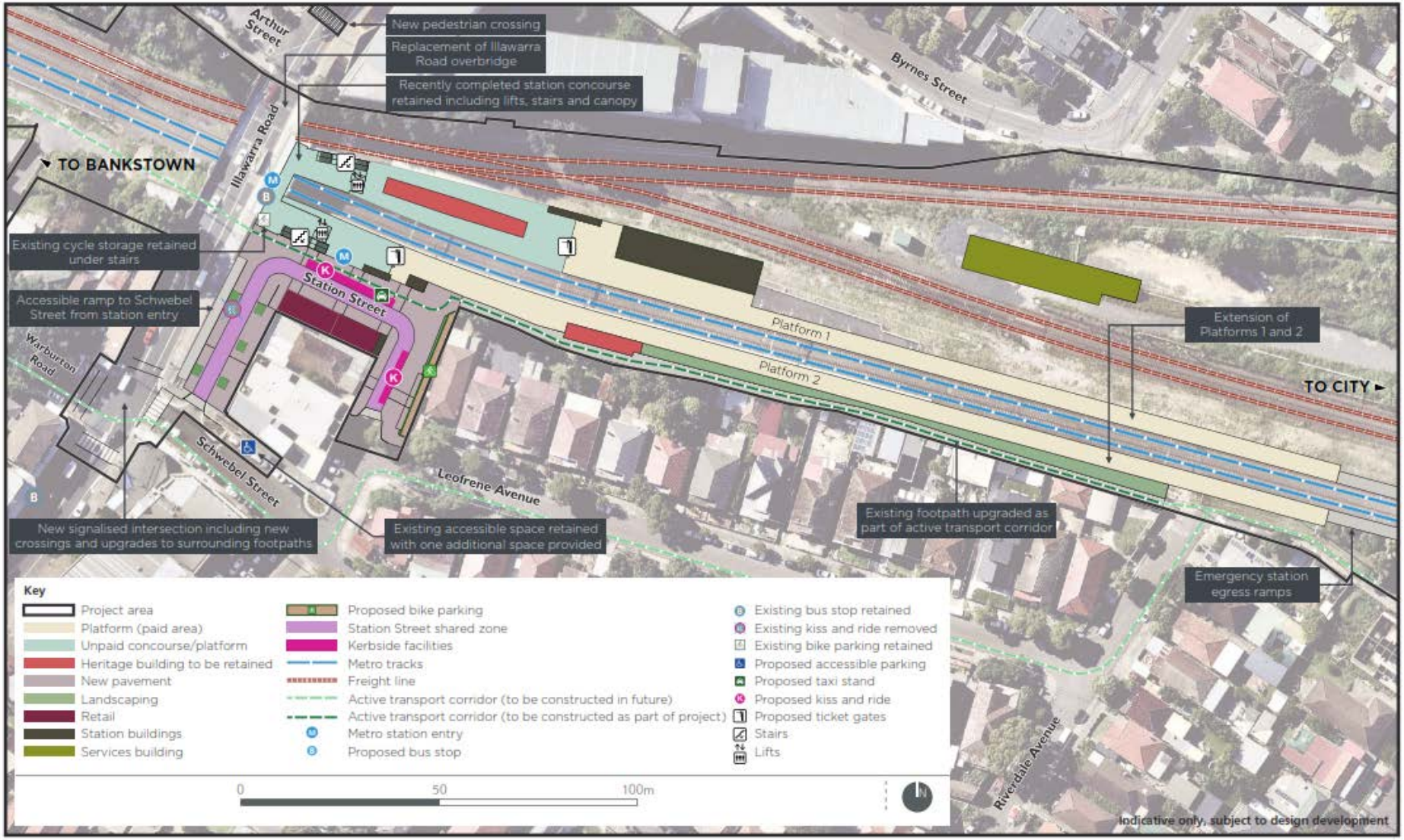


Figure 99: Marrickville Station – artist's impression

5.2.2 Dulwich Hill Station

Design description

Dulwich Hill Station is located west of the Wardell Road overbridge. The station area is bounded by Bedford Crescent to the north, Ewart Lane to the south, and Wardell Road to the east. The station entrance is on Wardell Road.

The key works proposed as part of the project are shown in Figure 100 and summarised in Table 11.

An artist's impression is provided in Figure 101.

Table 11: Dulwich Hill Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance would be removed. • A new elevated station concourse would be provided and would connect with the existing stairs and lift to Dulwich Hill Light Rail stop. The concourse would be accessed from two new station entrances at Bedford Crescent (northern side) and adjacent to Ewart Lane (southern side).
Platform details	• The heritage listed platforms would be rebuilt in their current location and extended to the west. A portion of the existing platform east of Wardell Road would be removed.
Station buildings	• New station facilities would be provided within the new concourse structure and within a new building located on the platform. • The heritage listed overhead booking office would be removed as part of the removal of the existing station entrance. • The existing heritage station building on the platform would be retained. • New retail space would be provided within the southern station entrance below the new concourse (the use of the space would be subject to a separate approval process).
Station area	
Public transport integration	• The existing bus stops located in Dudley Street and Wardell Road would be retained. • The new concourse would connect the existing lift and stairs to the Dulwich Hill light rail stop.
Access	• A new public plaza would be provided between the proposed southern station entrance and the existing pedestrian crossing on Wardell Road. • Ewart Lane would be widened/upgraded adjacent to the new southern station entrance to improve vehicular access to the reconfigured Ewart Lane car park. • Pathways would be provided along Ewart Lane, Ewart Street, and Dudley Street, to form part of an active transport corridor.

Feature	Description
Kerbside uses, bike parking	• New kiss and ride, taxi, and accessible parking would be provided on the southern side of Bedford Crescent. • New bike parking facilities would be provided on the upper level of the proposed services building.
Car parking	• Commuter parking on Ewart Lane would be reconfigured with the same number of spaces retained. • Loss of five on-street parking spaces due to new kerbside facilities.

Indicative layout

The following drawings provide an indicative layout of Dulwich Hill Station.

Figure 100: Dulwich Hill Station – indicative layout of key design elements

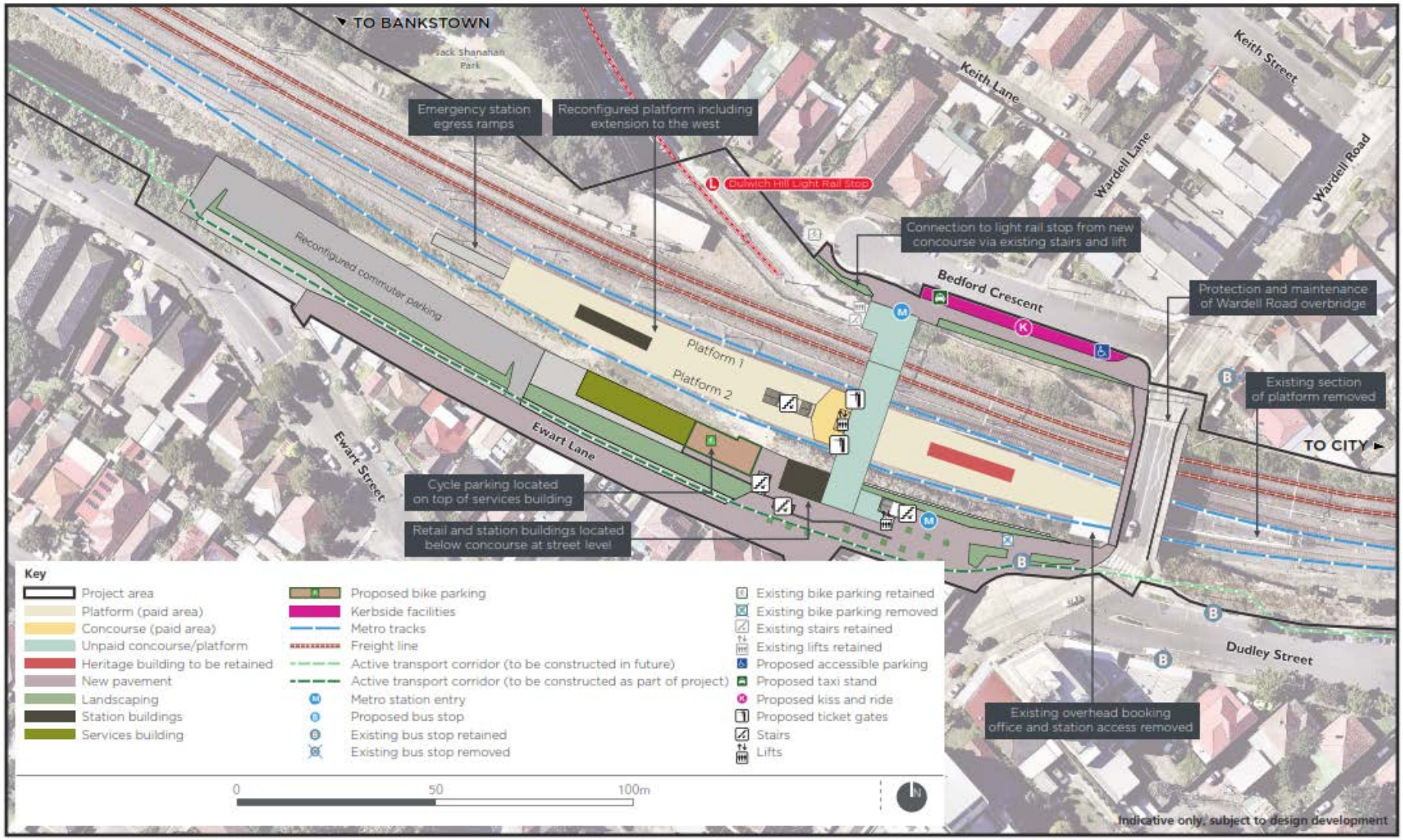


Figure 101: Dulwich Hill Station – artist's impression

5.2.3 Hurlstone Park Station

Design description

Hurlstone Park Station is located to the west of the Duntroon/Crinian Street overbridge. The station area is bounded by Crinian and Floss streets and residential dwellings to the north, Duntroon Street and residential dwellings to the south, and Duntroon/Crinian Street to the west. The station entrance is on the overbridge.

The key works proposed as part of the project are shown in Figure 102 and summarised in Table 12.

An artist's impression is provided in Figure 103.

Table 12: Hurlstone Park Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance on the overbridge would be upgraded. • A new enlarged, elevated station concourse would be provided in the same location to provide an enlarged station forecourt area and entry set back from the road.
Platform details	• Heritage listed platforms would be rebuilt, straightened, and extended to the southwest along the rail corridor, generally in their existing locations.
Station buildings	• New station buildings would be located within the concourse and on platforms. • The existing heritage listed overhead booking office and heritage building on platform 1 would be removed. • The existing heritage station building on platform 2 would be retained. • New retail space would be provided as part of the new concourse (the use of the retail space would be subject to a separate approval process).
Station area	
Public transport integration	• The existing bus stops on the overbridge would be retained.
Access	• New pedestrian crossing facilities would be provided adjacent to the new southern station entrance and on Crinan Street just north of Floss Street. • The existing pedestrian crossing on the overbridge would be modified to improve pedestrian flow by including more space on the southwestern side. • Connection to an active transport corridor along the western side of Duntroon Street (south of rail corridor).

Feature	Description
Kerbside uses, bike parking	• New kerbside facilities would be located near the southern station entrance on Floss Street on the eastern side of the overbridge adjacent to the station. • New bike parking areas would be provided in Floss Street on the northern side of the rail corridor. • The existing accessible parking spaces on Floss Street would be retained, and a new accessible space would be provided on Duntroon Street.

Indicative layout

The following drawings provide an indicative layout of Hurlstone Park Station.

Figure 102: Hurlstone Park Station – indicative layout of key design elements

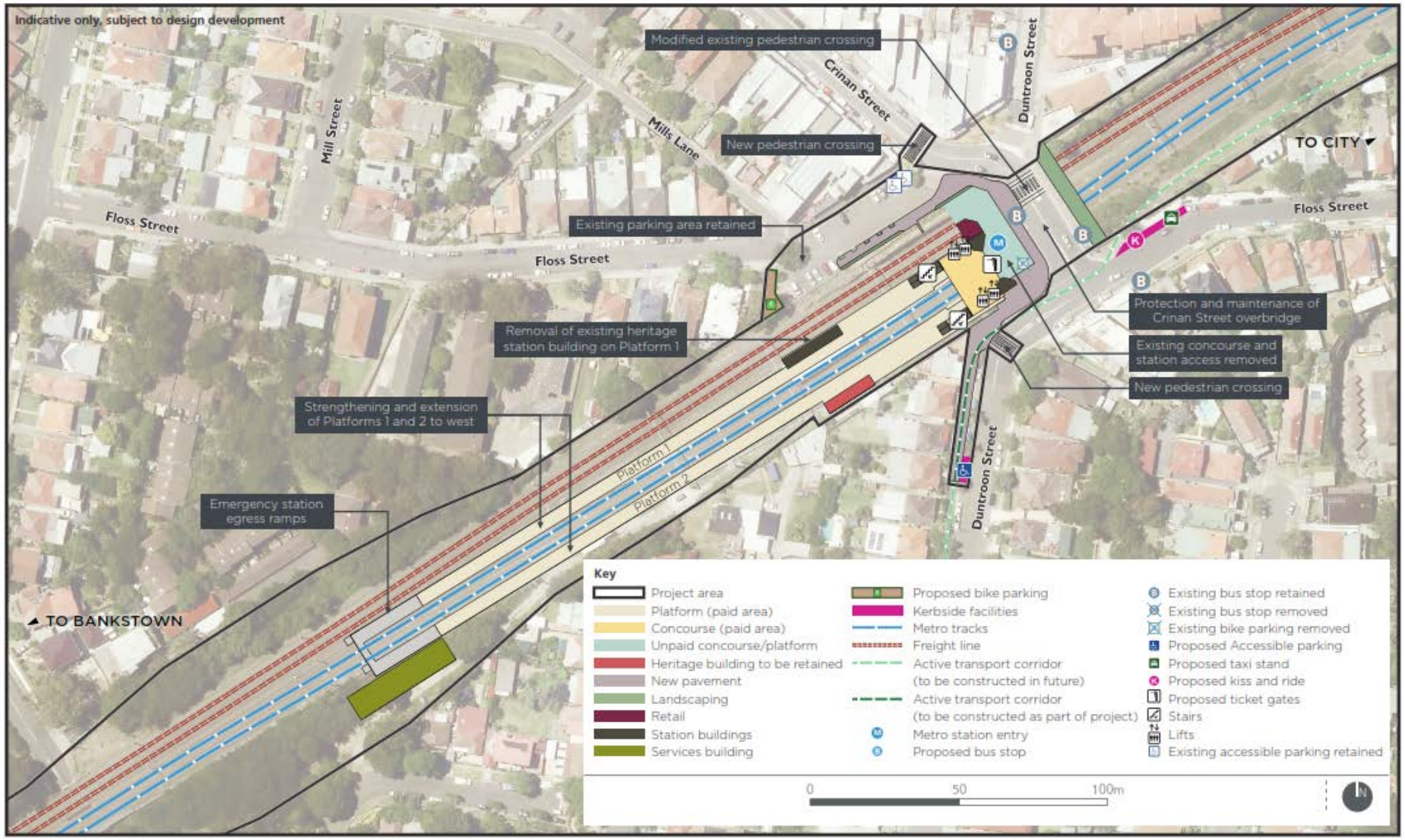


Figure 103: Hurlstone Park Station – artist's impression

5.2.4 Canterbury Station

Design description

Canterbury Station is located to the north-west of the Canterbury Road overbridge. The station area is bounded by Broughton Street to the north, a large mixed use development fronting Charles Street to the south, and Canterbury Road to the east. The station entrance is on Canterbury Road.

The key works proposed as part of the project are shown in Figure 104 and summarised in Table 13.

An artist's impression is provided in Figure 105.

Table 13: Canterbury Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance on Canterbury Road would be relocated to the western side of the rail corridor and provide access to platform 2. • A new elevated station concourse would be provided about 150 metres west of Canterbury Road. • A new station entrance would be provided on Broughton Street providing access to platforms 1 and 2. • Futureproofing for a potential future station entrance on Charles Street as part of any future development along Charles Street. This entrance would provide access to platform 2.
Platform details	• The heritage listed platforms would be rebuilt and extended to the northwest.
Station buildings	• The heritage listed footbridge and overhead booking office would be removed. • The heritage listed buildings on platform 1 and 2 would be retained. • The existing heritage listed signal box on the southeastern side of the Canterbury Road overbridge would be retained. • New station buildings would be provided at the station entrance on Broughton Street. • New retail space would be provided at the station entrances at Broughton Street and Canterbury Road (the use of the retail space would be subject to a separate approval process).
Station area	
Public transport integration	• All existing bus stops would be retained, with the exception of one stop on Broughton Street, which is to be relocated to the new Broughton Street entrance. • A new bus shelter would be provided at the station entrance on Broughton Street.
Access	• Connection to an active transport corridor located along Charles Street via Canterbury Road. • New pedestrian crossing on Broughton Street in line with new station entrance.

Feature	Description
Kerbside uses, bike parking	• Kerbside facilities would be provided on Broughton Street adjacent to the new station entry. This would include new accessible parking on Broughton Street. • New bike parking areas would be provided within the new station plaza areas on Broughton Street, Charles street and Canterbury Road.

Indicative layout

The following drawings provide an indicative layout of Canterbury Station.

Figure 104: Canterbury Station – indicative layout of key design elements

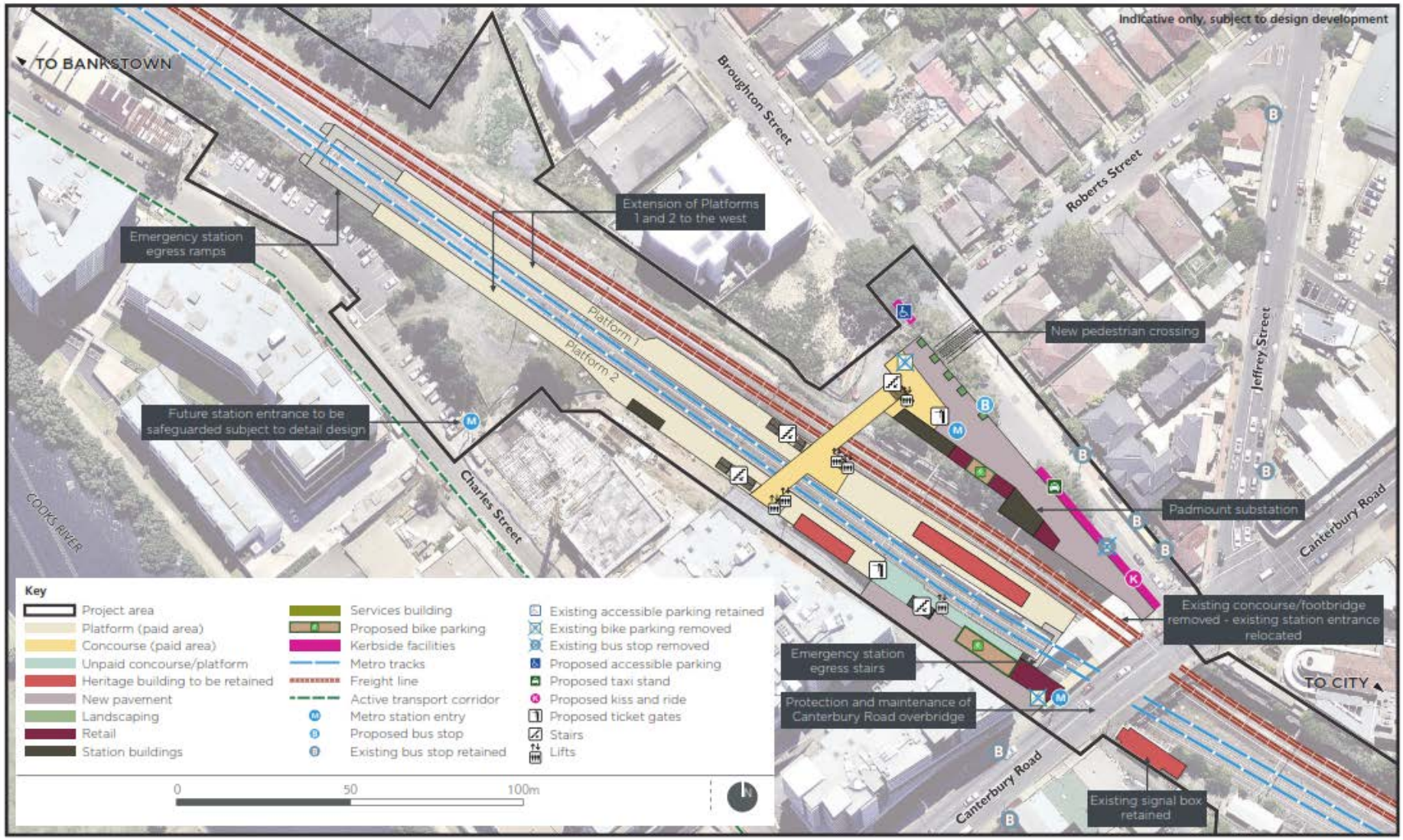


Figure 105: Canterbury Station – artist's impression

5.2.5 Campsie Station

Design description

Campsie Station is located to the west of the Beamish Street overbridge. The station area is bounded by Lilian Lane/South Parade to the south, Wilfred Avenue/North Parade to the north, and Beamish Street to the east. The station entrance is located on the overbridge.

The key works proposed as part of the project are show in Figure 106 and summarised in Table 14.

An artist's impression is provided in Figure 107.

Table 14: Campsie Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance at Beamish Street would be upgraded. • A new station entry would be provided on North Parade. • A new enlarged, elevated station concourse would provide more space for pedestrian circulation and pedestrian movement along Beamish Street. The part of the existing concourse built in 2001 would be retained.
Platform details	• The heritage listed platforms would be rebuilt, straightened and extended to the west.
Station buildings	• The heritage listed overhead station concourse and footbridge (except the part built in 2001) would be removed. • The existing heritage listed buildings on platforms 1 and 2 would be retained. • New station facilities would be provided within the new concourse. • New retail space would be provided at the station entrance on North Parade and on the eastern side of Beamish Street (the use of the retail space would be subject to a separate approval process).
Station area	
Public transport integration	• Existing bus stops located in the vicinity of the station would be retained.
Access	• New shared zone would be provided along Lilian Lane between Beamish and Dewar streets. This would form part of an active transport corridor.

Feature	Description
Kerbside uses, bike parking	• New kerbside facilities would be provided on the southern side of North Parade, adjacent to the northern station entrance. • The existing kerb facilities on the northern side of South Parade would be removed. • New kerbside facilities would be provided as part of the new elevated platform on the eastern side of Beamish Street. • The existing accessible parking on North Parade, Wilfred Avenue, and South Parade would be retained. • New bike parking facilities would be provided near the northern station entrance on North Parade, and on the southern side of the station concourse.
Car parking	• The existing parking area along the northern side of Lilian Lane would be reconfigured, which would result in the provision of 80 additional commuter car parking spaces. • The new kerbside facilities would result in the loss of about 20 on-street car parking spaces on North Parade and South Parade.

Indicative layout

The following drawings provide an indicative layout of Campsie Station.

Figure 106: Campsie Station – indicative layout of key design elements

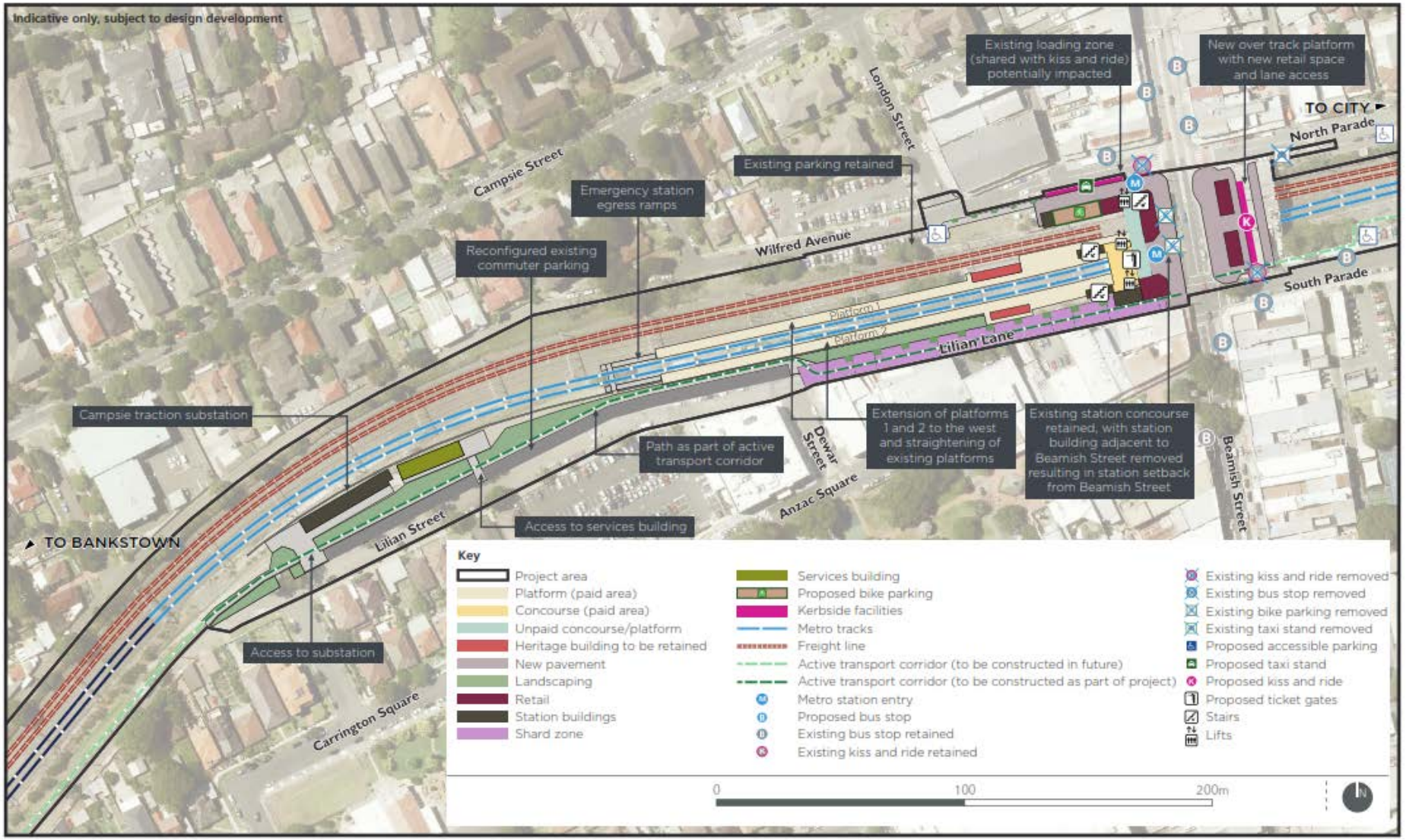


Figure 107: Campsie Station – artist's impression

5.2.6 Belmore Station

Design description

Belmore Station is located to the east of the Burwood Road overbridge. To the north and south, the station area is bounded by commuter car parks fronting Redman Parade and Tobruk Avenue respectively. To the west, the station area is bounded by Burwood Road. The existing station entrance is located on the Burwood Road overbridge.

The key works proposed as part of the project are shown in Figure 108 and summarised in Table 15.

An artist's impression is provided in Figure 109.

Table 15: Belmore Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance would be removed. • A new station entrance and plaza would be at Tobruk Avenue to the south and a new entrance provided to Redman Parade to the north. • A new elevated concourse would be provided to the east of the heritage platform building.
Platform details	• The heritage listed platforms would be rebuilt, straightened and extended to the east.
Station buildings	• New station buildings would be provided within the concourse and at the eastern end of the platform. • The existing heritage listed platform building would be retained. • The existing overhead booking office would be retained. Existing stairs from the overhead booking office to the platform would, however, be removed. • Existing heritage buildings located within the car park to the north of the station would be retained. • New retail spaces would be provided within the new plaza on Tobruk Avenue (the use of the space would be subject to a separate approval process).
Station area	
Public transport integration	• The existing northbound bus stop on Burwood Road would be retained. • The southbound stop on Burwood Road would be relocated to the south of Tobruk Avenue.

Feature	Description
Access	• The existing signalised crossing on Burwood Road at the station entrance would be removed, and a new signalised intersection would be provided at the Tobruk Avenue, and Burwood Road intersection. The new signalised intersection would include pedestrian crossings. • New pathways would be provided on Tobruk Avenue to connect to an active transport corridor along Bridge Road, and the existing pathways along the southern side of the rail corridor.
Kerbside uses, bike parking	• Tobruk Avenue would be extended and widened to provide a shared zone, including new taxi and kiss and ride facilities. • A new bike parking area would be provided within the new plaza on Tobruk Avenue.
Car parking	• Potential impacts to commuter parking and council parking on the northern side of existing station due to new northern station entrance. • Removal of existing council off-street car park located south of the station, resulting in the loss of 48 spaces.

Indicative layout

The following drawings provide an indicative layout of Belmore Station.

Figure 108: Belmore Station – indicative layout of key design elements

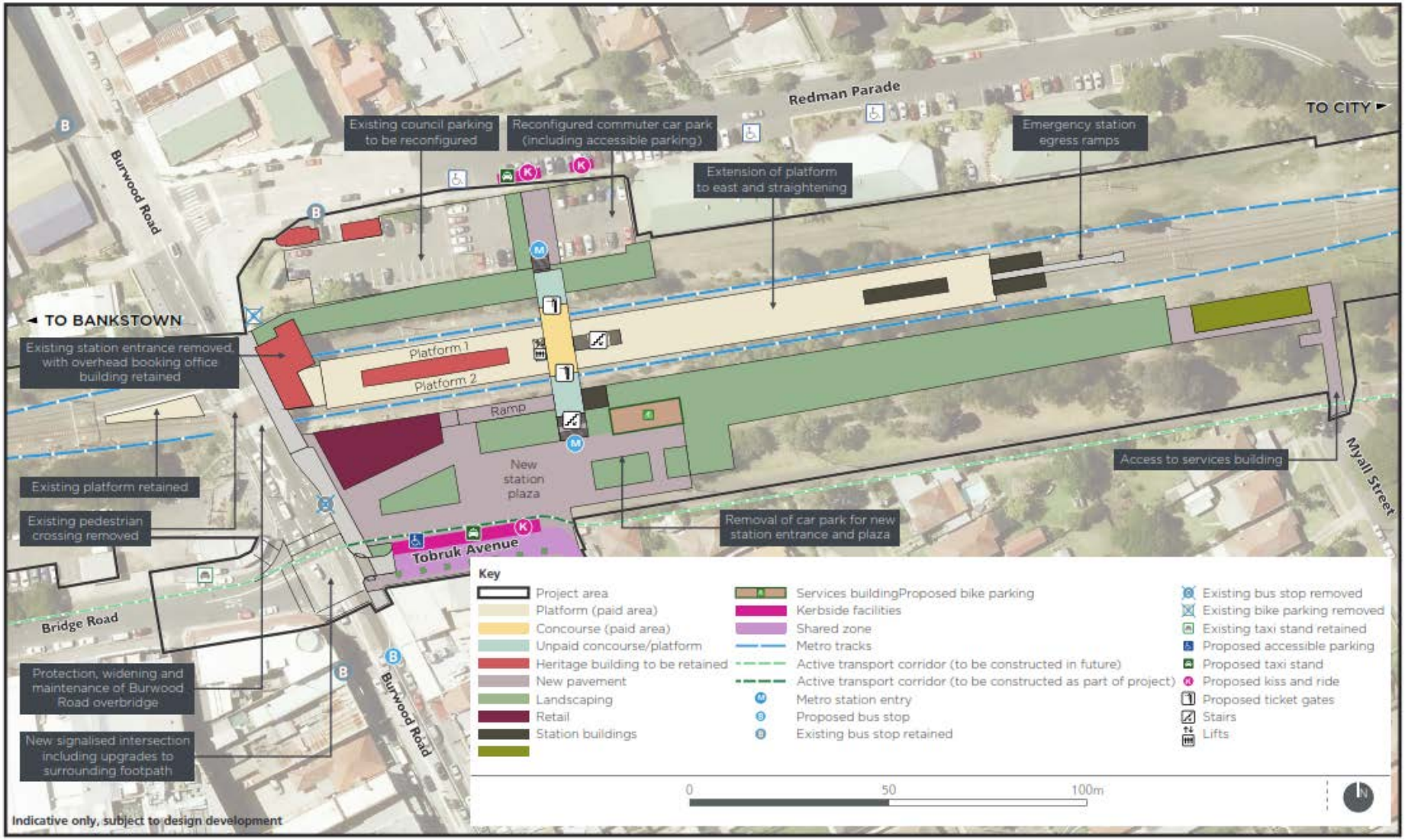


Figure 109: Belmore Station – artist's impression

5.2.7 Lakemba Station

Design description

Lakemba Station is located about 60 metres to the west of the Haldon Street overbridge. The station area is bounded by Railway Parade to the north and The Boulevarde to the south. Access to the station is provided off Railway Parade and The Boulevarde.

The key works proposed as part of the project are shown in Figure 110 and summarised in Table 16.

An artist's impression is provided in Figure 111.

Table 16: Lakemba Station key design elements

Feature	Proposed
Station works	
Station entry/exit	• The existing station entrances on Railway Parade and The Boulevarde would be retained. • The existing elevated concourse would be retained with a minor expansion on the western side to accommodate additional station buildings/facilities.
Platform details	• The platform would be reconstructed to a new straight alignment with extensions to meet metro requirements.
Station buildings	• The heritage station building on the platform would be retrofitted for reuse. • New station buildings would be provided in the concourse, on the platform and would also be provided adjacent to the Railway Parade entrance.
Station area	
Public transport integration	• The existing bus stops located on The Boulevard, Railway Parade, and Haldon Street (south) would be retained.
Access	• Connection to an active transport corridor along The Boulevarde east of Haldon Street, and along the rail corridor boundary east of Haldon Street. • A new footpath is proposed on the southern side of Railway Parade, adjacent to the existing car parking area leading to the station entrance.
Kerbside uses, bike parking	• New kerbside facilities would be provided on Railway Parade and on The Boulevard, east of the new station entrance. • New bike parking areas would be provided on either side of the rail corridor adjacent to the existing station entrances.

Indicative layout

The following drawings provide an indicative layout of Lakemba Station.

Figure 110: Lakemba Station – indicative layout of key design elements

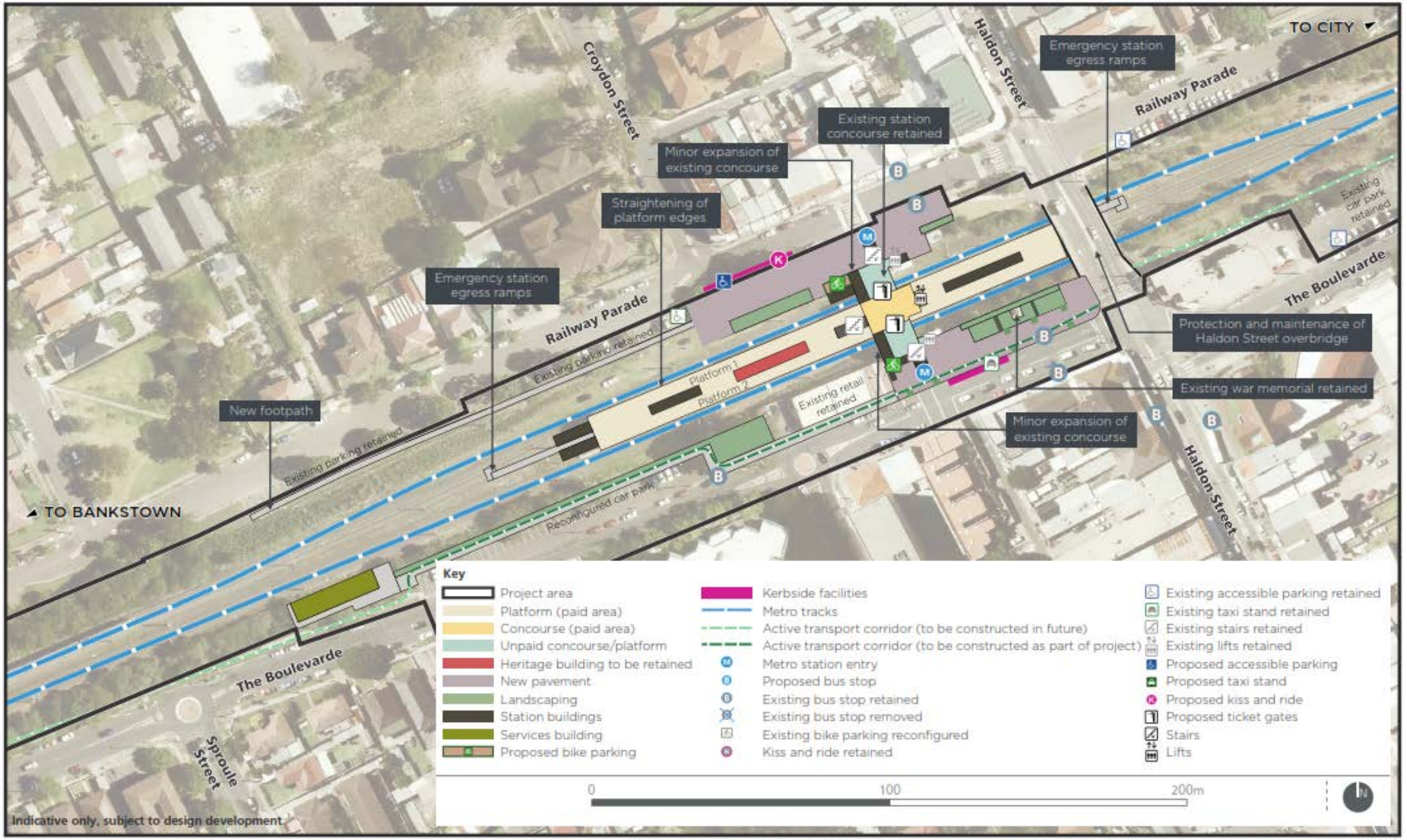


Figure 111: Lakemba Station – artist's impression

5.2.8 Wiley Park Station

Design description

Wiley Park Station is located to the west of the King Georges Road overbridge. The station area is bounded by Stanlea Parade walkway to the north, by King Georges Road to the east and The Boulevarde to the south. The station entrance is located on the overbridge.

The key works proposed as part of the project are shown in Figure 112 and summarised in Table 17.

An artist's impression is provided in Figure 113.

Table 17: Wiley Park Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance on King Georges Road would be upgraded. • Two new entrances would be provided on The Boulevarde and from the Stanlea Parade walkway near King Georges Road. • The existing station concourse would be removed but a new structure installed in the same location. • A new elevated concourse would be built to provide more space for pedestrian circulation.
Platform details	• The heritage listed platform would be rebuilt, straightened and extended to the west.
Station buildings	• New station buildings would be provided within the new concourse, on platforms 1 and 2 and adjacent to The Boulevarde. • The existing heritage listed overhead booking office, concourse and platform buildings would be removed to enable the new facilities to be provided. • New retail space would be provided in the new concourse along King Georges Road (the use of the retail space would be subject to a separate approval process).
Catchment works	
Public transport integration	• No changes would be made to existing bus stops.
Access	• Connection to active transport corridor along the southern side of the station along The Boulevarde east of Haldon Street, and along the rail corridor boundary west of Haldon Street.
Kerbside uses, parking	• New bike parking areas would be provided on either side of the corridor adjacent to the platforms • Kerbside facilities would be provided on the northern side of the Boulevarde, east of King Georges Road.

Feature	Description
Car parking	• Land within the rail corridor on the northern side of The Boulevarde would be used to provide replacement off-street parking as part of the King Georges Road clearways project undertaken by Roads and Maritime Services.

Indicative layout

The following drawings provide an indicative layout of Wiley Park Station.

Figure 112: Wiley Park Station – indicative layout of key design elements

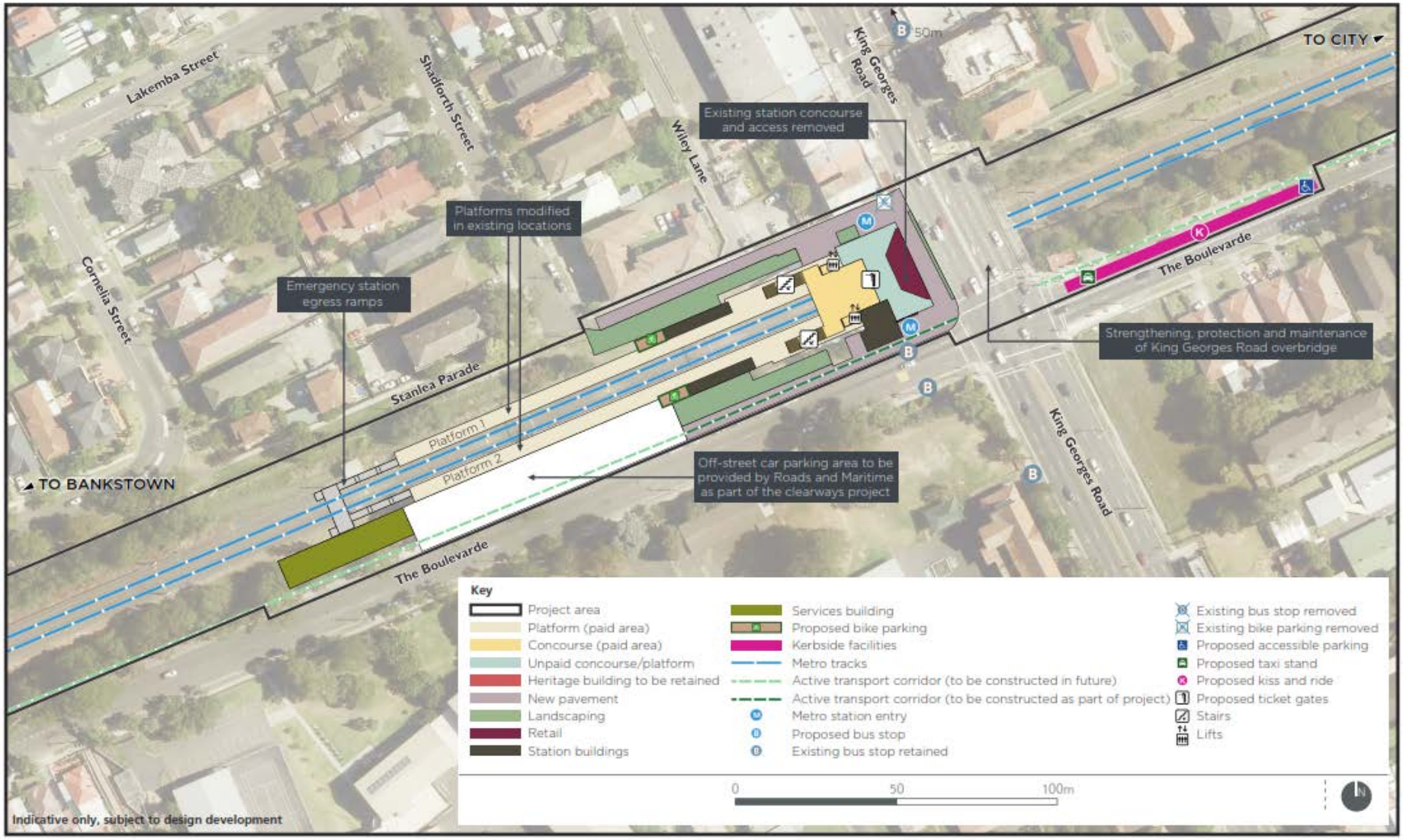


Figure 113: Wiley Park Station – artist's impression

5.2.9 Punchbowl Station

Design description

Punchbowl Station is located to the east of the Punchbowl Road overbridge. The station area is bounded by commercial land uses and a car park fronting The Boulevarde to the south, Warren Reserve and Urunga Parade to the north, and Punchbowl Road to the west. The station entrances are located on Punchbowl Road (via Warren Reserve) to the north, and The Boulevarde to the south.

The key works proposed as part of the project are shown in Figure 114 and summarised in Table 18.

An artist's impression is provided in Figure 115.

Table 18: Punchbowl Station key design elements

Feature	Description
Station works	
Station entry/exit	• The existing station entrance would be removed. • Two new station entrances would be provided from The Boulevarde (to the south) and adjacent to Warren Reserve to the north. The new southern entrance would be located within a new station plaza. • A new elevated bridge would be constructed to provided access between the two platforms.
Platform details	• The heritage listed platform would be rebuilt, straightened and extended to the east. A portion of the existing platform to the west of the new concourse would be removed.
Station buildings	• New station buildings would be provided at the station entrances and platforms. • The heritage listed station buildings and overhead booking office would be removed. Further information on the ability to retain these items is provided in Table 6.3. • New retail space would be provided within the southern station plaza adjacent to The Boulevarde (use of this space would be subject to separate approval).
Station area	
Public transport integration	• The existing bus stops on Punchbowl Road would be retained. • The existing eastbound stop on The Boulevarde would be relocated east of Arthur Street, adjacent to new station entry.
Access	• Paths located in the vicinity of the station between the rail corridor and The Boulevarde would form part of an active transport corridor.

Feature	Description
Kerbside uses, bike parking	• New bike parking areas would be provided on either side of the corridor at the station entrances. • Kerbside facilities would be provided on both sides of The Boulevarde adjacent to the southern station entrance. • Kerbside facilities would be provided along the southern side of Urunga Parade to the east of the northern station entrance. • A new pedestrian crossing would be provided on Punchbowl Road northeast of Bruest Place.
Car parking	• About 30 existing commuter parking spaces located on the northern side of The Boulevarde would be relocated further to the east to provide space for the new station plaza and entrance.

Indicative layout

The following drawings provide an indicative layout of Punchbowl Station.

Figure 114: Punchbowl Station – indicative layout of key design elements

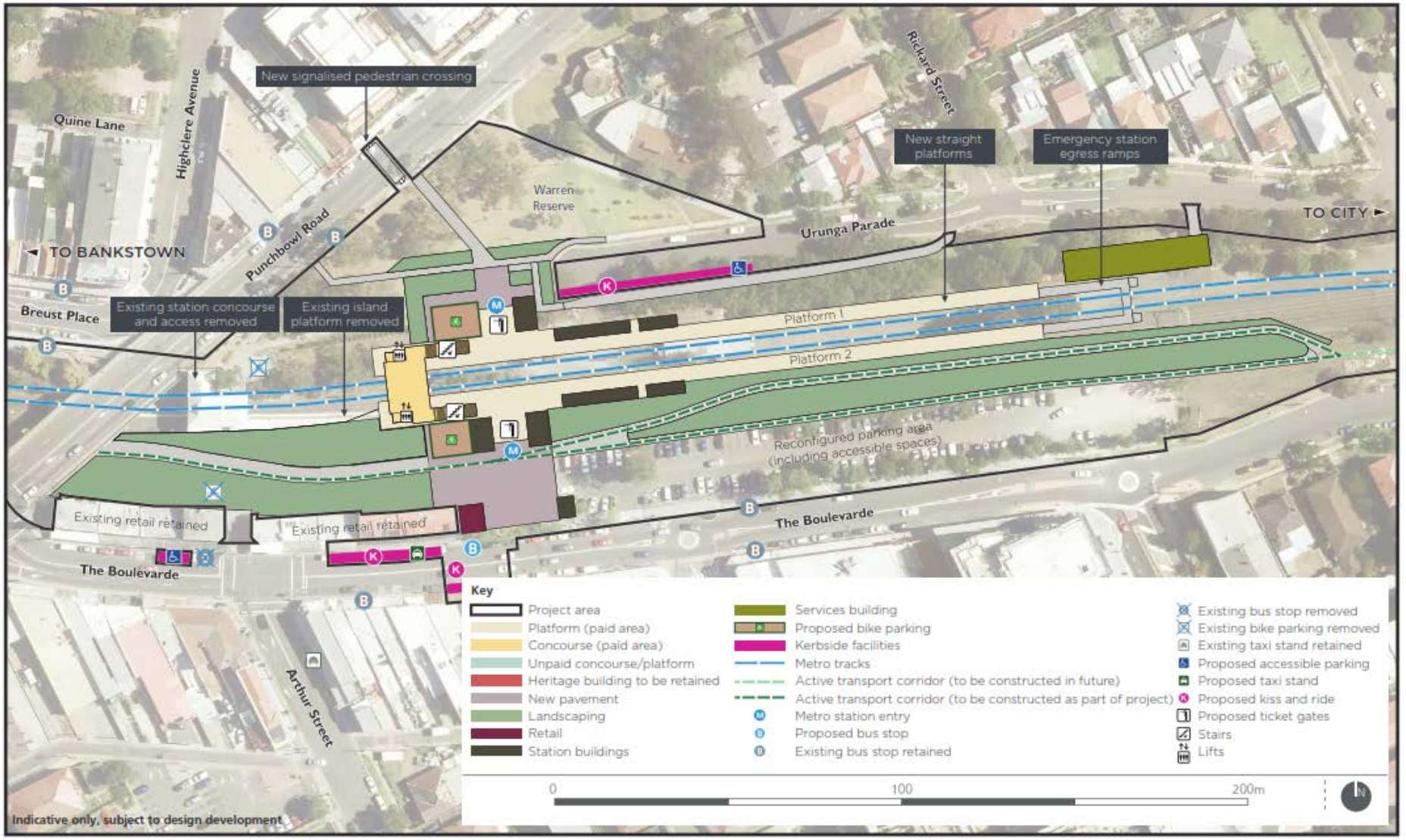


Figure 115: Punchbowl Station – artist's impression

5.2.10 Bankstown Station

Design description

Bankstown Station is located to the east of the Bankstown City Plaza overbridge. The station area is bounded by North Terrace to the north, South Terrace to the south, and Bankstown City Plaza to the west. The station entrance is on Bankstown City Plaza.

A new Sydney Metro station would be constructed to the east and adjoining the existing Sydney Trains Bankstown Station.

The key works proposed as part of the project are shown in Figure 116 and summarised in Table 19.

An artist's impression is provided in Figure 117.

Table 19: Bankstown Station key design elements

Feature	Proposed
Station works	
Station entry/exit	• The existing Sydney Trains station entrance at Bankstown City Plaza would be retained. • A new at-grade corridor crossing would be provided at the eastern end of the existing Sydney Trains platform and would provide access to both Sydney Trains and new Sydney Metro platforms. • New station plazas would be constructed at station entrances on both sides of the rail corridor.
Platform details	• The heritage listed Sydney Trains platforms would be retained with minor modifications required at the eastern end. • New Sydney Metro platforms would be constructed to the east of the new at-grade corridor crossing.
Station buildings	• All station buildings (including the heritage listed station building and Parcels Office) on the Sydney Trains platforms would be retained. • A new canopy would be constructed on the Sydney Trains platform between the new station entrance and the existing platform building.
Station area	
Public transport integration	• The bus layover area off South Terrace would be retained with minor adjustments to accommodate the new station entrance. • The bus interchange area on South Terrace, near the existing station entrance, would be retained. • The existing bus stop on the northern side of station on North Terrace would be retained.
Access	• The pedestrian/shared paths located along South Terrace would form part of an active transport corridor. • An new 'at grade' corridor crossing would be provided at the eastern end of the existing Sydney Trains platform and would provide access to both Sydney Trains and new Sydney Metro platforms.

Feature	Proposed
Kerbside uses, bike parking	• Changes would be made to kerbside facilities and parking along North Terrace, between the new station entrances and the existing entrance. Existing kerbside facilities (i.e. taxi rank) on northern side of North Terrace would be retained. • New bike parking would be provided on both sides of the station within the new station plazas.
Car parking	• Removal of existing car park located adjacent to the Appian Way off North Terrace, resulting in the loss of 10 spaces.

Indicative layout

The following drawings provide an indicative layout of Bankstown Station.

Figure 116: Bankstown Station – indicative layout of key design elements

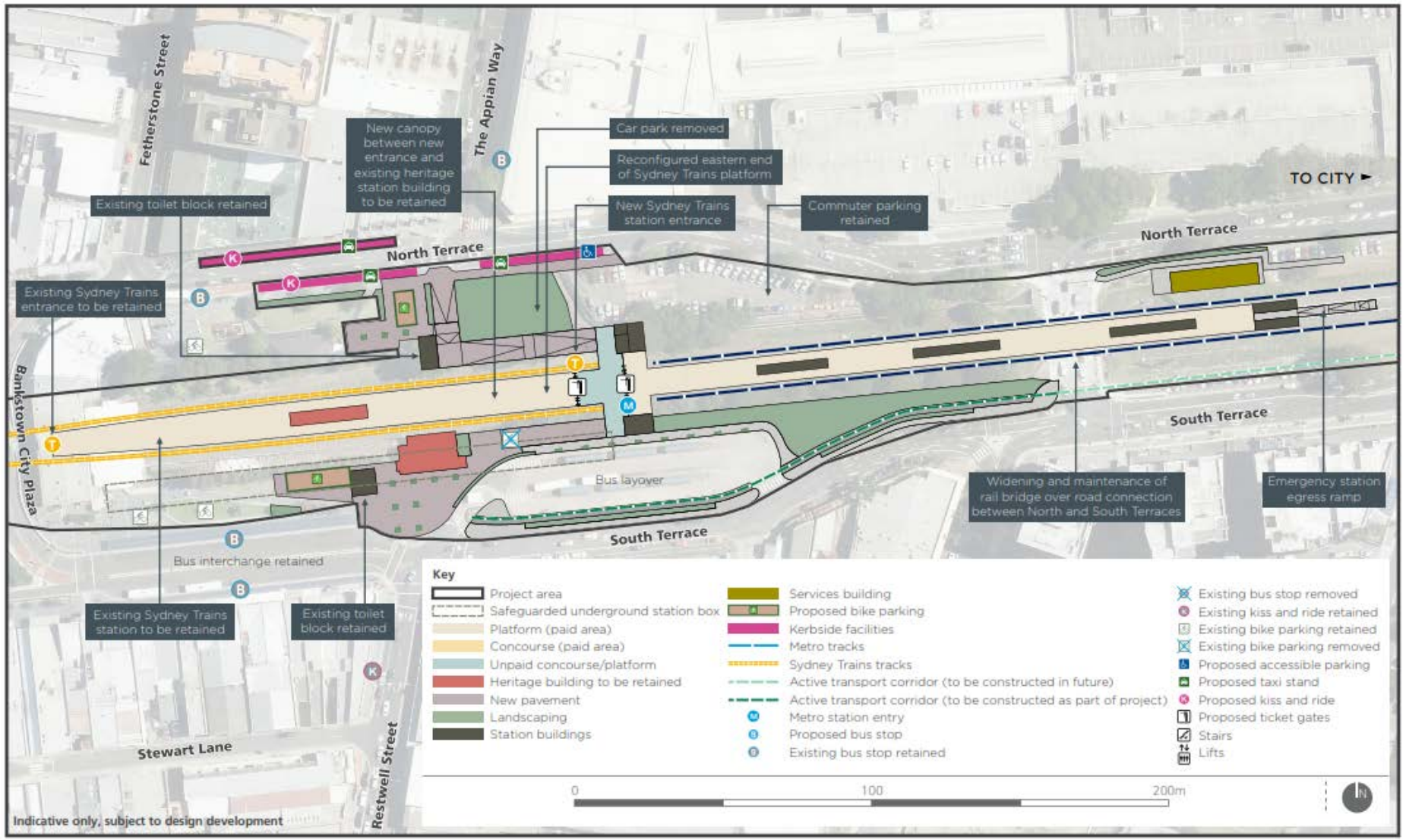


Figure 117: Bankstown Station – artist's impression

5.3 Options and justification

5.3.1 Project need

An overview of project needs is discussed in Chapter 5 of the Environmental Impact Statement.

5.3.2 Design

Table 20 outlines the five design objectives and supporting principles that have been developed for the City & Southwest project and were used to guide the design and decision-making process for the project.

Table 20: Design objectives

Design objective	Design principle
Objective 1: Ensuring an easy customer experience.	Sydney Metro places the customer first. Stations are welcoming and intuitive with simple, uncluttered spaces that ensure a comfortable, enjoyable and safe experience for a diverse range of customers.
Objective 2: Being part of a fully integrated transport system.	Sydney Metro is a transit-oriented project that prioritises clear and legible connections with other public and active transport modes within the wider metropolitan travel network that intersect with this new spine.
Objective 3: Being a catalyst for positive change.	Sydney Metro is a landmark opportunity to regenerate and invigorate the city with new stations and associated development that engage with their catchments, raise the urban quality and enhance the overall experience of the city.
Objective 4: Being responsive to distinct contexts and communities.	Sydney Metro's identity is stronger for the unique conditions of centres and communities through which it passes. This local character is to be embraced through distinctive station architecture and public domain that is well integrated with the inherited urban fabric of existing places.
Objective 5: Delivering an enduring and sustainable legacy for Sydney.	Sydney Metro is a positive legacy for future generations. A high standard of design across the corridor, stations and station catchments, that sets a new benchmark, is vital to ensuring the longevity of the Metro system, its enduring contribution to civic life and an ability to adapt to a changing city over time.

5.3.3 Accessibility and safety requirements

A key influence on the design of the Sydney Metro along the Bankstown Line is the requirement for all stations and interchanges to be accessible, meaning that connections from the transport interfaces with all transport modes (accessible parking, buses, taxis, kiss and ride facilities, and park and ride areas) are to be accessible, easy and intuitive for all customers of the Metro. It also means that there should be equality of access for all people within the stations.

Station and interchange designs and layouts have been developed in accordance with relevant accessibility legislation and guidelines – including the Disability Discrimination Act (DDA), Disability Standards for Accessible Public Transport (DSAPT). An outline of the options considered to meet these requirements is provided below.

5.3.4 Platform geometry and platform edge barriers

Platform edge barriers are required to be constructed on the Sydney Metro system to meet train loading and safety requirements. The existing brick faced platforms cannot accommodate the necessary footings for platform edge barriers.

5.3.5 Station and interchange design

The design of stations and interchange nodes along the project corridor has taken into consideration the following accessibility requirements:

- Stations, plazas, interchanges, walkways, fixtures and fittings and the provisioning for retail precincts are to be designed to meet DDA guideline requirements. Stations have been designed to be accessible including the platform-train interface, platform, concourse, facilities and interchange.
- Interchanges are to incorporate accessible facilities, and accessible paths of travel between station and bus/light rail, taxi and kiss and ride facilities, in accordance with the DSAPT and resting seats are to be provided along pathways in stations and plazas.

The design of station catchments has sought to comply with the DDA and DSAPT as far as practicable and within the Metro project's zone of influence.

5.3.6 Architectural Design Strategy for Stations

Transport for NSW is seeking to establish a Sydney Metro network that has a coherent identity to unify the different sections of the line (Sydney Metro Northwest, Sydney Metro City & Southwest), whilst providing sufficient flexibility to address and celebrate the differences in local context and communities, and the engineering and architecture responses to these differences.

The architectural strategy developed for the Marrickville to Bankstown stations is to introduce elegant, contemporary structures that complement the earlier station buildings, and to ensure that this fourth overlay on the Bankstown Line railway landscape is clearly distinguishable from the earlier heritage fabric. Specifically the design has been developed with reference to the Heritage Design Guidelines prepared for the Reference Design by GML Heritage (February 2017). GML Heritage has worked closely with the design team during the design process preparing advice and providing input into options analysis as well as attending workshops and design review meetings. Detailed design, including final design of architectural forms and fabric, will be prepared in consultation with the design review panel, which includes a Heritage Architect who will oversee development of the design in relation to sensitivity to heritage values.

5.3.7 Retrofitting and reuse

Retrofitting and reuse of significant structures to be retained in accordance with their heritage values has been a key consideration during the design process and will continue to be developed during detailed design. This would be a positive heritage outcome as it would enable public engagement with heritage values within the upgraded stations, conservation of significant elements and would facilitate maintenance and care of structures in use.

The following options for reuse of spaces would be considered during detailed design, although are yet to be confirmed:

- operational
- community
- commercial

- public space / non-public space.

Retrofitting would aim to highlight the heritage values of the structures to the customers, both through sensitive design and fitout and use of heritage interpretation.

Reuse of salvaged significant fabric, such as platform bricks or fittings, could be used as part of design or as public art/interpretation. A salvage strategy would be prepared as a recommendation of this report which would outline strategies for selecting salvaged material.

Reuse and retrofitting would be guided by the Burra Charter, the Heritage Council Guidelines for Altering Heritage Assets, relevant Sydney Trains guidelines, and all relevant Conservation Management Plans and Statements of Significance previously prepared the site.

5.3.8 Heritage Strategy

As indicated above, the introduction of Sydney Metro on the Bankstown Line constitutes the fourth major intervention to this existing railway landscape. The design of the Sydney Metro stations along the Marrickville to Bankstown railway line has been undertaken having regard to the heritage values of the stations and the line, and has sought to:

- recognise and demonstrate the heritage significance of all phases of rail transport development along the Bankstown Railway Line
- retain and conserve, wherever possible, elements of heritage significance so that functional relationships can be understood and interpreted
- remove intrusive station elements that detract from the core heritage values
- adaptively reuse the retained and conserved heritage buildings for station and related functions
- carefully and clearly express the presence of the Sydney Metro with new high quality design elements
- deliver a functionally viable line, stations and catchments while enhancing the legibility of key heritage values.

The design approach adopted to meet the operational requirements of the Sydney Metro system whilst minimising impacts on heritage involves the following:

- Provision of a canopy which would minimise bulk while allowing views of platform buildings, allowing these buildings to viewed in the round as originally intended, without attached awnings and other later additions. The canopy would typically provide weather protection between the concourse and platform buildings.
- New aerial concourses that bridge the rail corridor would be carefully placed so that they directly address heritage platform buildings. This would generally involve the positioning of new stairs from the concourse leading directly down to heritage buildings.
- The design of the concourse needs to accommodate the minimum depth and area required for gatelines and customer requirements at the concourse level.
- In a number of instances, the existing entry to the station is too close to the road and the platform heritage buildings are also in relatively close proximity to the existing entry. In these instances, there is not sufficient space between the existing road overbridges and platform buildings to accommodate the Sydney Metro concourse and accessibility requirements to the platform (i.e. lifts

and stairs). At these locations, in order to retain existing heritage platform buildings, the aerial concourse and station entrance have been relocated away from their traditional location on the adjacent road overbridge.

- Provision of weather protection along the length of the platforms. The strategy is to ensure that a contemporary material provides the link between the existing canopy and a new platform canopy, ensuring that the impact to the existing building is minimised.

5.3.9 Heritage input during design

Through the design of the project to date, significant work has been undertaken to reduce the heritage impacts of the project. GML Heritage has worked closely with the design team during the design process preparing advice and providing input into options analysis. The Sydney Metro Heritage Working Group which includes representatives from Sydney Trains and the NSW Heritage Division (as delegates of the NSW Heritage Council) has been presented with information on the project including discussion around heritage impacts, options to avoid impact and justifications for impact. The members of the Heritage Working Group have had the opportunity to provide comment during this process.

Platforms are required to be reconstructed along the alignment to meet operational requirements including provision of PEBs for safety and for accessibility purposes. This results in an unavoidable impact to platforms at every station along the alignment.

The approach to remaining heritage elements has been to retain where possible existing significant items and/or elements on all heritage registers, with particular focus given to those items listed on the SHR. As part of this process, Transport for New South Wales has had to ensure that the heritage elements retained have a suitable station or operational purpose and that their retention does not compromise the integrity of the station design and layout as well as safety and other customer requirements.

Significant SHR listed masonry platform buildings have been retained at Marrickville, Canterbury and Belmore stations. Belmore Station has also been designed to retain the overhead booking office to be adaptively reused as a retail/ commercial or community building. Transport for New South Wales has worked with heritage stakeholders on some of the options available to reduce impacts on heritage values.

The following table summarises the justification for impacts on those elements at each station which are proposed to be removed as part of the proposed project design.

Table 21: Justification of heritage impacts

Station	Heritage Elements Directly Impacted	Comment/Justification
Marrickville Station	Overbridge	Significant optioneering work has been undertaken to reduce the number of heritage elements impacted, resulting in retention of Platform 1 and 2 buildings and retention of the booking office. Earlier in the design process, these elements were proposed to be removed. The overbridge is required to be replaced as it is past its operational life and damaged as a result. This impact is unavoidable.

Station	Heritage Elements Directly Impacted	Comment/Justification
Dulwich Hill	Overhead booking office	The relocation of the entry and associated concourse to a location east of the platform heritage building are to avoid impacts on the platform building which has high significance. Given a decision was made to change the entry/concourse location to retain the existing platform building, the existing overhead booking office would be physically separated and isolated from the station and have no future rail purpose. The works required to be undertaken to reconstruct the platforms and corridor works mean that it physically cannot remain in situ. In addition the existing support structures are inadequate for its long term retention within an operating rail environment. Retention of the overhead booking office would have significant cost, program and constructability implications. Given it would no longer function for rail purposes, a decision was made to remove this building.
Hurlstone Park	Overhead booking office and footbridge Platform Building 1	The impact on overhead booking office and footbridge is associated with the limited space between Crinan Road and the platform building to accommodate the new relocated entry and concourse. The new entry and concourse provide better integration with surrounding streets and the urban centre, together with improved accessibility throughout the precinct. Platform 1 building is to be removed to provide sufficient safe platform width and accommodate the new Metro tracks whilst retaining the existing Platform 2 building. Retention of the overhead booking office would have significant cost, program and constructability implications. Given it would no longer function for rail purposes, a decision was made to remove this building as it was not in the public interest.

Station	Heritage Elements Directly Impacted	Comment/Justification
Canterbury	Overhead booking office/footbridge	Significant optioneering work has been undertaken to reduce the number of heritage elements impacted at Canterbury Station, resulting in retention of the exceptionally significant rated Platform 1 building and the highly significant Platform 2 building. Earlier in the design development process, these elements were proposed to be removed. The relocation of the concourse/entry to a location west of the Platform 1 building is to avoid impacts on this heritage building (exceptional heritage significance). Given a decision was made to change the entry/concourse location to retain the existing platform building, the existing overhead booking office would be physically separated and isolated from the station and have no future rail purpose. The new entry and concourse locations are consistent with Council and DP&E aspirations to have a new town centre focussed on the junction of Broughton and Robert Street. A new southern entry off Canterbury Road will enable customers to enter a covered activation area which extends from Canterbury Road in front of heritage buildings opening up views to heritage buildings on both platforms.
Campsie	Overhead footbridge with concourse and booking office	The station entry remains on Beamish Street however the entry and concourse is being widened to accommodate the greater patronage of the station anticipated and the pedestrian flows along Beamish Street. This requires removal of the existing overhead footbridge, booking office and concourse to create a safer and improved customer experience. The existing (original) concourse steel structure will be retained and refurbished to ensure compliance with Metro standards.
Belmore	Intrusive modern canopies	Significant optioneering work has been undertaken to develop an option which retains all existing elements of heritage significance except for the station platforms, and removes intrusive modern platform canopy structures. Earlier options proposed removal of the overhead book office and platform building.
Lakemba	Overhead booking office/footbridge with concourse	The existing overhead booking office, footbridge and concourse will be retained with some minor expansion. Earlier options sought removal of these elements..

Station	Heritage Elements Directly Impacted	Comment/Justification
Wiley Park	Overhead booking office/footbridge Platform 1 Building Platform 2 Building	The impact on the overhead booking office and footbridge is associated with the close proximity of the existing station entry to King Georges Road and the poor customer amenity and experience that results from this location. A new entry and concourse is proposed to be constructed requiring the removal of both the existing overhead booking office/footbridge and platform buildings. The existing platform buildings are locally significant from a heritage perspective however their location and size would compromise the new station operation and customer requirements. Retention of the overhead booking office would have significant cost, program and constructability implications. Given it would no longer function for rail purposes, a decision was made to remove this building as it was not in the public interest.
Punchbowl	Overhead booking office/footbridge Platform 1 and 2 Buildings	The tracks are required to be relocated to fit straight platform requirements. This has resulted in a new location for Punchbowl Station slightly to the east of the existing station. This provides a far better relationship with the existing town centre and provides improved accessibility across the rail corridor, supporting future growth of the centre. This outcome results in the removal of all existing heritage elements. If the overhead booking office were to be retained, it would be isolated from the existing station and would not have a rail purpose. It is noted that the existing overhead booking office currently has a poor relationship with Punchbowl Road. Retention of the overhead booking office would have significant cost, program and constructability implications. Given it would no longer function for rail purposes, a decision was made to remove this building as it was not in the public interest.
Bankstown	Platform impacts only	Given it is proposed to introduce new Sydney Metro infrastructure alongside the existing station, there is limited impact on heritage elements at Bankstown Station, involving the straightening and reconstruction of platforms.

6. BUILT HERITAGE ASSESSMENT

The following sections provide an assessment of potential heritage impacts as a result of the works proposed as part of the project. A list of the heritage items located within the study area of each catchment is provided as well as relevant description and heritage significance assessments. This information forms the base for assessing direct and visual heritage impacts.

6.1 Marrickville Station Catchment

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.

6.1.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

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

Item	Suburb	Significance	Listing
Within project area			
Marrickville Railway Station Group	Marrickville	State	SHR (01186) RailCorp S.170 Heritage and Conservation Register (4801091) Marrickville LEP 2011 (I89)
Stone house, including interiors	Marrickville	Local	Marrickville LEP 2011 (I114)
Within buffer zone (outside project area)			
Sewage Pumping Station 271	Marrickville	State	SHR (01342) Sydney Water S.170 Heritage and Conservation Register (4571727) Marrickville LEP 2011 (I67)
Stonewalling, terracing and street planting	Marrickville	Local	Marrickville LEP 2011 (I86)

Figure 118: Aerial map showing heritage items within study area: Marrickville

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Marrickville

6.1.2 Existing environment

Marrickville Railway Station Group

Marrickville Station was built by Alexander Scouller using a design by NSW Government Railways, between 1894-1895.

Marrickville Station consists of one wayside platform (Platform 2) to the south and an island platform (Platform 1) to the north (Figure 119 to Figure 128). Passenger rail only uses the south side of the island platform, with the Metropolitan Goods Line running on the north. The station buildings are original, as is the booking office at the western end of Platform 2 (Figure 124). The station is accessed via the stairs from the Illawarra Road overbridge and via a second set of stairs on the south which give access to Platform 2 (Figure 129, Figure 130).

Marrickville is located on the Sydenham to Bankstown Line which was opened as far as Belmore on 1 February 1895. Some changes were made to the station layout with construction of the Metropolitan Goods Line in 1917. A new up platform and building were built with overhead booking office, and the up side of the island platform was withdrawn from use as one of the goods lines now passed it. The platforms were lengthened to the eastern ends in 2011. [100]

The Marrickville TAP project included upgrades to the station such as the installation of two new stairs and lifts, new concourse buildings, new canopies, and adaptive reuse of station buildings. The 1917 booking office was relocated along Platform 2. [101]

Figure 119: View of Platform 2 building, south-east aspect

Figure 120: View of Platform 2 building, south-west aspect

Figure 121: View of Platform 2 buildings, west aspect

Figure 122: View of Platform 2 buildings, south-west aspect

[100] David Scobie Architects Pty Ltd 2016
[101] RPS 2013

Figure 123: View of Platform 2, east aspect

Figure 124: View of Platform 2 booking office, west aspect

Figure 125: View of Platform 1 and 2, west aspect

Figure 126: View of Platform 1 building, west aspect

Figure 127: View of Platform 1 building, east aspect

Figure 128: View of Platform 1 building, south aspect

Figure 129: View of stairs and overbridge, west aspect

Figure 130: View of overbridge, west aspect

Sewage Pumping Station 271

The Sewage Pumping Station 271 was designed and built by the Public Works Department.

The complex consists of a combined boiler house and engine room, a large chimney stack and a residence (Figure 131 to Figure 142). The pumping station/ boiler house is designed in classic Federation Romanesque style (Figure 131, Figure 135). Decorative Gothic buttresses with steep copings flank its sides, round headed windows surmounted by arches of rusticated sandstone typify the window openings, and the walls and gables are accentuated by machicolation motifs. The gables have sandstone copings with bracketed kneelers. The windows are small paned figured glass with pivotal awnings typical of the Federation style. The internal doors are round headed diagonal panelled double doors and are similar in style to the external doors.

The building originally had a slate roof with terracotta hips, ridges and finials. Both the boiler and engine house have since been clad in terracotta tile. The gable roofs have monitors, which are centrally placed and continue approximately half the length of the roof and are fitted with fixed steel louvres. The roof truss in the engine house is a delicate hand-wrought Warren truss strengthened internally with matchboarding. The exposed rafters are rounded on the ends and this attention to detail is typical of the quality of carpentry throughout. The internal pilasters, which correspond with the buttresses, hold the overhead crane rail. The overhead crane is a simple undertrussed steel girder hand operated crane typical of the early twentieth century.

The residence is an unadorned two storey brick building designed in Federation Queen Anne style (Figure 140, Figure 141). Masonry is English bond and the facade is accentuated by timber filigree detailing.

The chimney stack is polychromatic brickwork on a square base which changes to an octagonal shaft some three metres above the ground (Figure 142). It is finished with an ornate cap. The stack is a local landmark.

The station is substantially intact and in good condition. The residence building is in good condition and the fabric is substantially intact.

A series of low level sewage pumping stations were constructed to transport waste against gravity by means of a series of rising mains. The low level portions of Marrickville, Newtown, Erskineville, Alexandria and St Peters are still serviced by a low level sewer which discharges into the wells of Marrickville Pumping Station. The sewage is then pumped to the high level of the Eastern Branch of the Southern and Western Suburbs Ocean Outfall Scheme (SWOOS). Marrickville SPS also receives

stormwater discharge from the Central stormwater channel during certain high tides in the Cooks River.

Figure 131: View of pumping station, south-east aspect

Figure 132: View of brick paving, north-east aspect

Figure 133: View of pumping station, south-west aspect

Figure 134: View of retaining wall and brick paving, south-east aspect

Figure 135: View of pumping station, north-west aspect

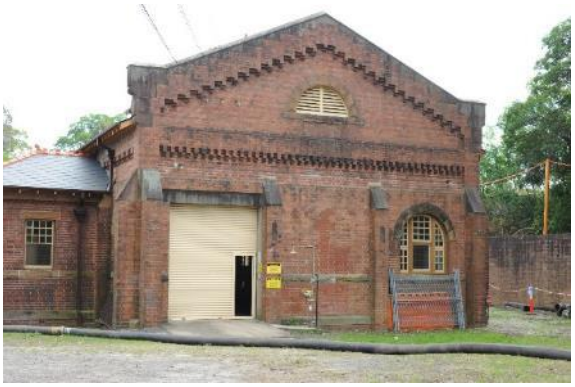


Figure 136:View of pumping station, with stack and residence in background, north-west aspect

Figure 137: View of pumping station and stack, north-east aspect

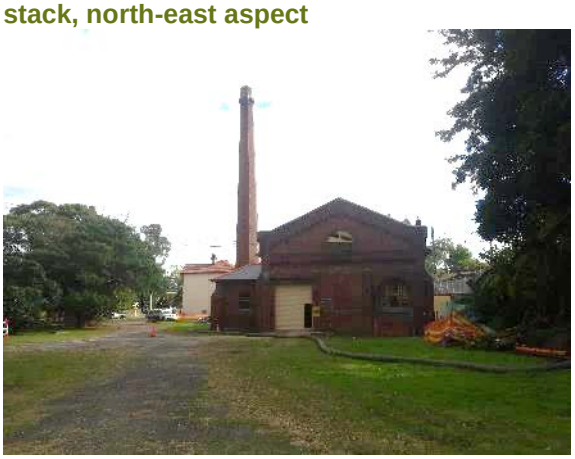


Figure 138: View of pumping station and brick paving, south aspect

Figure 139: View of retaining wall, north-west aspect

Figure 140: View of residence, north-east aspect

Figure 141: View of residence, north-west aspect

Figure 142: View of stack, west aspect

Stone house, including interiors

The house at 1 Myrtle Street, Marrickville was built as *Loch Lomond* as the home of James Meek Jnr circa 1870s. James Meek Snr built a stone cottage in Harriet Street in 1860 which was subsequently demolished. *Loch Lomond* was built by his son to the same design but on a larger scale. James Jnr, who married Harriet Fairburn in 1866, lived in Loch Lomond and raised their eight children there until a new residence, *Myrtle Grove*, was built in 1887. The house was occupied by C.G. Neilson in the 1920s under the name of *Stonehenge*. [102]

The house is the largest of the rock faced sandstone houses found in close proximity of early sandstone quarries in Marrickville. It has smooth faced cut stone quoins and surrounds to the French door openings on the verandah, a slate roof and late Victorian columns. The original detailing to the doors and windows has been lost. Modifications to the house include the addition of security features, brick and metal boundary wall treatment along Myrtle Street and a metal and timber lean-to addition to the west of the original dwelling (Figure 143).

Figure 143: View of Stone house, north-east aspect (Source: OEH SHI)

6.1.3 Description of elements

The tables below outline the main structures and elements comprised within the Marrickville Railway Station Group and Sewage Pumping Station 271. Information such as date, description and condition is provided, and the significance of each element has been graded.

Marrickville Railway Station Group

Table 23: Elements of Marrickville Railway Station Group (CMP 2016)

Elements	Date	Description	Condition	Significance
Platform 1	1895	Platform 1 has an asphalt surface above concrete coping and the original brick face wall.	Generally good	Exceptional
Platform 1 building (Type 11) [103]	1895	External: Rectangular polychromatic face brick building with gabled roof and surrounding cantilevered awning clad in corrugated roof sheeting. The face brick is in English bond, with dark brick walls and lighter salmon coloured bricks forming a dado, framing the upper half of the windows and doors and with a diamond pattern dentil course at the high level. The building is eight bays in length, with the bays	Generally good	Exceptional

[102] Cashman, Richard. & Meader, Chrys. & Carolan, Anne. (1990). *Marrickville, rural outpost to inner city. Petersham*, N.S.W : Hale & Iremonger, quoted on Marrickville Heritage Society's website, *Tracking Heritage: Loch Lomond, Marrickville's Oldest House*, http://marrickville-heritage.blogspot.com.au/
[103] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		defined by engaged brick piers which coincide with the awning brackets. Original chimneys with cement mouldings and terracotta flues remain but have been painted. The cantilever awning is on filigreed steel brackets supported on decorative cement capped brick engaged piers and bolt fixings to the station building brick walls. The soffit lining is the underside of the corrugated steel roof fixed to intermediate exposed purlins. There is a decorative timber moulding at the junction with the brick wall. The awning returns around both ends of the building and at the stair end becomes a canopy supported on timber posts. The awning edges are finished with a decorative timber boarded valance. The end awning and timber valance are not original but constitute a sympathetic addition to the building. The external walls rise from a projecting brick plinth (now painted) with a decorative two-part cement dado moulding which frames the salmon brick dado and is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding, each with a decorative keystone. The original window and door openings have segmental arches and the windows feature a decorative moulded cement sill. The original timber windows were double hung with a double paned lower sash and a multi-paned upper sash featuring coloured glass. Much of the original coloured window glass as well as the original fanlights above the door openings remain on the southern side but several have been bricked up on the goods line side. The doors were timber panelled but most have been removed or, on the northern side, bricked up. The end brick gables feature a louvre within round brick window frames in salmon coloured voussoir shaped bricks with four cement keystones. Internal: The building comprises a booking hall, still accessible via the original set of double doors at the bottom of the stairs; a booking office; station master's room; general waiting room; ladies room and ladies toilets, a store and men's toilets. The internal usage has now changed and the toilets have modern fitouts and finishes. Original plaster wall finishes and plaster ceilings and ceiling roses remain in the general waiting room, the ladies waiting room, and ladies toilets as well as the station master's room.		
Platform 2	1911	Platform 2 is made of the original brick face wall below concrete coping, brick coping and an asphalt surface.	Generally good	Exceptional
Platform 2 building (Type 11) [104]	1911	External: Rectangular face brick building with gabled roof and integral shallower sloped single cantilevered awning. The face brick is in Flemish bond and the building is four bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. The original chimney with cement mouldings and terracotta flue has been removed.	Generally good	High

[104] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		The cantilever awning is on standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. The soffit lining of corrugated steel is fixed to intermediate exposed purlins and follows the roof slope. There is a decorative timber moulding at the junction with the brick wall. Vertical timber boards form a valance at each end of awning. The awning roof as for the main roof is corrugated steel. The external walls rise from a projecting brick plinth four courses high with a decorative dado moulding run in cement which is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding. The rear or southern side of the building reflects the same detailing. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash which featured coloured glass. Most of the original window glass as well as the upper glazing bars remain but have been obscured by the installation of vandal proof fibreglass sheeting. Original door openings featured fanlights matching the upper window sashes, which have also been removed. One original timber panelled door remains. The rear of the building has been painted and all the window openings bricked up. Internal: The building comprises a general waiting room; ladies room and ladies toilets, a store and men's toilets.		
Overbridge - Illawarra Road	1911. c.2013	Steel girders and a concrete slab supported on central brick piers and side brick abutments. Part of the overbridge was impacted during the TAP upgrades.	Generally good	Brick parapets including curbs, piers and panels - Exceptional Structure below the deck level - Moderate
Platform 2 booking office	1917, relocated	The original timber framed overhead booking office dating from 1895 was demolished and the existing timber framed booking office located on Platform 2 built in 1917-18. The building is a simple, rectangular weatherboard clad timber framed structure, with a gable roof clad in corrugated steel which extends as an awning with exposed rafters on the platform side. Originally the roof extended to the east over the open public space and ticket collection booth, but this has been replaced by a later gabled awning structure on timber posts. Externally the original ticket window survives as does two of the original timber double hung windows; the door has been replaced by a flush type. The booking office was relocated on Platform 2 as part of the TAP upgrades. Internal: Internally much of the fabric survives including the timber lining boards, the timber boarded ceiling and the built in desk and cupboards, although it would appear much of this dates from the alterations and additions of the mid-1940s.	Generally good	Exceptional

Elements	Date	Description	Condition	Significance
Pedestrian steps: northern set	1917, c.2013	The original access stairs from the overbridge to platform 1 have the original steel stringers but have new concrete treads and a new steel balustrade. The stairs were upgraded as part of the recent TAP upgrades. Their integrity has been severely impacted overtime.	Generally good	Little
Pedestrian steps: southern set	1985, c.2013	The later stairs on the south were constructed from steel stringers supported on steel columns and with precast concrete treads. The stairs were constructed in replacement of the previous steps as part of the recent TAP upgrades.	Generally good	Little

Sewage Pumping Station 271

Table 24: Elements of Sewage Pumping Station 271 (CMP 2005)

Significance Grading	Elements
Exceptional	The elements identified as being of Exceptional Significance generally include those essential for the presentation of the item to the wider public and its general identification in the wider community. These include: • The ongoing use of SP0271/DP271 in its original function • The original structure of the pumping station building and Engineer's Residence including: - The brickwork stack and flue - Original decorative sandstone and brickwork • Other original fabric elements including: - Evidence of original roof battens, slates or fixings - Evidence of original door and window hardware - Evidence of original fixtures including of machinery and electricity associated with the successive steam, diesel and electrical powering of SP0271 and original operation of the site. - Original T& G timber ceiling and crane, warren truss bracket and crane - Original external fabric and footprint of the wet wells including original stonework. - Evidence of original colour schemes and finishes (dado tiles etc) - Specific to the Engineers Residence, original significant fabric includes (but is not restricted to) internal elements such as original timber joinery, original locks and doors including pantry (meat safe) door, domestic fixtures including gas fittings, original timber and pressed metal ceilings, fireplaces, skirting boards and picture rails. • Original movable elements associated with the operation of SP0271 including the diesel engine and pump, tools, historic documents of significance, maps affixed to office walls, clocks and various movable elements as identified as significant by Sydney Water's Movable Heritage Project. • The structural exterior elements of SP0271 and original spatial composition of the site, including: - The overall scale and volume of the buildings - All elevations of the Engineers House - The original fenestration (including multipane glass) and timber joinery - The original entrances and doors (southern office and northern elevations) - The relationship of the engineer's house to pumping station building. • The non-structural exterior elements of SP0271 that participate in the landscape, including: - The rear retaining stairway and wall with sandstone capping - Trachyte cobbles, sandstone kerbing, formal roadway and the original 'turf' between the roadway encircling the site and the pumping station buildings.

Significance Grading	Elements
High	The following elements have been identified as elements of High Significance: • The structural exterior and interior elements of SP0271 including: - The rear (northern) elevation generally below the level of the rear boundary wall as visible from the northern side of the boundary (excluding those elements identified as exceptionally significant) - Internal walling, including load-bearing walls and partitions • The original non-structural elements that are important in demonstrating the original character of the buildings, including: - The internal layout and architectural composition/organisation of the boilerhouse, engine house, office and engineers house. - Notable original interior features as identified in future inspection of the interior of the Engineers House, possibly including original interior decoration, including the joinery, floorboards, skirtings, and picture rails, ceilings and doors. - Potential archaeological evidence of demolished coal store and footings of coal bunker.
Medium	The following elements have been identified as elements of Medium Significance: • The landscaping of the site as open space and plantings and domestic garden and low front paling fence of the Engineers House. • The stormwater channel • Variety of original or early interior and exterior features including: - Painted finishes of pumping station and unfinished boiler room. - Change room, toilet and store room in the boiler room and tools - Office hand basin and table - On site vent stack on site and case iron surface fitting.
Little	Elements of Little Significance include areas and elements that are not important for the retention of significance or presentation of the item, or whose significance can be demonstrated through information recorded in the technical documentation. These elements may contribute to the ongoing significant function of the place, but in themselves are not significant fabric. This includes: • Various elements added in the recent decades: - Various electrical kiosks and other electrical equipment including meter boards - Pumps and engines, rising mains and other infrastructure machinery regularly replaced or updated. - Railings around the wet wells and stormwater well - Various safety equipment and recent installations such as the emergency shower equipment - New elements including, floorings such as linoleum in the Office building, terracotta tiled roof, removed dado tiles and roller door. - Electrical substation on site - Low level access chambers positioned on grassed area next to southern elevation. - The 1940s addition to the rear of the boiler house. Whilst this element is associated with the retention of coal to power the boilers, and therefore with the early function of the place, this significance is associated with the space itself and not the fabric which is presently structurally unsound and inconsistent with the originally open elevation. - All furniture and non-original/early finishes, fixtures and elements in the Engineers House and grounds.
Intrusive	The elements detracting from the presentation of sewage pumping station and subsequently detracting from the derived aspects of the cultural significance of the item. Intrusive elements include:

Significance Grading	Elements
	• The railway goods line which must be crossed to access the site. Whilst this may be considered intrusive in terms of accessing the site, it is consistent with the industrial character of the site and area. • Concrete patching to repair trachyte paving

6.1.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHR and SHI listings, and the relevant CMPs where applicable.

Table 25: Statements of significance for Marrickville Station Catchment

Item	Statement of Significance	Listing
Marrickville Railway Station Group	*The railway station at Marrickville is significant as it is a station on the Sydenham to Bankstown Line which was constructed to relieve congestion on the Main South Line as well as to encourage suburban development and the growth of agriculture in the late 19th and early 20th century. The highly intact main platform building represents the period of transition from the boom time of the 1880s to the standardisation of NSW railway building design from the 1890s onwards, while the booking office on Platform 2 reflects a later period of expansion in the first quarter of the 20th century.* *Marrickville Railway Station is significant at a State level as the platform building demonstrates the high level of aesthetic design of the pre-1900 standard buildings, which included the use of polychromatic brickwork, decorative dentil coursing, ornate awning brackets and carved bargeboards. The platform building is intact and is representative of a small group of such ornate platform buildings including Canterbury and Belmore on the Bankstown Line. The platform building on platform 2 provides an interesting contrast, demonstrating the simpler design of the standard platform buildings of the 1910/20s.* *Also of significance is the intactness of the weatherboard booking office which is unusual for being one of the few examples of a booking office located on a platform with street entry only and no access from the footbridge or overbridge, though the structure itself is representative of a standard design*.	SHR
	The Marrickville Railway Station Group demonstrates State historical significance as an important station through: • *involvement in the expansion of suburban Sydney;* • *local associations with Marrickville politician and contractor A.H. Scouller;* • *aesthetic significance as a relatively intact assemblage of station buildings and structures spanning 1895-1917 and demonstrating various economies and design motivations* • *social significance in its association with the local community;* • *the 1917 Booking Office having research potential to demonstrate the design of these buildings and rarity values.* *Overall, the component structures of the Marrickville Railway Station Group are excellent representative examples of their types and the level of significance of the Marrickville Railway Station Group is regarded as having state significance.*	CMP
Sewage Pumping Station 271	*SPS 271 displays a high level of architectural sophistication in the execution of Federation Queen Anne and Romanesque styles. It has the highest level of aesthetic significance of pumping stations within the Sydney Water sewerage system and is the most intact example of a pair of stylistically complete Federation industrial buildings. It is*	SHR

Item	Statement of Significance	Listing
	technologically unique (one of only three of its type), having the dual function of carrying both sewage and stormwater. It has a high level of industrial archaeological value evidenced by the Blackstone three-cylinder diesel pump (steam driven until 1954) which dates from c..1920, and an outstanding level of technological significance due to the manner and method in which it functioned within the SWOOS system. It had the unique capability of pumping waste from the sewage wells to either the high-level sewer or the eastern stormwater channel. It is one of the oldest SPS's still functioning, and presently discharges into the SWOOS	
	SP0271 is of State historic and aesthetic significance. Historically, it is one of the oldest sewage pumping stations still in active service in the Sydney Water system and is technologically unique in having the dual function of carrying sewage and stormwater. SP0271 is one of only two pumping stations which were originally powered by steam. *The importance of the station is reinforced by the provision of a substantial house for the housing of the site engineer which survives intact. Aesthetically, it is one of the finest examples of a large scale Federation Period public utility building in Sydney, displaying a high level of excellence in its design, construction and craftsmanship. The existing chimney is significant in its own right, being an excellent example of a substantial stack constructed in ornamental brickwork which is also a local landmark.* *The station reveals information about early steam and diesel technologies and is significant as a representative example of a sewage pumping station which still fulfils its role over 100 years after its introduction, as originally designed and constructed albeit with mechanical and electrical upgrading*	CMP
Stone house, including interiors Include	*This is the largest of the relatively small number of buildings which illustrate the use of stone in the residential development in this area. It was well built and lies in close proximity to the old Schwebel quarries.*	SHI

6.1.5 Heritage impacts

Direct impacts

Marrickville Railway Station Group

The table below provides an assessment of the direct impacts of the 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 Marrickville Railway Station Group

Element	Significance	Proposed action	Assessment of impact	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	The western section of the platform would be retained including the structure underneath the platform building. The removal of the eastern section of Platform 1 would involve demolition eastward of the central platform building. This would have a major impact on the original platform including the loss of approximately half its fabric and brick face. The eastern section of the platform would be reconstructed to accommodate the straight rail line alignment required for Metro trains. This would result in the loss of the original curvilinear form of the platform and of the symmetry created with Platform 2 when the latter was constructed in 1911. This would have a major impact on the original platform layout. A new platform building, canopies and platform screen doors would be anchored on the reconstructed platform and would not further impact significant fabric. New platform canopies and platform screen doors would be anchored on the portion of Platform 1 to be retained. This would result in a moderate impact where pylons and struts are anchored in the platform. Overall, the proposal would result in a major impact on the platform and station group as a whole.	Major
Platform 1 building (Type 11) (1895) [105]	Exceptional	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. This aspect of the project would have a minor impact on the heritage values of the building and station overall.	Minor

[105] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
Platform 2 (1911)	Exceptional	Partial retention on the western side; removal of eastern section with retention of structure underneath platform 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 platforms.	A portion of the platform would be retained on the western side as well as the structure underneath the heritage building. However, the majority of the platform would be removed on the eastern side. This would have a major impact on the original platform including the loss of most of its fabric and brick face. The eastern section of the platform would be reconstructed to accommodate the straight rail line alignment required for Metro trains. This would result in the loss of the original curvilinear form of the platform and of the symmetry with Platform 1. This would have a major impact on the original platform layout. The new platform buildings, platform canopies and platform screen doors would be constructed both on the retained and new platforms. There would be a moderate impact on the portion of retained platform where pylons and struts are anchored. Elements to be anchored on the reconstructed platform would not further impact significant fabric. Overall, the proposal would result in a major impact on the platform and station group as a whole.	Major
Platform 2 building (Type 11) (1911) [106]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. This aspect of the project would have a minor impact on the heritage values of the building and station overall.	Minor
Overbridge - Illawarra Road (1911, c.2013)	Brick parapets including curbs, piers and panels - Exceptional Structure below the deck level - Moderate	Removal and replacement	The overbridge is proposed to be removed and replaced. This would include the demolition of the bridge deck, adding new parapets, throw screens, waterproofing, and asphalt. It would also include new abutments, bridge beams, and concrete slab. Utility modifications/relocations, bride drainage, line markings, road level adjustments, and makeup panels would be conducted. The bridge is an element of exceptional significant and its heritage value would be removed. This aspect of the project would result in a major impact on the heritage values of the overbridge and station overall.	Major

[106] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
Platform 2 booking office (1917, relocated)	Exceptional	Retention in current location	The structure is proposed to be retained in its current location. This would result in a neutral impact on the Platform 2 booking office.	Neutral
Pedestrian steps: northern set (1917, c. 2014-2016)	Little	Retention	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 retrain them with the Metro concourse. This would result in a neutral impact on the steps and station overall.	Neutral
Pedestrian steps: southern set (1985, c.2014-2016)	Little	Retention	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 with the Metro concourse. This would result in a neutral impact on the steps and station overall.	Neutral

When considering cumulative impacts, it is assessed that the project would result in a major direct impact on Marrickville Railway Station Group overall.

Sewage Pumping Station 271

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

Direct impacts on the Sewage Pumping Station 271 would be neutral.

Stone house, including interiors

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

Direct impacts on the Stone house, including interiors would be neutral.

Visual impacts

Marrickville Railway Station Group

There would be some difference visually between the proposed upgrade for the project, and the recent TAP upgrade undertaken by Sydney Trains. The TAP upgrade concourse and lifts would remain with some cosmetic modifications. Pedestrian steps would also be retained. The upgrades to be undertaken as part of the project would be distinguishable and recognisable across the station as a new phase in development of the station and the Bankstown Line.

The contemporary nature of the new development would differ from the existing heritage character of the station group, which would create a contradistinctive relationship between the historic components of the site and the new elements. The new platform building on Platform 1 would be low in scale and bulk and located away at a distance from the heritage building. The canopy design has aimed to reduce bulk and height. Canopies would be glazed adjacent to heritage buildings to maximise potential view lines.

Ribbon canopies would cover enclosed stairways from the concourse to the platforms diminishing views down towards the retained significant platform buildings. Some views from the concourse to the Platform 1 building would be discernible, while views towards the Platform 2 building would generally

be obscured by canopies between the stairs and the Platform 2 building. Ribbon canopies would extend along both platforms with separation of at least two meters from the significant Platform 1 and Platform 2 buildings. Views of the Platform 1 building would be available from Station Street.

The TAP upgrades resulted in some impacts to historic context and setting of the station. The additional structures and canopies proposed as part of the project would further modernise the station setting. While positive impacts include general refresh and removal of intrusive elements, the open historic setting and character of the station would be diminished.

The proposed platform screen doors would rise to human height to accommodate the specific workings of Metro trains. This would have a minor impact on external views from the platform buildings and from the concourse towards the heritage buildings and a moderate impact on internal views as a result of visual clutter. Existing views from the new Illawarra Road overbridge would not be significantly affected in comparison with existing views and vistas. 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.

The visual impacts of the upgraded station on the Marrickville Railway Station Group would be moderate overall.

Existing views from the new Illawarra Road overbridge would not be significantly impacted compared to existing views and vistas. The proposed replacement of the Illawarra Road overbridge with a sympathetically designed structure would have a moderate visual impact on the station group, although views from the overbridge to the significant station buildings would be retained.

Additional impacts such as the services building to be constructed to the north-east 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 platform canopies and platform building would have a moderate visual impact on the character and setting of Marrickville Station. The new platform screen doors would result in a moderate 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, although the ribbon canopies on the stairs and platforms would obscure views from most areas apart from the section of the concourse and Station Street. This assessment considers the balance of impacts as a result of new high quality design structures being added, and the positive impacts of removal of intrusive elements, and refresh of the station. The assessment also considers the high quality, sensitive design of the new Metro layer which would remain distinguishable from the original elements.

When considering cumulative impacts, it is assessed that the project would result in a moderate visual impact on Marrickville Railway Station Group.

Sewage Pumping Station 271

The heritage item is located approximately 350 metres from Marrickville Railway Station. Such distances would prevent any significant visual impacts onto the pumping station and would likely be negligible. Any views of the new Metro tracks and overhead wiring 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 negligible.

Stone house, including interiors

The heritage-listed stone house is located approximately 150m from Marrickville Station and 20m south of the existing railway corridor. There would be no significant visual impacts onto the heritage item as a result of the proposed design at Marrickville Station. Any views of the new Metro tracks and overhead wiring 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 negligible.

Stonewalling, terracing and street planting

The closest section of the heritage stonewalling, terracing and street planting is located approximately 65m from the south 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 new Metro tracks and overhead wiring 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 negligible.

Potential direct impacts

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

Table 27: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Marrickville Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Sewage Pumping Station 271	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Stone house, including interiors	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Stonewalling, terracing and street planting	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.1.6 Assessment against conservation management policies

Marrickville Railway Station Group

The conservation policies provided in the Conservation Management Plan (CMP) prepared for the site for Marrickville Railway Station Group (2016) have been reviewed. Policies provided in the CMP relevant to assessing the impacts of the project have been extracted and provided below for reference.

Table 28: Relevant conservation policies – Marrickville Railway Station Group [107]

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.*
	Adaptive reuse (retrofitting) would be considered during detailed design in accordance with mitigation measure NAH5 (Section 10).
12.3 Gardens & Landscape	*Canopies to the Platforms are proposed generally across the Sydney Trains rail network for additional amenity and should they be proposed at Marrickville, they should be located a respectful distance from the heritage buildings, adopt a complementary form, utilise suitable materials in appropriate painted colours and finishes and be visually recessive and unobtrusive.*
	Architectural design principles and the heritage strategy for the project consider the design of canopies, and recommend that they are set back from heritage items with the aim of opening up viewlines and providing a clear delineation between the heritage elements and new Metro design layer. The form and fabric of the canopies would be considered during detailed design in consultation with a heritage architect and the design review panel.
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 has found to be in such poor condition that options for upgrade have been discounted
18.1 Built Heritage	*Ensure appropriate conservation of the Scouller station building on Platform 1*
	The Platform 1 station building would be conserved
18.2 Built Heritage	*Ensure appropriate conservation of the southern station building on Platform 2*
	The Platform 2 station building would be conserved
18.3 Built Heritage	*Ensure appropriate conservation of the two Platforms and associated elements*
	Platforms 1 and 2 would be partially impacted by the project. Sections of original fabric would be retained. Justification is discussed in Section 5.3. 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*

[107] David Scobie Architects Pty Ltd 2016

Policy	Assessment of impacts against recommendations
	The bridge has found to be in such poor condition that options for upgrade have been discounted
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 masonry would be retained. Salvage and reuse of original fabric to be removed would be managed under the salvage requirements of mitigation measure NAH7 (Section 10).
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. Results of this consultation have informed this impact assessment. The design review panel would continue to provide heritage input during detail design in order to ensure design is sympathetic to heritage values in accordance with mitigation measure NAH2 (Section 10).
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.*
	Significant fabric associated with Platforms 1 and 2 and the overbridge would be removed. Justification of this impact is provided in Section 5.3. There is provision for salvage of significant fabric in mitigation measure NAH7 (Section 10). The Platform 1 building of exceptional significance and the Platform 2 building of high significance would be conserved.
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 NAH12 (Section 10).
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 measures NAH4 and NAH8 address protection of non-impacted fabric during construction (Section 10).
22.7 Managing Change	*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 with interpretation, when they are no longer needed*

Policy	Assessment of impacts against recommendations
	• *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 and the booking office would be retained and conserved. Justification for removal of portions of Platforms 1 and 2 and overbridge are discussed in section 5.3.
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 in accordance with project's design principles and heritage strategy. Canopy design for the new Metro layer aim to enable design and materials of the new layer to be easily discernible from the historic layer.
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 in accordance with the design principles and heritage strategy
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 in accordance with the design principles and heritage strategy
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.*
	This recommendation would be considered as part of detailed design in accordance with the design principles and heritage strategy
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 in accordance with the design principles and heritage strategy
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 in accordance with the design principles and heritage strategy
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.*

Policy	Assessment of impacts against recommendations
	This recommendation would be considered as part of detailed design in accordance with the design principles and heritage strategy

Sewage Pumping Station 271

The conservation policies provided in the Conservation Management Plan (CMP) prepared for the site for Sewage Pumping Station 271 (2005) have been reviewed. Policies provided in the CMP relevant to assessing the impacts of the project have been extracted and provided below for reference.

Table 29: Relevant conservation policies - Sewage Pumping Station 271 [108]

Policy	Assessment of impacts against recommendations
7.2.1 Ongoing Use of the Asset	*Maintain operational use of the sewage and stormwater pumping stations and the residential use of the former engineers cottage.*
	The use of the item would not change as a result of the project
7.2.2 Conservation of Significant Fabric	*The significance of SP0271 is dependent upon the conservation of the identified historic fabric of the item. It should be recognised that significant fabric includes landscape elements (paving, kerbing), buildings, works, subsurface remains and movable elements.*
	All significant fabric would be conserved
7.3.2 Future Development and Change	*The ability of the site to absorb change and conserve its significance requires consideration of the impact of change on the heritage significance of SP0271. Additions and upgrading of the precinct should not compromise the overall heritage significance of SP0271.* *New material should be of a form, detail, colour and material which is sympathetic to significant fabric and sited in a place consistent with its original function. It should also be distinct from the significant fabric.*
	No change to the item is proposed as part of the project
7.4.1 Preservation of Engineering Heritage and Technical Significance Background	*The technical significance of the item is gained through preservation of the surviving historic records, including photographs, oral history recordings and architectural drawings and plans.* *Prior to any future major works, an archival recording should be undertaken to encapsulate the surviving original features and fabric subjected to rapid deterioration. This recording is to be undertaken in accordance with current NSW Heritage Office Guidelines on archival and photographic recording for items of State significance.*
	As impacts are assessed as negligible archival recording has not been recommended
7.5.1 Views, Vistas and Setting	*The site of SP0271 largely retains its original configuration and setting. Conservation of the setting provides a boundary, views to the item and enables appreciation of the aesthetic qualities of the site.*
	There would be no change to configuration and setting as a result of the project

6.1.7 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

[108] Sydney Water 2005

Table 30: Summary of Heritage Impacts – Marrickville Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of the Platform 1 building of exceptional significance, the Platform 2 building of high significance and the booking office of exceptional significance. • Potential for positive heritage impacts during retrofitting and upgrade works to significant elements to be retained • Negligible visual impacts on heritage items located within the buffer zone • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Partial demolition of Platforms 1 and 2 of exceptional significance • Demolition of Illawarra Road overbridge • Loss of curvilinear platform lines and near-symmetry of platform layout caused by the straightening of Platforms 1 and 2 • Major direct impacts on the fabric of the station • Moderate visual impacts on the setting of the station catchment

6.1.8 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Marrickville Station Catchment and the 25-metre buffer zone:

Marrickville Railway Station Group

The direct impacts of the project on Marrickville Railway Station Group would be major overall. The platform building of exceptional significance and the Platform 2 building of high significance would be retained and retrofitted with potential for positive impact. The Illawarra Road overbridge would be removed and replaced. The Platform 2 booking office of exceptional significance would be retained in its current location. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

Marrickville Station is assessed at State significant under the following criteria: historical and aesthetic significance, rarity, representatives and research potential.

The SHR statement of significance focusses largely on the values of the platform buildings which are rare and representative and have historical and aesthetic significance at a State level. The booking office is assessed as having research potential in relation to its fabric and construction.

As they are to be retained, platform buildings 1 and 2 dated 1895 and 1911, of exceptional and high significance would still contribute to the overall significance of Marrickville Station as a major station on the Bankstown Line. The two platform buildings are good examples of their respective types and would still contribute to the aesthetic and historical significance and representativeness and rarity values of the station. The partial retention of platforms 1 and 2 would retain representative samples of the original 1895 and 1911 platforms. The booking office, an element of exceptional significance would be retained in its current location.

The statement of significance provided in the CMP acknowledges the importance of the station in facilitating the expansion of urban Sydney. The retained elements of the station would continue to represent this historical value. The project would enable the station to continue to play a role in the growth and development of Sydney and the local area.

Visual impact would be moderate as new elements would diminish views to significant platform buildings, impact context and setting and introduce visual clutter.

Although there would be significant changes as a result of the new Metro design layer being added to the station, this evolution would enable the station to continue its use as a transport hub. The new Metro layer which would remain distinguishable from the original elements and therefore the historic values of the station could be appreciated in the context of the evolution of the station.

When assessed cumulatively, the level of heritage impact of the project on Marrickville Railway Station Group would be major. The heritage item would continue to meet the threshold for State significance for the historical and aesthetic significance of the station in the context of its evolution and retained elements, as well as under rarity and representativeness as demonstrated by the retained elements of high and exceptional significance. The station would still reach the threshold of State significance under research potential, as the booking office, to which this criteria primarily refers in the SHR statement of significance would be retained.

Sewage Pumping Station 271

The direct impacts of the project onto the Sewage Pumping Station 271 would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Sewage Pumping Station 271 would be negligible. The heritage item would continue to meet the threshold for local significance.

Stone house, including interiors

The direct impacts of the project onto the Stone house would be neutral. The proposed works in the vicinity would result a negligible visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Stone house would be negligible. The heritage item would continue to meet the threshold for local significance.

Stonewalling, terracing and street planting

The direct impacts of the project onto the Stonewalling, terracing and street planting would be neutral. The proposed works in the vicinity would result a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Stonewalling, terracing and street planting would be negligible. The heritage item would continue to meet the threshold for local significance.

6.2 Dulwich Hill Station Catchment

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.

6.2.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 31: Heritage items within Dulwich Hill Station Catchment and buffer zone

Item	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 project 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)

Figure 144: Aerial map showing heritage items within study area: Dulwich Hill

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_DH

6.2.2 Existing environment

Dulwich Hill Railway Station Group

Dulwich Hill Station was designed and built by NSW Government Railways between 1895 and 1935. It was officially opened as Wardell Road on 1 February 1895. The station was renamed as Dulwich Hill on 1 July 1920. The platform building dates from 1935 and replaced the original timber building. Historic plans dated 1935 show the demolition of the original platform building and the construction of a new brick platform building; a new overhead weatherboard booking and parcels office and bookstall; and the relocation of the stairs to the platform to accommodate modifications.

Dulwich Hill Station consists of a single island platform with an original platform building, and stair access to an original timber framed weatherboard clad overhead booking office (Figure 145 to Figure 158). The station is accessible via the booking office building from the Wardell Road overbridge (Figure 145, Figure 146).

Figure 145: View of Platform 1 and 2 building north-west aspect

Figure 146: View of Platform 1 and 2 building, west aspect

Figure 147: View of Platform 1 and 2 building, east aspect

Figure 148: View of Platform 1 and 2 building, west aspect

Figure 149: View of Platform 1 and 2 building, east aspect

Figure 150: View of Platform 1 and 2, north-west aspect

Figure 151: View of overhead booking office, west aspect

Figure 152: View of overhead booking office, south-west aspect

Figure 153: View of overhead booking office and stairs, south-east aspect

Figure 154: View of overhead booking office and stairs, east aspect

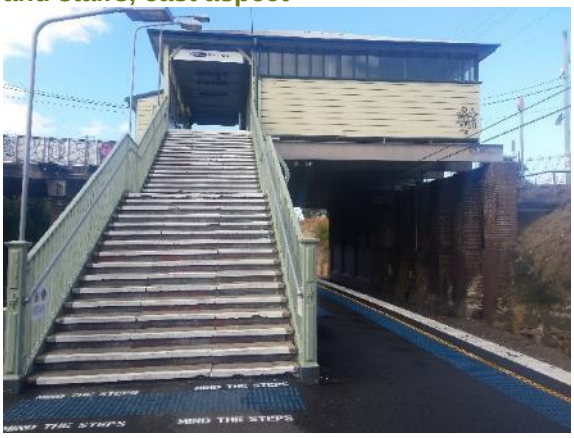


Figure 155: View of overbridge, south-east aspect

Figure 156: View of overbridge abutments, south-east aspect

Figure 157: View of overbridge and overhead booking office, south-east aspect

Figure 158: View of stairs, east aspect

South Dulwich Hill Heritage Conservation Area

The South Dulwich Hill HCA is located between Cannonbury Grove and Livingstone Road in Marrickville/Dulwich Hill and dates to 1901-1920.

The South Dulwich Hill HCA is suburban in character. It was within the part of the extensive Petersham Estate that was known as the Petersham Farms, and was used for orchards and market gardens before the first subdivision in 1901, with a second in 1907. Most lots had been developed by 1920. The short period of development has led to a highly consistent built form that demonstrates Marrickville's mature twentieth century suburban cultural landscape, with detached, single storey Federation bungalows set on low-density lots with setbacks and space for front and rear gardens and side driveways to most properties.

The streetscape rhythms are well expressed and are enhanced by the gentle undulation in the local topography. A high proportion of houses are substantially intact and have retained much of their original detailing such as face brickwork, slate roofs and decorative terracotta ridge capping; tall

rough-cast chimneys, timber windows, hoods, timber verandah detailing and face brick facades. This establishes an integrity that underlies the streetscapes in this area.

Many of the 'Federation' houses in the area demonstrate an important local variation to the style. Instead of the usual steep pitched roof rising high to a cross-ridge, the houses built in this part of Marrickville are characterised by a lower-pitched roof which rises to a long cross-ridge set at the height of the gable-ended return. This pattern is not a common one in Sydney and is likely that a local builder was responsible, but whatever the reason, the built forms of the houses in the HCA demonstrate a consistency and cohesive character not seen in many other areas.

Major structural alterations and additions such as second storeys are rare, creating a roofscape that has retained its integrity when viewed obliquely or from side streets. The alterations that have been made include mainly the replacement of roof cladding (retaining the original roof forms); removal of timber-framed windows and insertion of Aluminium-framed windows, the replacement or alteration of front fences and the construction of carports and garages forward of the building line. Many houses have undergone alterations and additions particularly in the migrant style. Most of these have been made to the rear of properties and are not highly visible elements in the local streetscape and include the loss of significant fabric such as timber windows and face brickwork. Others have introduced colour schemes and applied decorative elements that are visually prominent and intrusive in the streetscape views, although their impact could be reversed. Evidence was also found of more recent layers, including the rendering and stripping of detail associated with the current fashion for gentrification. Although some of these have affected the aesthetic values of their immediate streetscape their contribution to the unity of the rhythms of the facades and roofscapes of the Conservation Area remains.

The area also contains several notable examples of Inter-War residential flat building development, including the blue-black brick development with Dutch detailing in Keith Street and the P&O influenced block in Wardell Street.

Streetscapes in the area possess an open, suburban quality due to the low density and single storey development. They are notable for their unity of built form and strong roof patterns, extensive brick paving (part of the Depression employment relief scheme) and in the case of Margaret Street and Cannonbury Grove, outstanding street trees, with avenue plantings of mature Ficus in the pavement of Margaret Street and Brush Box in Cannonbury Grove.

Fence styles vary, with a high proportion of original iron palisade fences west of Wardell Street, and low brick walls in face brick to match the house to the east. The low height has allowed the fences in the area to remain reasonably neutral elements in oblique views along the streetscapes of the area. Kerbs and gutters are mainly concrete. Verges are wide, and include street planting in a grassed strip between the footpath and carriageway.

Figure 159: View of conservation area near railway corridor, west aspect

Figure 160: View of conservation area near railway corridor, east aspect

Figure 161: View of conservation area near railway corridor, north aspect

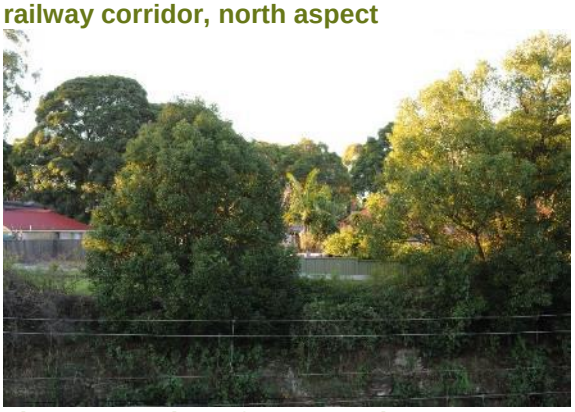


Figure 162: View of conservation area near railway corridor, north aspect

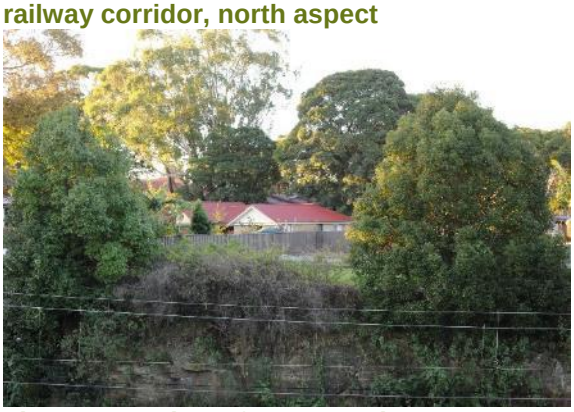


Figure 163: View of conservation area near railway corridor, north aspect

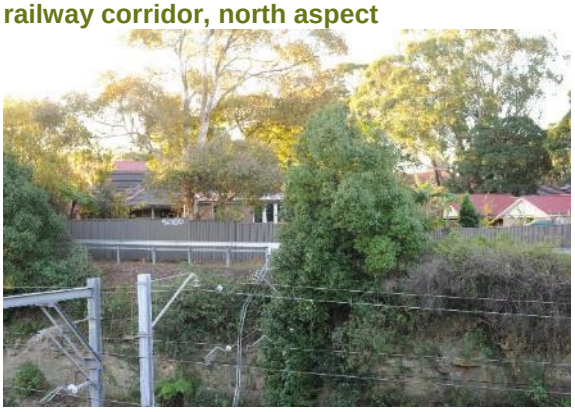


Figure 164: View of conservation area near railway corridor, west aspect

Figure 165: View of conservation area near railway corridor, south-west aspect

Figure 166: View of conservation area near railway corridor, south-west aspect

Figure 167: View of conservation area near railway corridor, north aspect

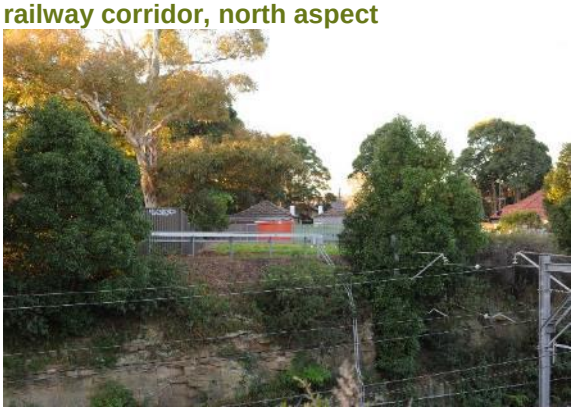


Figure 168: View of conservation area near Albermarle Street bridge, north-west aspect

6.2.3 Description of elements

Dulwich Hill Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 32: Elements of Dulwich Hill Station Group

Elements	Date	Description	Condition	Significance
Platforms 1/2	1935	One vertical brick island type, with asphalt surface and original brick platform face and edge.	Good	High
Platforms 1/2 building (Type 13) [109]	1935	External: The building is rectilinear in plan with parapeted gable ends and a half hipped awning to both elevations. The sides of the gables are characterised by the bricks being corbelled. It is constructed of red bricks in stretcher bond. A soldier course of darker bricks is used at the window heads and as a single band at awning height on the gable ends. These same bricks also are used to create a series of frames on each elevation which suggest window openings. The window sills are bullnose bricks. Both the brick heads and sills have been painted. Windows are in timber and were originally either double hung with an upper sash of six panes, or in the toilets, with a fixed lower sash with an upper sash of louvres. All windows have been later modified and both the glazing bars and glazing removed or obscured. The original external panelled doors have been removed and replaced with flush doors. The roof and awnings are clad with corrugated steel, the roof space being ventilated by a single metal louvre in each gable end. Beneath the awning the soffit is clad with fibre cement and exposed battens at the joints. Internal: The interior consists of a series of discrete spaces arranged in a linear plan. From the access end the rooms are: general waiting area, station master's office, ladies waiting room and ladies toilet, store and men's toilet. Within the waiting room the original plaster ceiling and plaster wall finishes remain as does the original timber seats. The station master's room has a new hardboard ceiling while the toilet fitouts are later.	The building is in moderate condition as the external brick walls are stained from old graffiti removal, overpainting, and the brickwork is damaged where the original male toilet modesty screen has been removed.	High
Overhead booking office	1935	This is a square timber framed weatherboard clad building consisting of a booking hall with an open side to the Wardell Road entry, a booking office and a bookstall. It is designed in the Inter-War Transitional style. The building is in a good state of preservation retaining original double hung windows, internal and external weatherboard cladding as well as the exposed timber post structure with diagonal bracing and fibre cement wall and ceiling cladding. Roofing is corrugated steel. The overhead booking office is supported on steel beams which span between steel platform trestles and face brick piers on the southern embankment. Internal fixtures and fittings have been replaced with modern office furniture. The roof has been replaced with corrugated metal sheets and doors replaced or boarded.	Good	High

[109] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		One ticket window has been replaced with a modern equivalent and one has been boarded. Integrity: good; original setting, form and function substantially intact. Most internal features removed/replaced in previous upgrades; notable original attributes: simple open floor-plan of bookings/parcels office; ticket window with brass coin tray; bookstall; weatherboard siding; multi-pane sash windows; covered booking hall with AC ceiling, horizontal band of windows; association with substantially intact stair including balusters and newels Unusual features: Skillion roof bookstall forms part of original design. Became standard with later examples; only example to retain evidence of a horizontal band of glazing along its booking hall walls.		
Stairs	1935	The Dulwich Hill stairs are a typical example of Inter-War platform access stairs with a timber overhead booking office attached. The stairs are substantially intact including balusters and newel posts. It is constructed with a steel beam girder with rolled steel joist.	Good	Moderate
Overbridge	c.1930, c.1975	The Wardell Road Overbridge consists of a modern reinforced, prestressed concrete road deck spanning between lateral concrete beams which bear on the original face brick platform and embankment piers on each side.	Good	Moderate

6.2.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHI listings.

Table 33: Statements of significance for Dulwich Hill Station Catchment

Item	Statement of Significance	Listing
Dulwich Hill Railway Station Group	*Dulwich Hill Railway Station has local historical significance as it is one of the stations to be located on the Sydenham to Bankstown Line which was built to take pressure off the traffic on the Main South Line as well as promote agriculture and suburban development in the late 19th and early 20th centuries. While the original 1895 station buildings are no longer extant, the replacement 1935 group of structures including both the overhead booking office and the platform building are significant as they represent typical examples of the Inter-War Eclectic style utilised by NSW Railways. The overhead booking office is especially significant as it retains its original configuration and much of its original fabric*	SHI
South Dulwich Hill Heritage Conservation Area	*The South Dulwich Hill Heritage Conservation Area is of historical significance as an area developed in the Federation period as a series of c. 1910 subdivisions in the vicinity of the Wardell Road (now Dulwich Hill) Railway Station which opened in 1889. The Area is of aesthetic significance for its many good quality individual examples and small groups of Federation bungalows that retain original timber joinery, window hoods and detailing to gables and verandas to a quality and consistency rare in the Council area. The area includes excellent examples of the Marrickville Iron Palisade fence, particularly in Cannonbury Grove. The area contains a good collection of a locally significant variation of the 'standard' Federation bungalow design with a low ridgeline set parallel to the street alignment. The Area also includes streetscapes of a high quality. This quality is derived from the consistency*	SHI

Item	Statement of Significance	Listing
	of subdivision pattern, setbacks, built forms, roof volumes, materials, detailing, and garden spaces. The built forms of the area are representative of the Marrickville area in the early years of the 20th Century as it transformed from a dense urban to detached suburban cultural landscape which includes detached late Federation bungalows and wide lots allowing asymmetrical siting of houses to provide for a side driveway (later development).	

6.2.5 Heritage impacts

Direct impacts

Dulwich Hill Railway Station Group

The table below provides an assessment of the direct impacts of the 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 34: Assessment of direct impacts for Dulwich Hill Railway Station Group

Element	Significance	Proposed action	Assessment of impact	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 west side of the new platform; new services building to be located on western end of reconstructed platform	It is proposed to remove the 1935 island platform apart from the structure underneath the heritage building. This would have a major impact on the fabric of the platform including the loss of the original brick face. The platform would be reconstructed to accommodate the rail lines required for the Metro trains. A curve similar to the original curve of the platform would be recreated. This would result in a moderate impact on the original platform layout. The new covered concourse, access stairs, lift shaft, platform canopies, platform screen doors and services building would be anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 1/2 to be reconstructed to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	Major
Platform 1/2 building (Type 13) (1935) [110]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be	Minor

[110] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
			sympathetic to the heritage context and minimise fabric and visual impacts. This aspect of the project would have a minor impact on the heritage values of the building and station overall.	
Overhead booking office (1935)	High	Removal	It is proposed to remove the building and the original brick pier and steel beam structure. The building was ranked in second position in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy [111] and recommended for retention. It was given an overall score of eight out of nine in the strategy. Its removal would result in a major impact on the setting of the station as a whole and removal of a building type that is significant in the context of Sydney Trains heritage assets as a group. Removal would result in a major impact on the fabric and heritage values of the booking office and Dulwich Hill Railway Station as a whole.	Major
Stairs (1935)	Moderate	Removal	It is proposed to remove the stairs and footbridge. The stairs were assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy.[112] The removal of the stairs would result in a major impact on the fabric and historical values of the stairs and the station catchment as a whole.	Major
Overbridge (c.1930; c.1975)	Moderate	Retention and upgrade	The structure is proposed to be retained and regraded for ongoing use. The proposed works would involve protection and maintenance works. This would involve the removal and replacement of non-significant parapets. It is expected this aspect of the project would result in a minor impact on the heritage values of the overbridge and station overall.	Minor

When considering cumulative impacts, it is assessed that the project would result in a major direct impact on Dulwich Hill Railway Station Group overall.

South Dulwich Hill Heritage Conservation Area

It is proposed to upgrade the existing railway tracks and associated overhead wiring between Marrickville and Dulwich railway stations as part of the installation of the new Metro train lines. The Albermarle Street overbridge would be removed and replaced. The curtilage of the South Dulwich Hill HCA comprises a 295m section of railway line starting approximately 100m east of Dulwich Hill Station. Direct impacts proposed within the curtilage of the conservation area would include an upgrade of railway tracks and related overhead wiring, and removal and replacement of the Albermarle Street overbridge. No areas of heritage significance within the conservation area would be

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

directly impacted by the works. Alterations to the railway line and the Albermarle Street overbridge would be in line with the exiting setting and nature of this portion of the conservation area.

Direct impacts of the works onto the South Dulwich Hill HCA would be negligible.

Visual impacts

Dulwich Hill Railway Station Group

The new concourse would be modern in style, and would be considerably larger in scale in comparison with the 1935 platform building. Medium-scale ribbon canopies would extend form the concourse, covering the central access stairs and along the length of the platform to the west. 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, canopies and station buildings 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 station and services buildings would be sited away from the heritage building.

The removal of the overhead booking office, one of two significant station buildings within the station group, would result in a major visual impact on the station as a significant portion of its heritage fabric would be removed. The overhead booking office is a rare example of an Inter-War transitional booking office with good condition and integrity. The building was ranked in second position in a recent study on those grounds.[113] Its removal would result in a major impact on the setting of the station as a whole.

The proposed platform screen doors along Platform 1/2 would rise to human height 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.

Overall, the proposed ribbon canopies, covered concourse and station infrastructure would have a major impact on the character and setting of Dulwich Hill Station. The removal of the overhead booking office would remove an element of high significance in the 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 project would result in a major visual impact on Dulwich Hill Railway Station Group.

South Dulwich Hill Heritage Conservation Area

The South Dulwich Hill HCA comprises a portion of land extending from the north of Dulwich Hill Railway Station, approximately 125m from the north boundary of the station, across the railway line and to the south-east where it reaches Beauchamp Road. The proposed railway track upgrade and the removal and replacement of the Albermarle Street overbridge would remain in line with the existing character of this portion of the HCA and would have a neutral visual impact onto it.

The project would involve the construction of a new concourse, medium-scale canopies along the western side of Dulwich Hill station and new Metro infrastructure along the southern boundary of Dulwich Hill station. It would also involve the removal of elements of high significance within the station group, namely the overhead booking office and associated stairs. There are some views from

[113] Australian Museum Consulting 2014. Railway Overhead Booking Offices Heritage Conservation Strategy. Prepared for Transport for NSW.

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.

Inter-War Heritage Conservation Area Group

The Inter-War HCA is located approximately 25m north of the railway corridor and 490m 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 in 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 new Metro tracks and overhead wiring 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 negligible.

Gladstone Hall, including interiors

Gladstone Hall is located approximately 40m south of the railway corridor and 270m 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 new Metro tracks and overhead wiring 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.

Potential direct impacts

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

Table 35: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Dulwich Hill Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
South Dulwich Hill Heritage Conservation Area	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor

Item	Potential direct impact assessment	Impact
Inter-War Heritage Conservation Area Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Gladstone Hall, including interiors	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor

6.2.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW Office of Environment & Heritage (Statement of Heritage Impact, 2002).

Table 36: Summary of Heritage Impacts – Dulwich Hill Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of the Platform 1/2 building of high significance • Retention and re-use of the Wardell Road overbridge including the original brick piers • Potential for positive heritage impacts during retrofitting and upgrade works to the platform building to be retained • Negligible direct and visual impacts on the South Dulwich Hill HCA • Neutral to negligible visual impacts on heritage items in the vicinity • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Demolition of elements of high significance within the station group: Platform 1/2 and the overhead booking office with associated stairs • Major direct and impacts on the fabric of the station • Major visual impacts on the setting of the station catchment and views onto the platform building of significance

6.2.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Dulwich Hill Station Catchment and the 25-metre buffer zone:

Dulwich Hill Railway Station Group

The direct impacts of the project on Dulwich Hill Railway Station would be major overall. The Platform 1/2 building would be retained and retrofitted with potential for positive impact. The removal of the overhead booking office, one of two significant buildings within the station group, would have major

direct and visual impacts. The visual impact of the new development on the setting of the item and significant views would also be major with considerable bulk added to the station group as a result of construction of the new concourse. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

The demolition of Platform 1/2 and the overhead booking office and stairs would remove a substantial portion of the 1935 layer of re-development of Dulwich Hill Railway Station and impact the integrity of the station as a whole. The representativeness significance of the station as a railway station in the Inter-War Railway Eclectic style would be severely diminished. The platform building would remain a good example of the type. The significant brick abutments and piers of the Wardell Road overbridge would be retained.

When assessed cumulatively, the level of heritage impact of the project on Dulwich Hill Railway Station Group would be major. However, based on the historical significance of the station and the aesthetic values of the retained platform building, the heritage item would continue to meet the threshold for local significance.

South Dulwich Hill Heritage Conservation Area

The direct impacts of the project on the South Dulwich Hill HCA would be negligible. Works within the boundaries of the HCA and in its vicinity would result in negligible visual impacts. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the South Dulwich Hill HCA would be negligible. The HCA would continue to meet the threshold for local significance.

Inter-War Heritage Conservation Area Group

The direct impacts of the project onto the Inter-War HCA Group would be neutral. The proposed works in the vicinity would result a negligible visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Inter-War HCA Group would be negligible. The HCA would continue to meet the threshold for local significance.

Gladstone Hall, including interiors

The direct impacts of the project onto Gladstone Hall would be neutral. The proposed works in the vicinity would result a neutral visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on Gladstone Hall would be neutral. The heritage item would continue to meet the threshold for local significance.

6.3 Hurlstone Park Station Catchment

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.

6.3.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 37: Heritage items within Hurlstone Park Station Catchment and buffer zone

Item	Suburb	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)
Hurlstone Park Railway Underbridge	Hurlstone Park	Local	RailCorp S.170 Heritage and Conservation Register (4805737) Canterbury LEP 2012 (I126)

Hurlstone Park Station has been nominated for SHR listing as of 17 March 2016.

The Hurlstone Park Heritage Assessment study (Paul Davies September 2016) was prepared and 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 Heritage Conservation Areas 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 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.

Figure 169: Aerial map showing heritage items within study area: Hurlstone Park

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_HP

6.3.2 Existing environment

Hurlstone Park Railway Station Group

Hurlstone Park Station was designed and built by NSW Government Railways. Hurlstone Park Station was opened as Fern Hill on 27 November 1894. It was renamed Hurlstone Park on 19 August 1911. In this year the Metropolitan Goods line was built past the station as well as a new Down platform. In 1915 the original timber station building was replaced by brick buildings on both platforms and an overhead booking office (Figure 170 to Figure 181). The latter was replaced in the 1980s by a new booking office (Figure 170).

Hurlstone Park Station consists of one wayside platform on the south and an island platform on the north. Passenger rail only uses the south side of the island platform, with the Metropolitan Goods Line running on the north. The station is accessed via the overbridge and overhead booking office from Floss Street. The overbridge is excluded from the heritage listing (Figure 182, Figure 183).

Figure 170: View of overhead booking office, south aspect

Figure 171: View of Platforms, south-west aspect

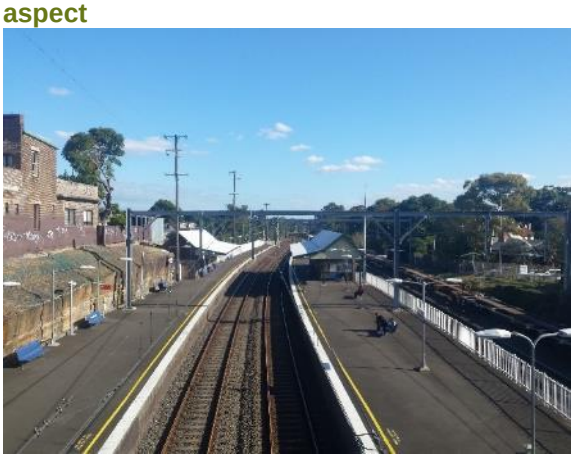


Figure 172: View of Platform 2 stairs, north-east aspect

Figure 173: View of Platform 2 building, north-east aspect

Figure 174: View of Platform 1 building, south-west aspect

Figure 175: View of stairs and overhead booking office, north-east aspect

Figure 176: View of Platform 1 building, north-east aspect

Figure 177: View of Platform 2 building, east aspect

Figure 178: View of cutting, south-west aspect

Figure 179: View of cutting, west aspect

Figure 180: View of Platform 1 building, south-west aspect

Figure 181: View of Platform 1 building, west aspect

Figure 182: View of overbridge, north-east aspect

Figure 183: View of overbridge, north-east aspect

Hurlstone Park Railway Underbridge

The Hurlstone Park Railway Underbridge was designed by engineering staff, New South Wales Government Railways and constructed by day labour. It consists of a single span, double track, prestressed concrete girder railway bridge, with 9.85 metre clear span between brick abutments, consisting of parallel, post-tensioned precast I-shaped concrete girders transversely post-tensioned in-situ to create a homogeneous structure carrying ballasted tracks (Figure 184 to Figure 187). The concrete girders rest on concrete padstones on top of each brick abutment. The bridge carries the double track Bankstown Railway over Foord Avenue. It was constructed shortly after the first prestressed bridge at Dombarton in 1962.

The viaduct is in good condition with the following defects: spalling concrete girders, minor cracks in headstock and water seepage through abutments. No recent condition report for the M25 part of the bridge has been reviewed.

Figure 184: View of railway corridor section of underbridge, south-west aspect

Figure 185: View of underbridge, south aspect

Figure 186: View of underbridge, north aspect

Figure 187:View of underbridge detail, west aspect

6.3.3 Description of elements

Hurlstone Park Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 38: Elements of Hurlstone Park Station Group

Elements	Date	Description	Condition	Significance
Platform 1	1894	Platform 1 has an asphalt surface with the original brick face with a concrete edge. The northern side of this platform (not used and fenced off) which extends only to the western end of the platform building has a concrete edge but the face is buried below the ballast of the raised railway lines	Generally good	High
Platform 2	1894	Platform 2 also has its original brick face with a concrete edge and asphalt surface.	Generally good	High
Platform building, platform 1 (Type 11) [114]	1915	External: Rectangular face brick building with gabled roof and integral shallower sloped single cantilevered awning. The face brick is in stretcher bond and the building is six bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. There is a further open veranda bay at the eastern end. Original chimneys with cement mouldings and terracotta flues have been removed. The northern cantilever awning on the goods line side has been removed. The remaining southern cantilever awning has standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. The soffit lining is corrugated steel fixed to intermediate exposed purlins and follows the roof slope. There is a decorative timber moulding at the junction with the brick wall. Vertical timber boards form a valance at each end of the awning. On the eastern end of the building the vertical boarding fills the whole width of the gable end and the roof is supported on two timber posts to form an open veranda for one bay. The awning roofs as for the main roof is corrugated steel. The external walls rise from a projecting brick plinth five/six courses high with a decorative dado moulding run in cement which is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding. The northern side of the building reflects the same detailing. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash. If the upper sashes featured coloured glass, none now remain. The original window glass as well as the upper glazing bars have been removed in most cases. Most of the windows now contain diamond pattern vandal proof fibreglass sheeting and/or hardboard coverings. Original door openings featured fanlights matching the upper window sashes, which have also been removed. One original timber panelled door remains. The original slate thresholds remain on the northern side only. Internal: The building comprises a station master's office; general waiting room; ladies room and ladies toilets, a store and men's toilets. The internal usage has now changed and the toilets have modern fitouts and finishes. Original plaster wall finishes and plaster	Generally good	High

[114] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		ceilings remain in the general waiting room, the ladies waiting room, and ladies toilets. The men's toilets retain the original painted brick walls but the ceiling has been removed. The station master's office has lost all internal finishes due to fire damage.		
Platform building, platform 2 (Type 11) [115]	1915	External: Rectangular face brick building with gabled roof and integral shallower sloped single cantilevered awning. The face brick is in stretcher bond and the building is four bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. The original chimney with cement mouldings and terracotta flue has been removed. The cantilever awning is on standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. The soffit lining of corrugated steel is fixed to intermediate exposed purlins and follows the roof slope. There is a decorative timber moulding at junction with the brick wall. Vertical timber boards form a valance at each end of awning. The awning roofs as for the main roof is corrugated steel. The external walls rise from a projecting brick plinth four/five courses high with a decorative dado moulding run in cement which is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding. The rear or southern side of the building against the rock cutting reflects the same detailing. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash which featured coloured glass. The original window glass as well as the upper glazing bars have been removed in several cases. Most of the windows now contain diamond pattern vandal proof fibreglass sheeting and/or hardboard coverings. Original door openings featured fanlights matching the upper window sashes, which have also been removed. One original timber panelled door remains. The original slate thresholds remain. Internal: The building comprises a general waiting room; ladies room and ladies toilets, a store and men's toilets. The waiting room and ladies waiting room retains the original plaster wall finishes, ripple iron ceiling, plaster ceiling rose and timber floor. The ladies toilets retain the original timber partitions and fittings but have not been used in many years. The men's toilets retains the original painted brick walls, urinal stalls, some timber partitions but the ceiling has been removed.	Generally good externally except for some damage to the brickwork where the toilet modesty screens have been removed and some paint graffiti damage. Internally the disused waiting rooms and toilets rooms in the building on Platform 2 are in a poor condition, with peeling paint, damage from water ingress.	High
Footbridge	1915	Haunched steel beam girder design consists of tapered cantilevers bearing on platform trestles and brick abutments and supporting shallow beams over the railway tracks. The original access stairs remain including the original newel posts.	Good	High (stairs) Moderate (footbridge) Little (deck)

[115] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
Brick abutments	c.1915	Face brick abutments supporting the overbridge and overhead booking office.	Good	High
Overhead booking office	c.1980	The original timber framed overhead booking office dating from 1915 has been demolished and replaced by a new structure erected on the original footbridge.	Good	Little
Landscape/natural features		Excavated rock face to rear of Platform 2 and wayside building.	Good	High

6.3.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHI listings.

Table 39: Statements of significance for Hurlstone Park Station Catchment

Item	Statement of Significance	Listing
Hurlstone Park Railway Station Group	*Hurlstone Park Railway Station has local historical significance as it is one of the stations to be located on the Sydenham to Bankstown Line which was built to take pressure off the traffic on the Main South Line as well as promote agriculture and suburban development in the late 19th and early 20th centuries. The platform buildings, footbridge and stairs are significant as examples of the designs used by NSW Railways during the period 1910 to 1920. The wayside platform buildings are good examples of their type, being relatively intact, with the original 1915 men's toilet on platform 2, although long disused, still retaining its original configuration.*	SHI
Hurlstone Park Railway Underbridge	*The Foord Avenue bridge is of local significance as the first prestressed concrete railway bridge built for the metropolitan network, the second within the NSW rail network. The bridge is a good and early representative example of prestressed concrete girder construction.*	SHI

Hurlstone Park Station has been nominated for SHR listing as of 17 March 2016.

6.3.5 Heritage impacts

Direct impacts

Hurlstone Park Railway Station Group

The table below provides an assessment of the direct impacts of the 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 40: Assessment of direct impacts for Hurlstone Park Railway Station Group

Element	Significance	Proposed action	Assessment of impact	Impact summary
Platform 1 (1894)	High	Removal; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shafts, platform canopies,	The platform would be removed to allow for the construction of a new platform to accommodate the straight rail lines required for the Metro trains. This would result in the complete loss of the fabric of the platform including the original brick face and curved layout. This would have a major impact on the original platform. The new covered concourse, access stairs, lift shafts, platform canopies and platform screen doors would be	Major

Element	Significance	Proposed action	Assessment of impact	Impact summary
		platform screen doors and station buildings to be anchored on new platform	anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 1 to be reconstructed in a straight alignment would result in a major impact on the platform and the station group.	
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	The platform would be removed apart from the structure underneath the heritage building to allow for the construction of a new platform to accommodate the straight rail alignment required for the Metro trains. This would result in the complete loss of the fabric of the platform including the original brick face and curved layout. This would have a major impact on the original platform. The new covered concourse, access stairs, lift shafts, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 2 to be reconstructed in a straight alignment would result in a major impact on the platform and the station group.	Major
Platform building, platform 1 (Type 11) (1915) [116]	High	Removal	The Platform 1 building would be removed to allow for the construction of a new paid concourse, canopies and station buildings. Its removal would have a major impact on the fabric of the building and on Hurlstone Park Station as a whole.	Major
Platform building, platform 2 (Type 11) (1915) [117]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. This aspect of the project would have a minor impact on the heritage values of the building and station overall.	Minor
Footbridge (1915)	High (stairs) Moderate (footbridge) Little (deck)	Removal	The footbridge including significant stairs would be fully removed to allow for the construction of a new concourse, canopies and station buildings. The footbridge was assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy.[118] It was highlighted for careful conservation and adaptation.	Major

[116] See Section 2.2.6 Station building types
[117] See Section 2.2.6 Station building types
[118] NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Proposed action	Assessment of impact	Impact summary
			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	The brick abutments are proposed to be retained and regraded for ongoing use as the overbridge structure. It is expected this aspect of the project would result in a minor impact on the heritage values of the brick abutments and station overall.	Minor
Overhead booking office (c.1980)	Little	Removal	It is proposed to remove the overhead booking office. This would result in a neutral impact on the station catchment. The overhead booking office is not identified as significant in the Sydney Trains Overhead Booking Office Conservation Strategy.	Neutral
Landscape /natural features	High	Retention	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 project would result in a major direct impact on Hurlstone Park Railway Station Group overall.

Hurlstone Park Railway Underbridge

It is proposed to undertake a general maintenance works overhaul on the bridge and to apply waterproofing to the whole bridge deck to mitigate future water attributed problems and assist with minimising future maintenance works. The non-significant parapets would be removed and replaced with new precast parapets with the screens pre-installed. The project would have a negligible impact on the heritage values of the overbridge.

Direct impacts of the works on the Hurlstone Park Railway Underbridge would be negligible.

Visual impacts

Hurlstone Park Railway Station Group

The contemporary nature of the new concourse, canopies and station buildings would be suitable within the present context as a contradistinctive design to be easily differentiated from the heritage components of the site. A new platform building on Platform 1 would be located opposite the Platform 2 building of a similar scale itself but of a contemporary style. The footprint of the overall concourse and new platform building as well as the platform canopies and platform screen doors would add considerable bulk to the originally low-scale station and impact the open context and setting. The Metro concourse would be located to the east of the retained platform building. Although the height and open layout of the new concourse would allow some views onto the retained building on Platform 2 from the concourse, views from Duntroon Street on the platform building would be impeded. Views would also be obscured by ribbon canopies over the two sets of access stairs from the concourse to the platforms. These canopies would extend along the platforms, with a gap of at least two metres at either side of the Platform 2 building. The canopy fabric adjacent to the Platform building would be glazed to maximise visibility. The visual impact of the new concourse on the setting of the railway station would be major overall.

The removal of the curved platforms, the Platform 1 building and the footbridge stairs would result in the loss of a majority of the heritage components of the site. This would have a major visual impact on

the station. The new structures would come to replace the heritage components of the station group and the overall character of the station would be significantly altered. Although the removal of the c.1980 overhead booking office would present an opportunity to enhance views onto the Platform 2 building, these views would eventually be mostly screened by the new concourse and ribbon canopies.

The platform screen doors along the reconstructed platforms would rise to human height 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.

Overall, the proposed concourse, canopies and platform building would result in a major visual impact. Views onto the Platform 2 building would be partially retained from the concourse, although views from Duntroon Street would be impeded. Views of the curved platforms, Platform 1 building and footbridge stairs would be lost due to the removal of these elements; this would also result in a major impact. The platform screen doors would result in a moderate visual impact overall.

When considering cumulative impacts, it is assessed that the project would result in a major visual impact on Hurlstone Park Railway Station Group.

Hurlstone Park Railway Underbridge

It is proposed to undertake a general maintenance works overhaul on the bridge and to apply waterproofing to the whole bridge deck to mitigate future water attributed problems and assist with minimising future maintenance works. The non-significant parapets would be removed and replaced with new precast parapets with the screens pre-installed. The maintenance and waterproofing works to Hurlstone Park Railway Underbridge are unlikely to significantly alter the existing aesthetics of the bridge and visual impacts on the bridge are anticipated to be negligible.

The heritage item is located approximately 180m 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. New Metro tracks and overhead wiring 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.

Potential direct impacts

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

Table 41: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Hurlstone Park Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Hurlstone Park Railway Underbridge	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.3.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 42: Summary of Heritage Impacts – Hurlstone Park Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of the Platform 1 building with opportunity for positive impact • Retention and upgrade works to the Duntroon Street overbridge • Retention of the sandstone wall on Platform 2 • Negligible direct and visual impacts to Hurlstone Park Railway Underbridge • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Demolition of elements of high significance within the station group: the two original 1894 platforms, the 1915 Platform 1 building and the 1915 footbridge stairs and posts • Major direct and visual impacts on the station catchment due to the removal of the original platforms, Platform 1 building and footbridge

6.3.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Hurlstone Park Station Catchment and the 25-metre buffer zone:

Hurlstone Park Railway Station Group

The direct impacts of the project on Hurlstone Park Railway Station would be major. Most elements of high significance within the station would be removed apart from the less prominent of two 1915 platform buildings, the Platform 2 building. This would have major direct and visual impacts on the station as a whole. The visual impact on the setting of the station and significant views to and from the station would also be major. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

The project would remove all original elements at Hurlstone Park Railway Station apart from the Platform 2 building, the brick abutments of the Duntroon Street overbridge, and the sandstone wall on Platform 2. This would significantly impact the integrity, aesthetics and representativeness significance of the station. The removal of most original elements would severely impact the legibility of the historical values of the place as one of the original railway stations on the Sydenham to Bankstown Line. The Platform 2 building would remain the sole tangible element to represent the heritage significance of the railway station. The Platform 2 building would retain some of the heritage values of the place and Hurlstone Park Railway Station would retain its historical use.

There are unlikely to be direct impacts to the currently unlisted items and HCAs discussed in the Hurlstone Park Heritage Study (Paul Davies 2016) and currently being determined by DP&E. The detailed design for the station catchment would consider the context and setting of the items and HCAs.

When assessed cumulatively, the level of heritage impact of the project on Dulwich Hill Railway Station Group would be major. Based on the historical significance of the station and the heritage values of the retained platform building, the heritage item would continue to meet the threshold for local significance.

Hurlstone Park Railway Underbridge

The direct impacts of the project on the Hurlstone Park Railway Underbridge have been anticipated to be negligible. Works to the Hurlstone Park Railway Underbridge and in its vicinity would result in negligible visual impacts. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Hurlstone Park Railway Underbridge would be negligible. The heritage item would continue to meet the threshold for local significance.

6.4 Canterbury Station Catchment

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.

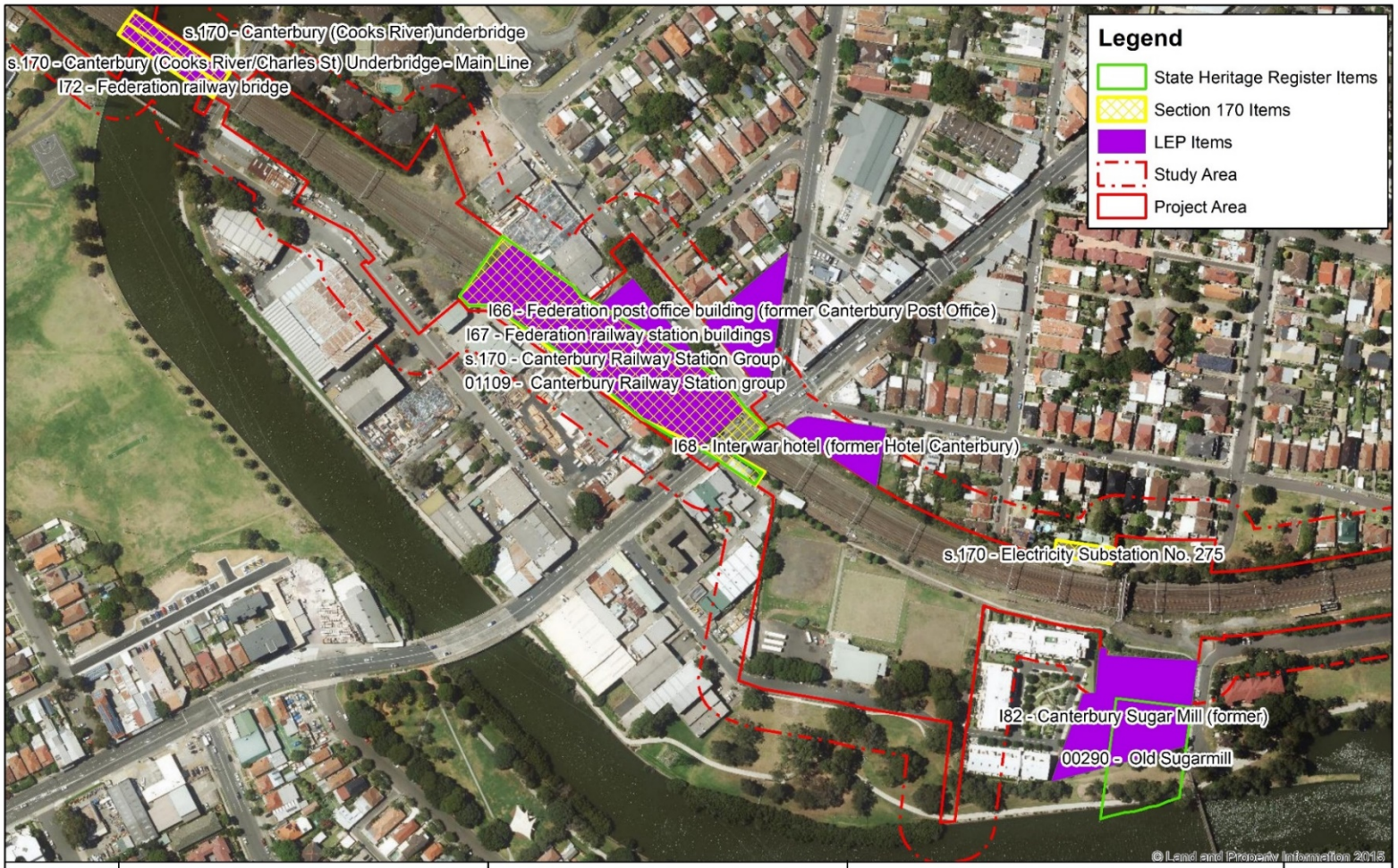
6.4.1 Summary of heritage listings

The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone. An aerial map showing the heritage items within the station catchment is also provided below.

Table 43: Heritage items within Canterbury Station Catchment and buffer zone

Item	Suburb	Significance	Listing
Within project area			
Canterbury Railway Station Group	Canterbury	State	SHR (01109) RailCorp S.170 Heritage and Conservation Register (4801100) Canterbury LEP 2012 (I67)
Canterbury (Cooks River) Underbridge	Canterbury	Local	RailCorp S.170 Heritage and Conservation Register (4801568) 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 project area)			
Old Sugarmill	Canterbury	State	SHR (00290) 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)

Figure 188: Aerial map showing heritage items within study area: Canterbury



File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Canterbury

6.4.2 Existing environment

Canterbury Railway Station Group

Canterbury Station was designed by N.S.W. Government Railways and built by J.J. Scouller. Canterbury Station consists of one wayside (Platform 2) on the south and one island (Platform 1) on the north, with both original platform buildings remaining (Figure 189 to Figure 194). The northern side of the island platform is not used for passenger services. The wayside platform is accessed from the footbridge via a ramp, while the island platform is accessed by stairs (Figure 195, Figure 196). An overhead booking office accessed from the Canterbury Road overbridge on the east and from Broughton Street on the north was rebuilt in the late 1980s (Figure 197). The railway was electrified in 1926.

Canterbury Station was expanded in 1915 in conjunction with the construction of the Metropolitan Goods Line. It has three platforms, only two of which are now used. One of the platforms faces one of the two goods lines. Canterbury Park Racecourse is adjacent, and a branch line formerly led to sidings used on race days (now demolished).

Canterbury signal box was commissioned on 13 December 1915 as part of the resignalling and track alterations of Canterbury station in preparation for the opening of the new Metropolitan Goods Line from Lidcombe via Enfield Marshalling Yards to Rozelle, in April 1916 (Figure 198). The signal box was constructed with a mechanical interlocking lever frame using 68 of the 72 possible lever positions, which controlled the operation of signals and points in a set sequence.

The signal box controlled all train movements through Canterbury on both the Bankstown suburban line and Metropolitan Goods line. Through ancillary lever frames 'B' and 'C', the signal box controlled the storage sidings for the Canterbury Racecourse special trains and the shunting of the local goods sidings.

Two extensions have been added to the signal box. The western annex in 1937, and the eastern annex in 1968 to provide additional space to accommodate signalling relays, circuits and equipment. In 1994 a start was made on replacing the life expired signalling system and equipment on the Bankstown Line and the Metropolitan Goods Line. This resulted in the closure of Canterbury signal box on the weekend of 30/31 December 1996. After its closure it was sealed in its 'as closed condition' by the Heritage Section of the State Rail Authority to preserve the building and its internal signalling equipment.

Figure 189: View of Platform 1 building, south-east aspect

Figure 190: View of Platform 2 building, south-east aspect

Figure 191: View Platform 2 building detail, south-east aspect

Figure 192: View of Platform 1 building, south-east aspect

Figure 193: View of Platform 1 building, east aspect

Figure 194: View of Platform 1 building detail, south-east aspect

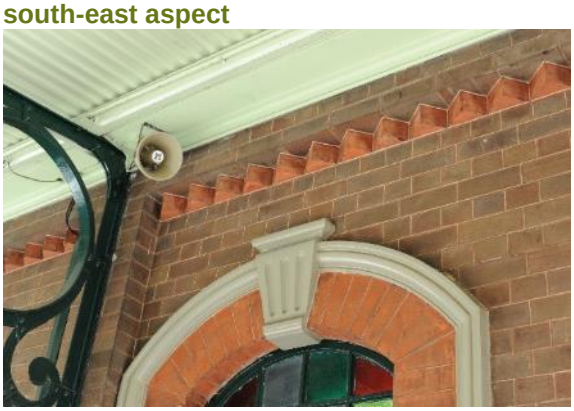


Figure 195: View of footbridge, south-east aspect

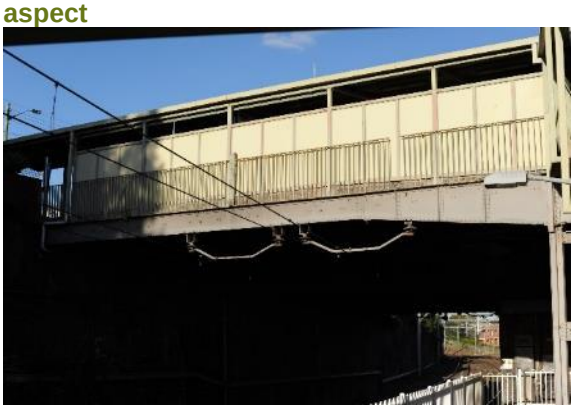


Figure 196: View of stairs to Platform 1, north-west aspect

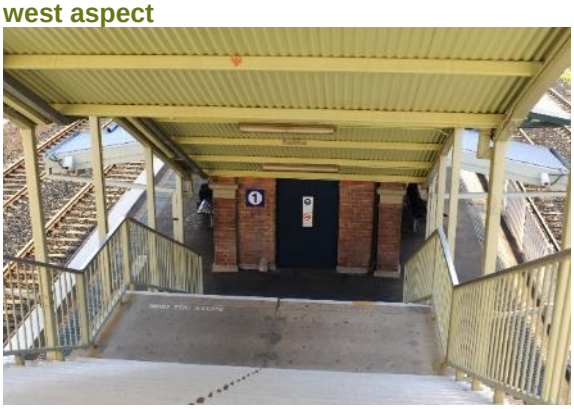


Figure 197: View of overhead booking office, west aspect

Figure 198: View of signal box, south aspect

Canterbury (Cooks River) Underbridge

The bridge was constructed in 1916 by day labour and designed by NSW Government Railways. It is a three span, double track, brick arch railway bridge, with 16.16 metres clear spans between intermediate foundations and abutments (Figure 199 to Figure 202). The arches are semi-circular in elevation with plain brick spandrel walls and stone coursing above the crown of the arches. The bridge is in good condition with some minor cracking and staining of the brickwork.

Figure 199: View of railway corridor, west aspect

Figure 200: View of railway corridor with brick walls of underbridge, west aspect

Figure 201: View of underbridge with brick arches, west aspect

Figure 202: View of underbridge, west aspect

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

The bridge is located on the Bankstown Line and is adjacent to the 1916 brick arch Canterbury (Cooks River) Underbridge that is part of the goods line. The original bridge was constructed in 1895. The bridge directly adjoins the structure of the 1916 brick underbridge. The existing bridge is a replacement bridge to the original 1895 bridge which was planned with a similar structure to the original but with welded steel deck girders and precast concrete units on top. It was designed by McMillan Britton & Kell and the work was undertaken in 1993.

Today the bridge has three sets of iron piers with riveted cross beams in between brick abutments (Figure 203, Figure 204). It has a steel girder with concrete top and access walkway along the south side. The bridge was refurbished in 1993, however it retains the original piers and abutments. The bridge is in good condition.

Figure 203: View of Canterbury (Cooks River) Underbridge - Main Line, north-east aspect (Sydney trains)

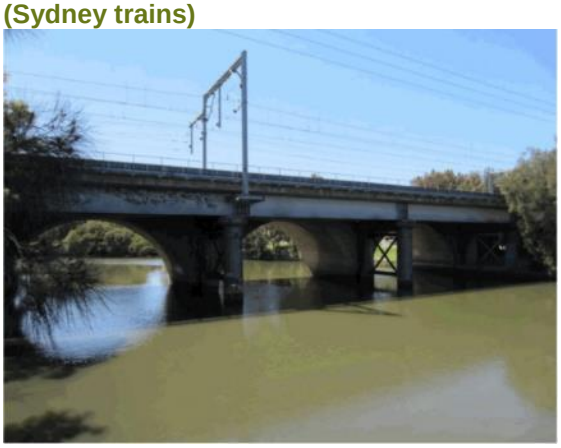


Figure 204: Close up view of underbridge structure, north-west aspect (Sydney trains)

6.4.3 Description of elements

Canterbury Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 44: Elements of Canterbury Station Group

Elements	Date	Description	Condition	Significance
Platform 1	1895	Platform 1 has an asphalt surface with its original brick face and a concrete edge. The northern or 'goods' side of this platform is constructed in the same manner.	Generally good	High
Platform building, platform 1 (Type 11) [119]	1895	External: Rectangular polychromatic face brick building with gabled roof and surrounding cantilevered awning clad in corrugated roof sheeting. The face brick is in stretcher bond, with dark brick walls and lighter salmon coloured bricks forming a dado, framing the upper half of the windows and doors and with a diamond pattern dentil course at the high level. The building is eight bays in length, with the bays defined by engaged brick piers which coincide with the awning brackets. Original chimneys with cement mouldings and terracotta flues remain but have been painted. The cantilever awning is on filigreed steel brackets supported on decorative cement capped brick engaged piers and bolt fixings to the station building brick walls. The soffit lining is the underside of the corrugated steel roof fixed to intermediate exposed purlins. There is a decorative timber moulding at the junction with the brick wall. The canopy returns around the western end of the building but not the eastern or stair access end. The awning edges are finished with a decorative timber boarded valance. The end canopy and timber valance are not original but constitute a sympathetic addition to the building. The external walls rise from a projecting brick plinth (now painted) with a decorative two part cement dado moulding which frames the salmon brick dado and is continuous	Generally good	Exceptional

[119] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		between door and window openings. Decorative cement window and door frames rise above the dado moulding, each with a decorative keystone. The original window and door openings have segmental arches and the windows feature a decorative moulded cement sill. The original timber windows were double hung with a double paned lower sash and a multi-paned upper sash featuring coloured glass. Much of the original coloured window glass remains as well as the original fanlights above the door openings. The doors were timber panelled. The end brick gables feature a louvre within a round brisk window frames in salmon coloured voussoir shaped bricks with four cement keystones. Internal: The building comprises a booking hall entered by a set of double doors at the bottom of the stairs; a booking office; station master's room; general waiting room; ladies waiting room and ladies toilet, a lamp room and men's toilet. The internal usage has now changed, and the toilets have modern fitouts.		
Platform 2	1895	Platform 2 has an asphalt surface with its original brick face and a concrete edge. The northern or 'goods' side of this platform is constructed in the same manner.	Generally good	High
Platform building, platform 2 (Type 11) [120]	1915	External: Rectangular face brick building with gabled corrugated steel roof and integral shallower sloped cantilevered awning. The face brick is in stretcher bond. The building is four bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. The original chimney with cement mouldings and terracotta flue remains. The cantilever awning is on standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. The soffit lining is the underside of the corrugated steel roofing fixed to intermediate exposed purlins. There is a decorative timber moulding at junction with brick wall. Vertical timber boards form valances at each end of awning. The external walls rise from a projecting brick plinth three/four courses high with a decorative dado moulding run in cement which is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash featuring coloured glass, with glass louvres in the toilet windows. The original window glass as well as the upper glazing bars has been removed from all but one window. Original door openings featured fanlights matching the upper window sashes. All the original timber panelled doors have been removed. Internal: The building comprises a general waiting room; ladies room and ladies toilets and men's toilets. The internal usage has now changed and the toilets have	Generally good	High

[120] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		modern fitouts and finishes. The waiting room and ladies room have original ripple iron ceiling, ceiling rose and plaster wall finishes.		
Signal box	1915	External: Canterbury signal box is located beside the Bankstown suburban line, in the Canterbury Station Catchment. It is a two storey timber framed structure clad in 'checked and chamfered' weather boards. It has a hipped, galvanised corrugated iron roof with wide eaves on all sides. The first floor (or operating level) has wood framed, sliding windows on three sides with a blank rear wall. On the eastern end of the building there is a landing, incorporating an enclosed toilet. The landing extends past the front of the building over a public walkway to a flight of metal stairs. The ground floor incorporates the interlocking room and relay room. The interlocking room has four windows in the front wall. In the rear is the relay room, featuring four windows in the rear wall. The eastern extension is flat roofed and is constructed of precast concrete panels between exposed verticals simulating timber weatherboards. There is one door at the eastern end of this extension (2009). Internal: The interior walls and ceiling of the first floor are lined with wall boards, and the timber floor is covered in linoleum. On the ground floor, the interlocking room is unlined, and the long and narrow lined relay room houses signalling relays which control the operation of signalling circuits.	The exterior is in reasonably good condition with some peeling of paint. A fire has caused some internal damage to the rear wall and ceiling of the operating level and there is evidence of past white ant activity (Jeff Moonie, 2000).	High
Footbridge	1915, 1947	Haunched steel beam girder design consists of tapered cantilevers bearing on platform trestles and brick piers on each side support shallow beams over the railway tracks. The footbridge has been extended in 1947. Its timber deck has been covered with concrete and concrete treads replace the original timber steps. The footbridge and stairs have been roofed over and the deck partly enclosed in lightweight panels.	Good	Moderate
Overbridge	c.1917	The overbridge consists of steel girders supporting a jack arched brick and concrete deck. The girders span the up and down lines supported on concrete and brick abutment walls. The parapet walls are brick.	Good	High
Overhead booking office and concourse	Late 1980s	The original timber clad overhead booking office has been demolished and replaced by a new steel framed metal hipped roof structure.	Good	Little
Canopies	Late 1980s	New steel framed and metal roof clad canopies have been erected over the access stairs to the island platform and at the eastern end of the wayside station building, as well as the access ramp.	Good	Little

6.4.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHR and SHI listings.

Table 45: Statements of significance for Canterbury Station Catchment

Item	Statement of Significance	Listing
Canterbury Railway Station Group	*Canterbury Railway Station possesses historical significance as it is a station on the Sydenham to Bankstown Line which was constructed to relieve congestion on the Main South Line as well as to encourage suburban development and the growth of agriculture in the late 19th and early 20th century. The main platform building represents the period of transition from the boom time of the 1880s to the standardisation of NSW railway building design from the 1890s onwards.* *Canterbury Railway Station is significant at the state level as the platform 1 Building demonstrates the high level of aesthetic design of the pre-1900 standard railway buildings, which included the use of polychromatic brickwork, decorative dentil coursing, ornate awning brackets and carved bargeboards. This platform building is relatively intact and is representative of a small group of such ornate platform buildings including Marrickville and Belmore on the Bankstown Line.* *The Canterbury signal box is of historical significance as it is representative of the development of railway signalling technology in the first decades of the 20th century. As it was is [sic] intact internally it is capable of providing information about the workings of a signal box of this era.*	SHR
Canterbury (Cooks River) Underbridge	*The Cooks River Underbridge is of local significance as the longest span brick arch rail viaduct within the NSW rail network, with clear spans of 16.16m between piers, demonstrating the technical limits for this construction type. The bridge is part of the original infrastructure for the Metropolitan Goods Line, one of the most significant and effective railway projects in New South Wales during the 20th century, which allowed freight trains to traverse the metropolitan area independent of the passenger train network. It is a good representative and early example of brick arch construction in the style of elliptical elevation, typical of this era of underbridge construction (1884 – 1924).*	SHI
Canterbury (Cooks River/Charles St) Underbridge – Main Line	*The bridge over Cook's River at Canterbury is historically significant as a major piece of infrastructure constructed as part of the Bankstown Line in 1895. At the time of construction it was the largest bridge on the line. It is technically significant for its 1890s construction methodology and materials. It still retains its original piers and abutments*	SHI

6.4.5 Heritage impacts

Direct impacts

Canterbury Railway Station Group

The table below provides an assessment of the direct impacts of the 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 46: Assessment of direct impacts for Canterbury Railway Station Group

Element	Significance	Proposed action	Assessment of impact	Impact summary
Platform 1 (1895)	High	Removal; platform to be rebuilt in straight alignment; covered concourse, access stairs, lift shaft, platform canopies and	The platform would be removed to allow for the construction of a new platform to accommodate the straight rail lines required for the Metro trains. This would result in the complete loss of the fabric of the platform including the original brick face and curved layout. This would have a major impact on the original platform. The new covered concourse, access stairs, lift shaft, platform canopies and platform screen doors would	Major

Element	Significance	Proposed action	Assessment of impact	Impact summary
		platform screen doors to be anchored on new platform	be anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 1 to be reconstructed in a straight alignment would result in a major impact on the station group.	
Platform building, platform 1 (Type 11) (1895) [121]	Exceptional	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. If these considerations are implemented, it is expected this aspect of the project would have a minor impact on the heritage values of the building and station overall.	Minor
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	The platform would be removed apart from for the structure underneath the heritage building to allow for the construction of a new platform to accommodate the straight rail line alignment required for the Metro trains. This would result in the complete loss of the fabric of the platform including the original brick face and curved layout. This would have a major impact on the original platform. The new covered concourse, access stairs, lift shafts, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. The demolition of Platform 2 to be reconstructed in straight line alignment would result in a major impact on the station group.	Major
Platform building, platform 2 (Type 11) (1915) [122]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. This aspect of the project would have a minor impact on the heritage values of the building and station overall.	Minor

[121] See Section 2.2.6 Station building types
[122] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
Signal box (1915)	High	Retention	The retention of the signal box is a positive heritage outcome in the context of the project.	Neutral
Footbridge (1915, 1947)	Moderate	Removal for replacement with new covered concourse including access stairs and lift shafts	It is proposed to remove the footbridge. The footbridge was assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy.[123] This would result in a major impact on the footbridge and a moderate impact on Canterbury Railway Station overall.	Moderate
Overbridge (c.1917)	High	Retention and upgrade	Maintenance and protection works are proposed for the bridge. This would involve removal and replacement of the brick parapets. The project would result in a moderate impact on the heritage values of the overbridge and station overall.	Moderate
Overhead booking office and concourse (Late 1980s)	Little	Removal for replacement with new covered concourse including access stairs and lift shafts	It is proposed to remove the overhead booking office. This would result in a neutral impact on the station catchment. The overhead booking office is not identified as significant in the Sydney Trains Overhead Booking Office Conservation Strategy.	Neutral
Canopies (Late 1980s)	Little	Removal for replacement with new platform canopies	It is proposed to remove the canopies. This would result in a neutral impact on the station catchment.	Neutral

When considering cumulative impacts, it is assessed that the project would result in a moderate direct impact on Canterbury Railway Station Group overall.

Canterbury (Cooks River) Underbridge

Maintenance and protection works are proposed for the bridge. This would include utility modifications/relocations, asphalt removal and reapplication, waterproofing, removal and replacement of parapets, line marking, and adjusting fencing, traffic barriers and tie-ins. The removal and replacement of the parapets would have a moderate direct impact on the underbridge. Direct impacts of the works onto Canterbury (Cooks River) Underbridge would be moderate.

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

Maintenance and protection works are proposed for the bridge. This would include utility modifications/relocations, asphalt removal and reapplication, waterproofing, removal and replacement of parapets, line marking, and adjusting fencing, traffic barriers and tie-ins. The removal and the replacement of the parapets would have a minor direct impact on the underbridge. Direct impacts of the works onto Canterbury (Cooks River/Charles St) Underbridge – Main Line would be minor.

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

Visual impacts

Canterbury Railway Station Group

Medium-scale ribbon canopies and platform screen doors would be located along the reconstructed platforms. The contemporary nature of the new concourse, canopies and station buildings would be suitable within the present context as a contradistinctive design to be easily differentiated from the heritage components of the site. This would not have a significant impact on internal views. The ribbon canopies from the concourse to the west would be elevated enough to allow views from the concourse onto the two retained significant platform buildings. The canopies would not continue above these structures, further facilitating the views from the concourse and lifts. Although the station currently has an open layout and setting, the existing canopies over the access stairs from the concourse obscure views, and these would be removed. Views are not currently available from the walled concourse. New canopies on the western side of the station away from the heritage buildings. New station buildings would be located at a notable distance at the western side of the station of Platform 2. The new Metro concourse would have a moderate visual impact on Canterbury Railway Station.

The removal of the footbridge, the integrity of which has been impacted over time, would result in a moderate visual impact on the station catchment. The removal of the overhead booking office is of little significance and would not result in a negative visual impact on the station catchment. The removal of the existing footbridge and overhead booking office would enlarge views onto the heritage buildings from Canterbury Road and result in a positive heritage outcome. Such views would also be available from the new Metro concourse. Enhanced views on the heritage buildings of exceptional and high significance would result in a positive visual impact.

The construction of the covered activation area from Canterbury Road would be located at street level in the location of the current pedestrian ramp and would be visible from the platform buildings. Views towards this area are not of high significance, and views towards the heritage buildings would be opened. This would have a negligible visual impact on Canterbury Railway Station.

The removal of the brick parapets of the overbridge would have a moderate visual impact to the current view of the bridge. The platform screen doors along the platforms would rise to human height 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.

When considering cumulative impacts and balancing the positive impacts in relation to removal of intrusive elements and high quality design of the new metro layer, it is assessed that the project would result in a moderate visual impact on Canterbury Railway Station Group.

Canterbury (Cooks River) Underbridge

Maintenance and protection works are proposed for the bridge. The removal and replacement of the parapets would have a moderate visual impact on the underbridge. The heritage item is located approximately 200m to the northwest of Canterbury Railway Station. Current views on the station are very limited. The proposed redevelopment of Canterbury Railway Station would have a negligible visual impact on the underbridge. New Metro tracks and overhead wiring 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 minor.

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

Maintenance and protection works are proposed for the bridge. The removal and replacement of the parapets would have a moderate visual impact on the underbridge. The heritage item is located approximately 200m to the northwest of Canterbury Railway Station, adjacent to the Canterbury (Cooks River) Underbridge. Current views on the station are very limited. The proposed redevelopment of Canterbury Railway Station would have a negligible visual impact on the underbridge. Any new Metro tracks and overhead wiring 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.

Old Sugarmill

The Old Sugarmill is located approximately 30m south of the railway corridor and 270m 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 new Metro tracks and overhead wiring 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 replace the existing Church St/Hutton St footbridge with a new footbridge with fully enclosed safety screen and demolition of the redundant pier on the down side. The replacement footbridge is unlikely to significantly alter the aesthetics of the existing environment and visual impacts of the new bridge on the heritage item are anticipated to be negligible.

Visual impacts on the Old Sugarmill would be negligible.

Inter-War Hotel (former Hotel Canterbury)

The Inter-War Hotel is located approximately 45m 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 removal of the overhead booking office would not significantly impact the heritage item as the booking office is a c1980s structure of little significance. Any views on the new Metro tracks and overhead wiring 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.

Federation Post Office Building (former Canterbury Post Office)

The post office is located approximately 15m 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 removal of the overhead booking office would not significantly impact the heritage item as the booking office is a c1980s structure of little significance. Any views on the new Metro tracks and overhead wiring 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.

Electricity Substation no. 275

The electricity substation is located approximately 10m north of the railway corridor and 210m 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 new Metro tracks and overhead wiring 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 replace the existing Church St/Hutton St footbridge with a new footbridge with fully enclosed safety screen and demolition of the redundant pier on the down side. The replacement footbridge is unlikely to significantly alter the aesthetics of the existing environment and visual impacts of the new bridge on the heritage item are anticipated to be negligible.

Visual impacts on the Electricity Substation no. 275 would be negligible.

Potential direct impacts

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

Table 47: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Canterbury Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Canterbury (Cooks River) underbridge	Vibration levels would be under the cosmetic damage screening level.	Negligible
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Vibration levels would be under the cosmetic damage screening level.	Negligible
Old Sugarmill	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Inter-War Hotel (former Hotel Canterbury)	Vibration levels would be under the cosmetic damage screening level.	Negligible
Federation Post Office Building (former Canterbury Post Office)	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Electricity substation no. 275	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.4.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 48: Summary of Heritage Impacts – Canterbury Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of the Platform 2 building with opportunity for positive impacts • Retention of the Signal Box and the overbridge • Views on the Platform 2 building from the new concourse • Neutral to negligible visual impacts on heritage items in the vicinity • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Demolition of elements of high significance within the station group: the two original 1894 platforms • Removal of the footbridge of moderate significance within the station group • Moderate direct and visual impacts on the station catchment due to the removal of the original platforms and additional of new elements

6.4.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Canterbury Station Catchment and the 25-metre buffer zone:

Canterbury Railway Station Group

The direct impacts of the project on Canterbury Railway Station would be moderate. All elements of exceptional and high significance within the station catchment would be retained apart from the original brick platforms and their curved layout. The Platform 1 building of exceptional significance, the Platform 2 building, the Signal Box and the overbridge of high significance would be retained for future use. This is anticipated to have a minor impact and present opportunity for a positive outcome. Views onto the platform buildings would be enhanced from the Canterbury Road overbridge and would also be appreciated from the new Metro concourse. This would result in a positive visual impact. The removal of the original curved platforms would result in a major direct and visual impact. The removal of the footbridge would result in moderate direct and visual impacts. The new Metro concourse would create a contradistinctive relationship with the remaining heritage elements. The concourse would be located on the western side of the station at a notable distance from the Platform 1 building and a setback from the Platform 2 building. The new concourse would have a moderate visual impact overall. The construction of the covered activation area would have a negligible visual impact. The removal of the brick parapets of the overbridge would have a moderate direct impact. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

The impacts of the removal of the original 1895 brick platforms and 1915 footbridge within Canterbury Railway Station would be balanced by the retention of all other significant elements including the 1895 platform building, the 1915 platform building and overbridge. This would enable the station to conserve its historic, aesthetic and representativeness significance. The 1895 platform building is an excellent example of its type and would continue to demonstrate the heritage values of the station as one of the original railway stations on the Sydenham to Bankstown Line. The retention of the 1915 platform

building and overbridge would retain two elements of the subsequent layer of development of the station.

When assessed cumulatively, the level of heritage impact of the project on Canterbury Railway Station Group would be moderate.

Canterbury Station is State significant under the following criteria: historical and aesthetic significance, research potential, rarity and representativeness.

The SHR statement of significance discusses the historical significance of the station, particularly in regard to the significant station buildings which have historical and aesthetic significance at a State level. The buildings demonstrate late nineteenth century railway design and are representative of a small group of ornate station structures. Both platform buildings would be retained.

The historical significance of the station is also in relation to its use and development as a transport hub. Canterbury Station has had previous intervention, particularly changes as part of the development of the Metropolitan Goods Line in 1915. The introduction of the Metro design layer would continue this evolution of the station to respond to transport requirements.

Research potential and rarity are discussed particularly in terms of the signal box, which will be retained. Representativeness applies to the platform buildings and signal box which demonstrate good, intact examples of their types. All buildings to in the statement of significance will be retained.

Based on the historical significance of the station and the heritage values of the retained buildings, the heritage item would continue to meet the threshold for State significance.

Canterbury (Cooks River) Underbridge

The direct impacts of the project on the Canterbury (Cooks River) Underbridge would be moderate. Works to the Canterbury (Cooks River) Underbridge and in its vicinity would result in minor visual impacts. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Canterbury (Cooks River) Underbridge would be moderate. The heritage item would continue to meet the threshold for local significance.

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

The direct impacts of the project on the Canterbury (Cooks River/Charles St) Underbridge – Main Line would be minor. Works to the Canterbury (Cooks River/Charles St) Underbridge – Main Line and in its vicinity would result in minor visual impacts. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Canterbury (Cooks River/Charles St) Underbridge – Main Line would be minor. The heritage item would continue to meet the threshold for local significance.

Old Sugarmill

The direct impacts of the project onto the Old Sugarmill would be neutral. The proposed works in the vicinity would result a negligible visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Old Sugarmill would be negligible. The heritage item would continue to meet the threshold for local significance.

Inter-War Hotel (former Hotel Canterbury)

The direct impacts of the project onto the Inter-War Hotel would be neutral. The proposed works in the vicinity would result in a neutral visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Inter-War Hotel would be neutral. The heritage item would continue to meet the threshold for local significance.

Federation Post Office Building (former Canterbury Post Office)

The direct impacts of the project onto the Federation Post Office Building would be neutral. The proposed works in the vicinity would result a neutral visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Federation Post Office Building would be neutral. The heritage item would continue to meet the threshold for local significance.

Electricity Substation no. 275

The direct impacts of the project onto the Electricity Substation no. 275 would be neutral. The proposed works in the vicinity would result a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Electricity Substation no. 275 would be negligible. The heritage item would continue to meet the threshold for local significance.

6.5 Campsie Station Catchment

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

6.5.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 49: Heritage items within Campsie Station Catchment and buffer zone

Item	Suburb	Significance	Listing
Within project area			
Campsie Railway Station Group	Campsie	Local	RailCorp S.170 Heritage and Conservation Register (4801101) Canterbury LEP 2012 (I40)
Within buffer zone (outside project 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)

Figure 205: Aerial map showing heritage items within study area: Campsie

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Campsie

6.5.2 Existing environment

Campsie Railway Station Group

Campsie Station was designed and built by NSW Government Railways between 1895-1915. Campsie Station consists of one wayside platform on the south and an island platform on the north, both with original station buildings (Figure 206, Figure 207). Passenger rail only uses the south side of the island platform, with the Metropolitan Goods Line running on the north. Most of the overhead booking office and the access stairs are modern, with part of the original 1915 booking office being adapted (Figure 208 to Figure 211). The station is accessed from the Beamish Street overbridge (Figure 212 to Figure 215). Beamish Street is the main commercial shopping strip in Campsie.

The station was opened in 1895 with a timber waiting shed on an island platform with the down line on its south side and the up line to the north in the present position of the Goods Line. A new booking office was constructed in 1905 and the platform extended in 1906.

The present station layout and station buildings date from 1915 and were constructed for the opening of the goods lines in 1916. The new layout featured an overhead timber booking office on a steel girder footbridge with stairs to the platform, a new brick station building on the existing island platform, and a new side (down) platform to the south with a brick station building. The new buildings replaced all previous platform structures. The brick and stone retaining wall on the south was also constructed at this time to accommodate the new down platform. A new jack-arch overbridge also replaced a previous timber bridge to carry Beamish Street across the four railway lines.

A northern side platform was also constructed in 1916 for the goods line and was used by railway employees so that they could travel to and from the Enfield/ Chullora workshops area. However, the existing concrete platform and stairs date from c.1950. An overhead parcels office was constructed c.1950 on the footbridge.

Part of the TAP program at Campsie included a new overhead concourse. Remnant elements of the original booking office building were retained within the concourse and a Dutch gable roof profile was constructed at the street elevation. The original booking hall and the northern section of the building were removed; as were the ticket windows, ticket collector's cabin; and the majority of doors and windows. [124]

Figure 206: View of platforms, east aspect

Figure 207: View of Platform 1 building, west aspect

[124] Simpson Dawbin Associates 2002; OEH 2013 *Campsie Railway Station Group.*

Figure 208: View of station entrance, south aspect

Figure 209: View of overhead booking office, east aspect

Figure 210: View of stairs and canopy, south aspect

Figure 211: View of stairs, north aspect

Figure 212: View of overbridge, west aspect

Figure 213: View of overbridge, north-west aspect

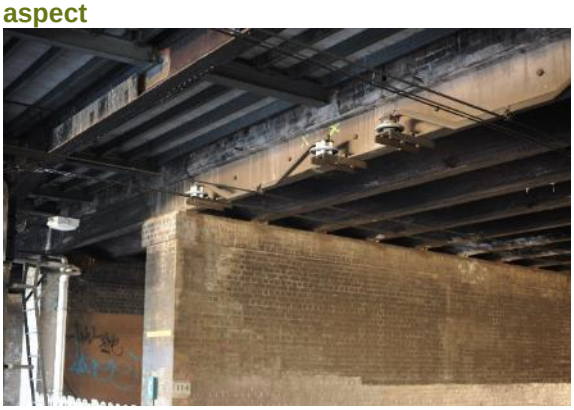


Figure 214: View of overbridge and stone retaining wall, west aspect

Figure 215: View of stone retaining wall, south-east aspect

6.5.3 Description of elements

Campsie Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 50: Elements of Campsie Station Group

Elements	Date	Description	Condition	Significance
Platform 1	1894	Platform is brick faced with asphalt surface. Platform 1 is an island platform arrangement although the south side of the platform is not used.	Generally good	High
Platform 2	1894	Platform is brick faced with asphalt surface. Platform 2 is a wayside platform.	Generally good	High
Platform building, platform 1 (Type 11) [125]	1915	External: Rectangular face brick building with gabled roof and integral shallower sloped single cantilevered awning. The face brick is in stretcher bond and has been painted. The building is six bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. There is a further open veranda bay at the eastern end. The original chimneys with cement mouldings and terracotta flues remain. The northern cantilever awning on the goods line side has been removed. The remaining southern cantilever awning has standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. The soffit lining is corrugated steel fixed to intermediate exposed purlins and follows the roof slope. There is a decorative timber moulding at the junction with the brick wall. Vertical timber boards form a valance at each end of the awning. On the eastern end of the building the vertical boarding fills the whole width of the gable end and the roof is supported on two timber posts to form an open veranda for one bay. The awning roof as for the main roof is corrugated steel. The external walls rise from a projecting brick plinth three/four courses high with a decorative dado moulding run in cement which is continuous between door and	Good	High

[125] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		window openings. Decorative cement window and door frames rise above the dado moulding. The northern side of the building reflects the same detailing. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash featuring coloured glass. Much of the original coloured window glass as well as the upper glazing bars has been removed and replaced with vandal-proof fibreglass sheeting. Original door openings featured fanlights matching the upper window sashes. All the original timber panelled doors have been either removed or modified, and the original thresholds have also been removed. Internal: The building comprises a station master's office; general waiting room; ladies room and ladies toilets, a store and men's toilets. The internal usage has now changed and the toilets have modern fitouts and finishes. Original plaster wall finishes, ripple iron ceilings, and timber cornices remain as well as ceiling roses in the general waiting room, the ladies waiting room, and ladies toilets. The men's toilets retain the original painted brick walls but the ceiling has been replaced.		
Platform building, platform 2 (Type 11) [126]	1915	External: Rectangular face brick building with gabled corrugated steel roof and integral shallower sloped single cantilevered awning. The face brick is in stretcher bond and has been painted. The building is four bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. The original chimney with cement mouldings and terracotta flue still remains. The cantilever awning is on standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. The soffit lining is the underside of the corrugated steel roof and is fixed to intermediate exposed purlins. There is a decorative timber moulding at junction with brick wall. Vertical timber boards form a valance at each end of awning. The external walls rise from a projecting brick plinth three/four courses high with a decorative dado moulding run in cement which is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding. The rear or southern side of the building against the rock cutting reflects the same detailing. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash which featured coloured glass. The original window glass as well as the upper glazing bars has been removed in several cases. Most of the windows now contain diamond pattern vandal proof fibreglass sheeting and/or hardboard coverings. The original door openings featured fanlights matching the	Generally good	High

[126] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		upper window sashes. One original timber panelled door has been replaced with a modern flush door. Internal: The building comprises a general waiting room; ladies room and ladies toilets a store and men's toilets. The waiting room and ladies waiting room retains the original plaster wall finishes, ripple iron ceiling, plaster ceiling rose and timber floor. The ladies toilets retain the original timber partitions and fittings but have not been used in many years. The men's toilets have a modern fitout but the original brick painted wall finish remains.		
Concourse including overhead booking office, Parcels Office and footbridge	2002 1915 c.1950s 1915,1947	The modern building incorporates all functions within it. It consists of a large concourse, new access stairs and canopies, a ticket office, access lifts to platforms 1 and 2, new public toilets and retail areas on Beamish Street. The existing structure has been built on the footprint of the original 1915 footbridge and stairs. Like the original footbridge the current concourse is located off the Beamish Street overbridge such that its eastern edge is directly accessible from the street. The overhead booking office was expanded and extensively modified c.1950s. Parts of the 1915 booking office and 1950s parcels office have been incorporated within the new building and serve as retail shops. These parts are identifiable by the retained original fabric including ripple iron ceilings, weatherboards and ceiling roses. However, these sections have also been modified and reconfigured with new glazing and shopfront designed to simulate the original detailing. This part of the building is covered by a corrugated steel half gabled roof which is juxtaposed with a corrugated steel gabled station entry. The western end of the concourse looks out onto the station through a clear glass and metal framed wall, which extends all along the length of the concourse. The entire area is roofed by a steel space frame structure covered with metal deck roof sheeting. The northern end of the concourse is connected to the 1947 footbridge (which was an extension of the 1915 footbridge), which comprises of a riveted steel plate girder substructure and latticed steel framing. This section of the footbridge like the original footbridge had timber floor construction and timber steps leading down to the disused platform 3 although it currently has a concrete slab and steps. Retail shops bordering the north-eastern corner of the concourse along Beamish Street date from the c.1950s.	Good	Little Moderate Moderate
Overbridge	1915	The Beamish Street overbridge crosses over the eastern end of the station and runs parallel to the footbridge. The structure is a steel jack-arch overbridge which comprises of filled in arched brickwork between steel web-girders, supported by central brick piers and side brick and stone abutments.	Good	High
Footbridge	1947, 2002	The footbridge is a steel beam girder design. It has been heavily modified and subsumed by the modern concrete concourse. It was a typical footbridge type that is still well represented in the Sydney Trains network.	Good	Little

Elements	Date	Description	Condition	Significance
Platform 3	1916, c.1950	Platform 3 is a disused wayside platform. Platform 3 was originally constructed in 1916 as a brick face platform. It was replaced by the existing concrete platform c.1950.	Generally good	Moderate
Platform canopies, platforms 1- 3	2002	Steel framed canopies with corrugated steel roofs were constructed over the new stairs and to the existing station buildings.	Good	Little
Landscape/natural features	1915	Cambered stone and brick retaining wall to the east of the wayside platform building.	Generally good	High

6.5.4 Statements of significance

The following statement of significance for the heritage item located within the project area is reproduced from the SHI listing.

Table 51: Statements of significance for Campsie Station Catchment

Item	Statement of Significance	Listing
Campsie Railway Station Group	*Campsie Railway Station has local significance as a station which has its origins in the 1890s expansion of the railways undertaken to encourage agriculture and suburban growth in the late 19th and early 20th century. The existing station layout, platform buildings and overbridge date from 1915 and demonstrate the ongoing expansion of the railways in the early 20th Century and represent the period of suburban development particularly the War Service residential development that took place during the interwar period along this line. The station is associated historically with the movement of railway employees to and from the Enfield/Chullora workshops area. The extant largely intact 1920s platform buildings and the Beamish Street overbridge are representative of railway structures of this period*	SHI

6.5.5 Heritage impacts

Direct impacts

Campsie Railway Station Group

The table below provides an assessment of the direct impacts of the 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 52: Assessment of direct impacts for Campsie Railway Station Group

Element	Significance	Proposed action	Assessment of impact	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	The platform would be removed apart from the structure underneath the heritage building to allow for the construction of a new platform to accommodate the straight rail line alignment required for the Metro trains. This would result in the almost complete loss of the fabric of the platform and of the original curved layout of the station platforms. This would have a major impact on the platform. The new covered concourse, access stairs, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric.	Major

Element	Significance	Proposed action	Assessment of impact	Impact summary
			The complete demolition of Platform 1 to be reconstructed in straight lines would result in a major impact on the station group.	
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	The platform would be removed apart from the structure underneath the heritage building to allow for the construction of a new platform to accommodate the straight rail line alignment required for the Metro trains. This would result in the almost complete loss of the fabric of the platform and of the original curved layout of the station platforms. This would have a major impact on the platform. The new covered concourse, access stairs, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 2 to be reconstructed in straight lines would result in a major impact on the station group.	Major
Platform building, platform 1 (Type 11) (1915) [127]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. The project would have a minor impact on the heritage values of the building and station overall.	Minor
Platform building, platform 2 (Type 11) (1915) [128]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. The project would have a minor impact on the heritage values of the building and station overall.	Minor

[127] See Section 2.2.6 Station building types
[128] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
Concourse including overhead booking office and Parcels Office	Little (Concourse) Moderate (Overhead booking office and Parcels Office)	Retention and partial removal for upgrading	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 refurbished. It is proposed to remove the 1915 overhead booking office, the c.1950 Parcels Office, and the remaining concourse structures between the gateline and Beamish Street. The overhead booking office scored four out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy [129]. Remnant elements of the building are wholly incorporated into the modern overhead concourse. Due to the integrity of the early elements having been greatly compromised overtime, their removal would result in a moderate heritage impact on Campsie Railway Station overall.	Moderate
Overbridge (1915)	High	Retention and upgrade	The structure is proposed to be retained and upgraded for ongoing use. The removal of the concourse structures between the gateline and Beamish Street and the construction of a new deck would not impact on the significant fabric of the overbridge, which consists of the arched brickwork between steel web-girders, brick piers, and side brick and stone abutments. It is expected this aspect of the project would result in a minor impact on the heritage values of the overbridge and station overall.	Minor
Footbridge (1947, 2002)	Little	Retention	It is proposed to retain the footbridge. The footbridge was assessed as having little significance as per the Railway Footbridges Heritage Conservation Strategy. [130] 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 Campsie Railway Station.	Neutral
Platform 3 (1916, 1950)	Moderate	Removal	It is proposed to remove the platform. This would result in a moderate impact on the station catchment.	Moderate
Platform canopies, platforms 1- 3 (2002)	Little	Removal	It is proposed to remove the platform canopies. This would result in a neutral impact on the station catchment.	Neutral

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

Element	Significance	Proposed action	Assessment of impact	Impact summary
Landscape / natural features (n/a,1915)	High	Removal to accommodate new covered concourse, access stairs and lift shaft	It is proposed to remove the cambered stone and brick retaining wall to accommodate the new covered concourse, access stairs and lift shaft. This would result in a major impact on the wall. However, as the wall's significance is mainly in relation to its aesthetic qualities rather than its purpose or historical significance, this would result in a moderate impact on the station catchment overall.	Moderate

When considering cumulative impacts, it is assessed that the project would result in a moderate direct impact on Campsie Railway Station Group overall.

Visual impacts

Campsie Railway Station Group

The proposed canopy above the concourse would rise to a similar height as the existing shopfronts on Beamish Street. Three ribbon canopies would extend from the concourse to cover access to the platforms. The canopies would end at least two metres from the significant heritage buildings on Platforms 1 and 2. Two ribbon canopies would extend east of the heritage buildings on Platforms 1 and 2 along the platforms. The height of the canopies would allow views of the heritage structures to be retained from the concourse.

The contemporary nature of the canopies and station buildings would be suitable within the present context as a contradistinctive design to be easily differentiated from the heritage components of the site. The scale and height of the proposed canopy structure, the footprint of the new platform building as well as the platform canopies and platform screen doors would add considerable bulk to the originally low-scale station catchment. It is noted that the station is located in an embankment below street level.

The upgraded Metro concourse would be located to the east of the retained platform building. Although the height and open layout of the upgraded concourse would allow views onto the retained platform buildings from the concourse, the upgraded structure would be visually dominant within the station group. Overall, the visual impact of the upgraded concourse on the setting of the railway station would be moderate.

The upgraded concourse would replace elements of little or moderate significance within the station group. Early elements of the station such as the 1915 overhead booking office and the c.1950 Parcels Office have been detractingly modified overtime and can no longer be easily appreciated in their existing context. Their integrity has been greatly impacted overtime and they no longer make a significant contribution to the station group. Their removal would result in a minor visual impact. The removal of the cambered stone retaining wall located along the wayside platform would result in moderate visual impacts.

The platform screen doors along the reconstructed platforms would rise to human height 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.

Overall, the proposed upgraded concourse and canopies would result in a moderate visual impact. Views onto the platform buildings would be allowed from the upgraded concourse. Views on the curved platforms, cambered stone and brick retaining wall would be fully lost. This would have a major impact. Loss of views onto impacted elements such as the overhead booking office and the

Parcels office would have a moderate impact. The platform screen doors would result in a moderate visual impact overall.

When considering cumulative impacts, it is assessed that the project would result in a moderate visual impact on Campsie Railway Station Group.

Federation commercial building–Coffill's Buildings

Coffill's Buildings is located approximately 30m north-east of the station entrance. The construction in the vicinity of Coffill's Buildings consists of new Metro tracks, the removal of shops along Beamish Street, new station canopy, and new station buildings such as lifts and the unpaid concourse. There is a direct visual connection between Coffill's Buildings and the station entrance. Any views on the new Metro tracks and overhead wiring would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. The removal of the shops along Beamish Street would open views up towards Coffill's Buildings from the south on Beamish Street and from South Parade. The new canopy and station buildings would be made in a proportional design to the existing and not impact on significant views to and from Coffills' Buildings. It is proposed to upgrade the existing Duck Street footbridge and provide a deflection wall for collision protection. 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 Coffill's Federation Commercial Building would be negligible.

Inter-War Commercial Building–Station House

Station House is located approximately 35m south-east of the station entrance. The construction in the vicinity of Station House consists of new Metro tracks, the removal of shops along Beamish Street, new station canopy to a height of approximately 5.25m above the current street level, and new station buildings such as lifts and the unpaid concourse. There is a direct visual connection between Station House and the station entrance. Any views on the new Metro tracks and overhead wiring would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. The removal of the shops along Beamish Street would open views up towards Station House from the north on Beamish Street and from North Parade. The new canopy and station buildings would be made in a proportional design to the existing and not impact on significant views to and from Station House.

Visual impacts on the Inter-War Commercial Building –Station House would be negligible.

Inter-War Court House (former) Campsie Court House

Campsie Court House is located approximately 10m north of the railway corridor and 240m west of the western end of the station platforms. The construction in the vicinity of the Court House consists of new Metro tracks. Current views towards the railway line are partially screened by vegetation. Any views on the new Metro tracks and overhead wiring 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 Lock Street overbridge and provide a deflection wall for collision protection. 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.

War Memorial Clock Tower

The War Memorial Clock Tower is located approximately 55m south of the station entrance. The construction in the vicinity of the clock tower consists of new station buildings and a new canopy

approximately 5.25m in height above the current street level. Current views towards the station are screened by commercial buildings along the north side of Anzac Mall. Changes to the station buildings would not impact views and vistas from the heritage item.

Visual impacts on the War Memorial Clock Tower would be neutral.

Federation house

The Federation House is located approximately 30m south of the railway corridor and 185m south-east of the station entrance. The construction in the vicinity of the Federation House consists of new Metro tracks and the construction of a new building along South Parade. Current views towards the railway line are partially screened by vegetation. Any views on the new Metro tracks and overhead wiring would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. The new building along South Parade would not impact on significant views to and from the heritage item. It is proposed to upgrade the existing Duck Street footbridge and provide a deflection wall for collision protection. 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.

Federation villa

The Federation villa is located approximately 30m south of the railway corridor and 130m south-east of the station entrance. The construction in the vicinity of the Federation villa consists of new Metro tracks and the construction of a new building along South Parade. Current views towards the railway line are partially screened by vegetation. Any views on the new Metro tracks and overhead wiring would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. The new building along South Parade would not impact on significant views to and from the heritage item. It is proposed to upgrade the existing Duck Street footbridge and provide a deflection wall for collision protection. 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.

Potential direct impacts

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

Table 53: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Campsie Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Federation commercial building– Coffill's Buildings	Vibration levels would be under the cosmetic damage screening level.	Negligible

Item	Potential direct impact assessment	Impact
Inter-War Commercial Building–Station House	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Inter-War Court House (former) Campsie Court House	Vibration levels would be under the cosmetic damage screening level.	Negligible
War Memorial Clock Tower	Vibration levels would be under the cosmetic damage screening level.	Negligible
Federation house	Vibration levels would be under the cosmetic damage screening level.	Negligible
Federation villa	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.5.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 54: Summary of Heritage Impacts – Campsie Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of elements of high significance within the station group including the two platform buildings and the overbridge • Potential for positive heritage impacts during retrofitting and upgrade works to the platform buildings to be retained • Minor direct and visual impacts on the overbridge • Neutral to negligible visual impacts on heritage items in the vicinity • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Removal of elements of high significance within the station group including Platforms 1 and 2 and the cumbered stone retaining wall along the wayside platform • Removal of elements of moderate significance including the overhead booking office, Parcels Office, and Platform 3 • Moderate direct and visual impacts overall

6.5.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Campsie Station Catchment and the 25-metre buffer zone:

Campsie Railway Station Group

The direct impacts of the project on Campsie Railway Station would be moderate. Elements of high significance within the station would be retained. The original 1894 platforms and the 1915 cambered stone retaining wall would be removed. This would result in moderate to major direct and visual impacts. Other elements to be removed are of little or moderate significance and would result in minor to moderate direct and visual impacts. The visual impact of the new development on the setting of the station would remain moderate overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

The removal of some elements of high and moderate significance within Campsie Railway Station would generally be balanced by the retention of the 1915 platform buildings and overbridge. This would enable the station to continue to demonstrate its historic and aesthetic significance, and representativeness. The integrity of some elements of the station has been greatly impacted over time so that its subsequent layers of development are no longer easily legible. The retention of the 1915 elements would allow the station to retain the historical values of the place as one of the original railway stations on the Sydenham to Bankstown Line. The two platform buildings are good examples of their type and would continue to contribute to the aesthetic significance of the station.

When assessed cumulatively, the level of heritage impact of the project on Campsie Railway Station Group would be moderate. Based on the historical significance of the station and the heritage values of the retained platform buildings, the heritage item would continue to meet the threshold for local significance.

Federation Commercial Building–Coffill's Buildings

The direct impacts of the project onto the Federation Commercial Building would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Federation Commercial Building would be negligible. The heritage item would continue to meet the threshold for local significance.

Inter-War Commercial Building–Station House

The direct impacts of the project onto the Inter-War Commercial Building–Station House would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Inter-War Commercial Building–Station House would be negligible. The heritage item would continue to meet the threshold for local significance.

Inter-War Court House (former) Campsie Court House

The direct impacts of the project onto the Inter-War Court House would be neutral. The proposed works in the vicinity would result in a neutral visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Inter-War Court House would be neutral. The heritage item would continue to meet the threshold for local significance.

War Memorial Clock Tower

The direct impacts of the project onto the War Memorial Clock Tower would be neutral. The proposed works in the vicinity would result in a neutral visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the War Memorial Clock Tower would be neutral. The heritage item would continue to meet the threshold for local significance.

Federation house

The direct impacts of the project onto the Federation House would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Federation House would be negligible. The heritage item would continue to meet the threshold for local significance.

Federation villa

The direct impacts of the project onto the Federation villa would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Federation villa would be negligible. The heritage item would continue to meet the threshold for local significance.

6.6 Belmore Station Catchment

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.

6.6.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 55: Heritage items within Belmore Station Catchment and buffer zone

Item	Suburb	Significance	Listing
Within project area			
Belmore Railway Station Group	Belmore	State	SHR (No. 01081) 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 project area)			
Federation House (former station master's cottage)	Belmore	Local	Canterbury LEP 2012 (I10)

The post-war bus shelter and public lavatories have been nominated for SHR listing as of 17 March 2016.

Figure 216: Aerial map showing heritage items within study area: Belmore

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Belmore

6.6.2 Existing environment

Belmore Railway Station Group

Belmore Station was designed and built by NSW Government Railways between 1895 and 1937. Belmore Station has a single island platform with the original platform building and a modified booking office and concourse with an access lift (Figure 217 to Figure 230). The platform is accessed directly via the modern stairs through the concourse from the overbridge on Burwood Road. Burwood Road is the main commercial shopping strip in the suburb.

Belmore is located on the Sydenham to Bankstown Line and was opened as the initial terminus station on 1 February 1895. Its initial construction name was Burwood Road but it was named Belmore on opening. The locality and station were named after the Earl of Belmore, Governor of New South Wales between 1868 and 1872.

The station was built when Belmore was still rural. The station layout featured a typical brick station building on an island platform. A station master's residence was also built in 1895 and is still extant at 346 Burwood Road, opposite the station, but is now in private ownership.

Prior to 1909 there were sidings for the storage of locomotives due to the railway terminating at Belmore. Suburban development intensified post World War I when many War Service homes were built in the area. Sidings at the station were extended during the 1920s for Belmore and Canterbury Councils for the purposes of unloading timber and other material for house construction and municipal works.

In 1925-26 a number of works were undertaken in preparation for electrification of the line including a substation and platform extension (Figure 231). The substation is now used as a signals training facility.

The overhead timber booking office at Belmore was constructed c.1937 at the top of the steps fronting onto the down side of Burwood Road to take the ticket selling and parcel functions. The change was also made to most other stations built to a similar configuration. The station master's office remained in the platform building for another forty years, but this function too has now moved to the street level building and the platform building remains largely unused.

Figure 217: View of overhead booking office, north aspect

Figure 218: View of station entrance, north aspect

Figure 219: View of station entrance, south aspect

Figure 220: View of platform building, east aspect

Figure 221: View of stairs, south aspect

Figure 222: View of stair canopy, east aspect

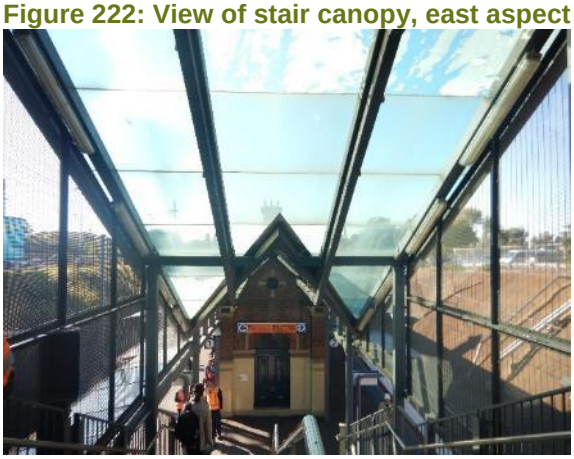


Figure 223: View of platform building, west aspect

Figure 224: View of platform and overbridge, west aspect

Figure 225: View of platform building, east aspect

Figure 226: View of platform building detail, north aspect

Figure 227: View of overhead booking office, west aspect

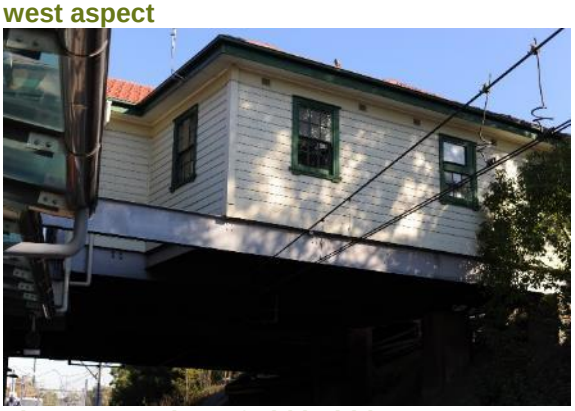


Figure 228: View of cutting, south-west aspect

Figure 229: View of old bubbler

Figure 230: View of brick abutments under overbridge, east aspect

Figure 231: View of substation, south aspect

Post-war bus shelter and public lavatories

The bus shelter was built circa 1940s and the lavatories were added in the 1950s. This was the bus terminus for many years thus requiring some capital investment. The bus shelter is a modern style rendered masonry bus shelter with a flat concrete roof. The toilets are rendered masonry located adjacent to the bus shelter and are decorated with fluted pilasters and a wavy patterned parapet.

Figure 232: View of bus shelter, east aspect

Figure 233: View of bus shelter, west aspect

Figure 234: View of public lavatories, south-west aspect

Figure 235: View of public lavatories, south-west aspect

Figure 236: View of bus shelter, east aspect

6.6.3 Description of elements

Belmore Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 56: Elements of Belmore Station Group

Elements	Date	Description	Condition	Significance
Platforms 1/2	1895, 1907	One island platform with asphalt surface, original brick platform face and edge. The platform was lengthened in 1907.	Generally good	High
Platform 1/2 building (Type 11) [131]	1895	External: Rectangular polychromatic face brick building with gabled roof and surrounding cantilevered awning clad in corrugated roof sheeting. The face brick is in stretcher bond, which was originally a dark brick up to a dado (the lower brick walls have now been painted) of lighter salmon coloured bricks which frame the upper half of the windows and doors, with a diamond pattern dentil course at the high level. The building is eight bays in length, with the bays defined by engaged brick piers which coincide with the awning brackets. Original chimneys with cement mouldings and terracotta flues remain but have been painted. The cantilever awning is on filigreed steel brackets supported on decorative cement cornices on engaged brick piers and bolt fixings to the station building brick walls. The soffit lining is the underside of the corrugated steel roof fixed to intermediate exposed purlins. There is a decorative timber moulding at the junction with the brick wall. The awning returns around the eastern end of the building but has been removed at the western end. The edge of the awning is finished with a decorative timber boarded valance. The end awning and timber valance are not original but constitute a sympathetic addition to the building. The external walls rise from a projecting brick plinth (now painted) with a decorative two part cement dado moulding which frames the salmon brick dado and is continuous between door and window openings. Decorative cement window and door frames rise above the dado moulding, each with a decorative keystone. The window and door openings have segmental arches and the windows feature a decorative moulded cement sill. The original timber windows were double hung with a double paned lower sash and a multi-paned upper sash featuring coloured glass of which some still remains. This detail continued through in the fanlights above the doors. The doors were timber panelled and most still remain. The end brick gable walls feature a louvre within a round brick window framed in salmon coloured voussoir shaped bricks, with four cement keystones. Internal: The building comprises a booking hall originally entered by a set of double doors at the bottom of the stairs; a booking office; station master's room; general	Good	Exceptional

[131] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		waiting room; ladies waiting room and ladies toilet, a lamp room and men's toilet. The internal usage has now changed, and the toilets have modern fitouts.		
Overhead booking office and concourse	1937, 2008	External: The original weatherboard overhead booking office was constructed in 1937, and had a hipped roof clad in Marseille pattern terracotta tiles which have been replaced by new terracotta tiles. It was constructed by placing steel beams across the Up line and supporting them on brick piers on the railway embankment on the north and on steel trestles on the platform. As well as accommodating the station master and ticket selling facilities it contained a parcels office and a booking hall which opened onto Burwood Road, with a bookstall in the north western corner. The building was substantially modified in 2008 by opening up the front wall on Burwood Road to provide larger full height glazing and more open access to the booking hall. The stairs were replaced and covered with a glazed canopy as well as the addition of an access lift. Internal: The booking office which is on the platform side of the building contains the area for ticketing and also contains the station master's office as well as staff facilities in the old parcels office. The interior of the booking office and open booking hall has hardboard lined ceilings with timber battens. The walls in the booking office and old parcels office are also lined with hardboard, while the booking hall is lined with weatherboards. The timber floors have been replaced with concrete with carpet internally and tiles in the open booking hall. The original timber panelled doors and ticket window have been replaced.	Good	High
Overbridge	Modified 1961	The Burwood Road overbridge was originally a wooden structure, supported on brick piers. In 1961 the roadway deck was replaced with prestressed concrete which spans between concrete abutments on each side. The only original element of the bridge is the central brick pier.	Good	Little
Platform canopies	2008	Modern glass canopy covers the stairway access from the booking hall concourse.	Good condition	Intrusive

6.6.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHR and SHI listings.

Table 57: Statements of significance for Belmore Station Catchment

Item	Statement of Significance	Listing
Belmore Railway Station Group	*Belmore Station is of State significance as it was the initial terminus station on the Sydenham to Bankstown Line which had been constructed to relieve congestion on the Main South Line as well as to promote agriculture and suburban growth. The platform building represents the period of transition from the boom time of the 1880s to the standardisation of NSW railway building design of the 1890s onwards and the high level of aesthetic design of pre-1900 standard railway buildings, which included the use of polychromatic brickwork, decorative dentil coursing, ornate awning brackets and carved bargeboards. The building is relatively intact and is representative of a small group of such ornate*	SHR

Item	Statement of Significance	Listing
	platform buildings including Canterbury and Marrickville on the Bankstown Line.	
Post-war bus shelter and public lavatories	*Evidence of the provision of services by Canterbury Council for an increasingly settled community. Of local social significance.*	SHI

6.6.5 Heritage impacts

Direct impacts

Belmore Railway Station Group

The table below provides an assessment of the direct impacts of the 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 58: Assessment of direct impacts for Belmore Railway Station Group

Element	Significance	Proposed action	Assessment of impact	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	The platform is proposed to be removed apart from the structure supporting the heritage building. This would have a major impact on the fabric of the platform including the loss of the original platform brick face. The platform would be reconstructed in a straight alignment and extended to accommodate the workings of the new Metro trains. This would result in the loss of the historic curved platform. This would have a major impact on the original platform layout. The new covered concourse, access stairs, lift shafts, platform station building, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric The complete demolition of Platform 1/2 to be reconstructed in straight lines and extended to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	Major
Platform building (Type 11) (1895) [132]	Exceptional	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. The project would have a minor impact on the heritage values of the building and station overall.	Minor

[132] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
Overhead booking office and concourse (1937, 2008)	High	Retention for re-use with potential retrofitting	The retention of the overhead booking office is a positive heritage outcome in the context of the project. The overhead booking office scored five out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy [133]. The strategy recommends adaptive reuse of the building. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Additions to the building should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. The project would have a minor impact on the heritage values of the overhead booking office and station overall.	Minor
Overbridge (Modified 1961)	Little	Retention and upgrade	The structure is proposed to be retained and upgraded for ongoing use. The proposed works would include protection works, bridge widening, maintenance works, and retaining wall works. The 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	The canopies are proposed to be removed. This would result in a neutral impact on the station catchment.	Neutral

When considering cumulative impacts, it is assessed that the project would result in a moderate direct impact on Belmore Railway Station Group overall.

Post-war bus shelter and public lavatories

No direct impacts to the Post-war bus shelter and public lavatories are proposed as part of the Metro project. Direct impacts related to construction sites are assessed in Section 8.3.6 of this report.

Direct impacts on the Post-war bus shelter and public lavatories would be neutral.

Visual impacts

Belmore Railway Station Group

The proposed new structures would be sited on the east side of Belmore Station with the retained overhead booking office, concourse and platform building located on the west side. There would be visual impacts resulting from the removal of the original brick face and curved layout of the original island platform. The contemporary nature of the new development would differ from the existing

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

heritage character of the station group and create a contradistinctive relationship with the historic components of the site. The new concourse and access stairs would add considerable footprint and bulk within the station and would be situated in proximity of the platform building. Although they would not obstruct any significant views, this is likely to dominate the platform building and would have a moderate visual impact. The new station buildings would be of a similar scale as the heritage buildings and located at a notable distance. They would result in a minor visual impact. The concourse canopy would rise high above the platform building which would allow new views onto the building of exceptional significance from the concourse. The existing intrusive canopy structure located in between the overhead booking office and the platform building would be removed, enhancing views from the booking office. The canopy would extend from the concourse to the eastern edge of the significant platform building with at least two metres separation. Canopies would not extend between the Platform building and the overhead booking office, retaining the relationship between these structures.

The platform screen doors along the reconstructed platforms would rise to human height 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 station building on platform 1 and 2 and the new services building would not visually dominate the retained heritage buildings, as they would be located at a distance to the east.

Overall, the project would add a contemporary layer of development on the east side of the station in contrast with the heritage components on the west side. Views onto the heritage buildings within the station catchment would not be obstructed, although the new structures would be large in scale and may be dominant. The project offers opportunity for positive impacts by enhancing views onto the 1895 platform building from both eastern and western angles. The project would alter the existing setting of Belmore Railway Station but visual impacts would remain moderate.

When considering cumulative impacts, it is assessed that the project would result in a moderate visual impact on Belmore Railway Station Group.

Post-war bus shelter and public lavatories

No visual impacts to the Post-war bus shelter and public lavatories are proposed as part of the Metro project. Visual impacts related to construction sites are assessed in Section 8.3.6 of this report.

There are views to and from the post-war shelters and public lavatories and Belmore Railway Station Group. The 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. The new Metro concourse would add considerable bulk to the railway station. It would be located approximately 50 metres from the post-war shelters and public lavatories. The new concourse would be visible in the background of the heritage item and would result in a minor visual impact.

Visual impacts on the post-war shelters and public lavatories would be minor.

Federation House (former station master's cottage)

The Federation House is located approximately 15m north of the railway corridor and 25m north-west of the station entrance. The construction in the vicinity of the Federation House consists of new Metro tracks, new station canopy to a height of approximately 6.15m above the current street level, and new station buildings such as lifts and the unpaid concourse. There is a direct visual connection between the Federation House and the station entrance. Any views on the new Metro tracks and overhead wiring 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. The new canopy and station buildings would be located on the east side of the station and would be partially screened by the retained heritage station buildings, with some views on the new canopy located behind the platform building. This would not significantly change the view from the Federation house. No views towards the Federation House would be impacted.

Visual impacts on the Federation House would be negligible.

Potential direct impacts

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

Table 59: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Belmore Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Post-war bus shelter and public lavatories	Vibration levels would be under the cosmetic damage screening level.	Negligible
Federation House (former station master's cottage)	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor

6.6.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 60: Summary of Heritage Impacts – Belmore Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of the element of exceptional significance: the Platform 1/2 building • Retention for re-use of elements of high significance within the station group: the overhead booking office and the concourse • Removal of intrusive canopy concealing views onto platform building for enhanced views on the platform building of exceptional significance • Potential for positive heritage impacts during retrofitting and upgrade works to significant elements to be retained • Neutral direct and minor visual impacts to the post-war bus shelters and public lavatories • Neutral to negligible visual impacts to heritage items in the vicinity • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items

Impact on a heritage item	Discussion
	• Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Removal of an element of high significance within the station group, the original 1895 island platform and loss of its curved layout • Moderate direct impact caused by the removal of the original island platform • Moderate visual impact caused by the bulk and footprint of the new covered concourse

6.6.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Belmore Station Catchment and the 25-metre buffer zone:

Belmore Railway Station Group

The direct impact of the project onto Belmore Railway Station Group would be moderate. All elements of exceptional and high significance within the station would be retained apart from the original 1895 brick island platform and its curved layout. The retention and retrofitting of the retained elements are anticipated to have a minor impact and present opportunity for a positive outcome. Views onto the Platform 1/2 building would be enhanced from the overhead booking office and would also be appreciated from the new Metro concourse. The scale and bulk of the new development is likely to dominate the platform building and this would result in a moderate visual impact. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

The impacts of the removal of the original 1895 island platform within Belmore Railway Station would be balanced by the retention of all other significant elements comprising the 1895 platform building, the 1937 overhead booking office and the remaining elements of the overbridge. This would enable the station to conserve its historic, aesthetic and representativeness significance. The platform building is an excellent example of its type and would continue to demonstrate the heritage values of the station as one of the original railway stations on the Sydenham to Bankstown Line. The retention of the overhead booking office, although detractingly modified, would conserve a good example of an inter-war weatherboard booking office and continue contribute to the setting of the station.

When assessed cumulatively, the level of heritage impact of the project on Belmore Railway Station Group would be moderate.

Belmore railway Station is State significant as the initial terminus station on the line. The SHR statement of significance lists the station building as having State technical and aesthetic significance and the station buildings and overhead booking office as being representative at a State level. All buildings that are listed as contributing to the State significance of the item will be retained.

Based on the historical significance of the station and the heritage values of the retained buildings, the heritage item would continue to meet the threshold for State significance.

Post-war bus shelter and public lavatories

The direct impacts of the project on the Post-war bus shelter and public lavatories would be neutral. Works to the heritage item and in its vicinity would result in minor visual impacts. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Post-war bus shelter and public lavatories would be minor. The heritage item would continue to meet the threshold for local significance.

Federation House (former station master's cottage)

The direct impacts of the project onto the Federation House would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Federation House would be negligible. The heritage item would continue to meet the threshold for local significance.

6.7 Lakemba Station Catchment

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

6.7.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 61: Heritage items within Lakemba Station Catchment and buffer zone

Item	Suburb	Significance	Listing
Within project area			
Lakemba Railway Station Group	Lakemba	Local	RailCorp S.170 Heritage and Conservation Register (4801916) Canterbury LEP 2012 (I143)
Within buffer zone (outside project 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)

Lakemba Station has been nominated for SHR listing as of 17 March 2016.

Figure 237: Aerial map showing heritage items within study area: Lakemba

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6.7.2 Existing environment

Lakemba Railway Station Group

Lakemba Station was designed and built by NSW Government Railways between 1909 and 1926. Lakemba Station has a single island platform with the original platform building and a large modern footbridge, booking office, central concourse, concessionaire, and easy access lift (Figure 238 to Figure 253). The footbridge is accessed from Railway Parade to the north and The Boulevard to the south, both commercial shopping strips.

Lakemba Station was opened on 14 April 1909. The original station at Lakemba had an island platform with entrance steps from the Haldon Street overbridge. A small timber station building with a ticket and parcels office was at the Belmore end with a small signal frame on the Bankstown side of the building. On 24 December 1919, a new brick station building with cantilever awnings and a signal box was opened at the Bankstown end of the station. A haunched beam footbridge with overhead booking office was erected with electrification in 1926.

On 31 January 1921, terminal arrangements were introduced at the Bankstown end of the station, providing for a locomotive to shunt into the engine dead-end. The down train would proceed into the Terminal Siding where the light engine would couple on to the train, the train engine uncoupled and the train hauled into the up platform for the return journey. The uncoupled locomotive would then move into the engine dead-end ready for the next train from Sydney. These arrangements were no longer necessary after electrification.

In 2001 the overhead booking office, concourse, and canopies were upgraded.

The War Memorial monument was dedicated on Sunday 19 April 1953 (Figure 254). It bears the inscription: 'In memory of our fallen comrades'.

Figure 238: View of station entrance with 2001 editions, south-east aspect

Figure 239: View of platform and stairs with 2001 canopies, south-west aspect

Figure 240: View of platform building, south-west aspect

Figure 241: View of platform building detail, north aspect

Figure 242: View of Platform 1, north-east aspect

Figure 243: View of Platform 1, north-west aspect

Figure 244: View of station, east aspect

Figure 245: View of platform, north-east aspect

Figure 246: View of footbridge, north-east aspect

Figure 247: View of stairs, east aspect

Figure 248: View of Platform 1, south-west aspect

Figure 249: View of overhead booking office, south-west aspect

Figure 250: View of footbridge, west aspect

Figure 251: View of overhead booking office, south-west aspect

Figure 252: View of footbridge, east aspect

Figure 253: View of overbridge, south-east aspect

Figure 254: View of War Memorial, south aspect

6.7.3 Description of elements

Lakemba Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 62: Elements of Lakemba Station Group

Elements	Date	Description	Condition	Significance
Platform 1/2	1919	One island platform, with thin asphalt surface and battered-profile original brick platform face and edge. Minor portion of brick coping removed and replaced with concrete coping at the western end. Concrete platform extension at west end of original platform. High level of integrity and in good condition overall.	Good	High
Platform building, platform 1/2 (Type 11) [134]	1919	External: Rectangular face brick building with gabled roof and integral shallower sloped cantilevered awnings. The face brick in stretcher bond has been painted. The building is six bays in length, with the bays defined by engaged brick piers which coincide with the awning supports. Original chimneys with cement mouldings and terracotta flues have been removed. The cantilever awnings have standard double bowed steel brackets supported on decorative cement haunches and bolt fixings to the station building brick walls. Soffit lining of timber boards fixed to intermediate exposed purlins follows the roof slope. There is a decorative timber moulding at the junction with the brick wall. Vertical timber boards form a valance at each end of the awnings. The awning roof as for the main roof is corrugated steel. The external walls rise from a projecting brick plinth three/four courses high with a decorative dado moulding run in cement which is continuous between door and window openings. Decorative cement	Generally good	High

[134] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		window and door frames rise above the dado moulding. The original window openings feature a moulded cement sill with a scalloped fringe. The original timber windows were double hung with a single paned lower sash and a six paned upper sash featuring coloured glass. The original window glass as well as the upper glazing bars has been removed. Original door openings featured fanlights matching the upper window sashes. All the original doors have been removed and most of the door openings bricked up, the original thresholds have also been removed. Internal: The building comprises a booking office; general waiting room; ladies room and ladies toilets and men's toilets. The original timber framed signal box which is shown on the original drawings at the stair access end of the platform building has either been removed, or was never constructed. The internal usage has now changed and the toilets have modern fitouts and finishes.		
Footbridge and stairs	1926	Haunched steel beam girder design; consists of tapered cantilevers bearing on platform trestles and supporting shallow beams over the railway tracks. The structure was augmented with the construction of the new overhead booking office, concourse, overhead canopies and lift shafts. However, the original form of the footbridge has remained legible and all original access stairs including star pattern cast iron newel posts remain.	Good	Moderate
War Memorial	1953	Outside the station entrance is a War Memorial. It is a sandstone block broken column (symbolising sacrifice) on a plain plinth. It bears the inscription: 'In memory of our fallen comrades'. This memorial was unveiled by His Excellency the Governor of NSW Lieutenant General Sir John Northcott KCMG CB MVO Sunday 19th April 1953'. Located on a small square lawn area, with plantings along the fence line.	Good	High
Overhead booking office /concourse	2001	The original timber framed overhead booking office dating from 1926 has been demolished and replaced by a new structure erected on the original footbridge consisting of a booking office, a central concourse, and a concessionaire.	Good	Little
Canopies	2001	New steel framed metal roofed canopy constructed over original station access stairs and extending to eastern end of station building.	Good	Intrusive

6.7.4 Statements of significance

The following statement of significance for the heritage item located within the project area is reproduced from the SHI listing.

Table 63: Statements of significance for Lakemba Station Catchment

Item	Statement of Significance	Listing
Lakemba Railway Station Group	*Lakemba Railway Station has local historical significance as it was one of the stations to be located on the Sydenham to Bankstown Line which was built to take pressure off the traffic on the Main South Line as well as promote agriculture and suburban development in the late 19th and early 20th centuries. The station reflects the extension of the line to Bankstown in 1909 and the platform building and associated stairs reflect the development of suburbs in the area after World War I. The platform building and stairs are also significant as examples of the design and technology of these structures built by NSW Railways between 1910 and the 1950s*	SHI

Lakemba Station has been nominated for SHR listing as of 17 March 2016.

6.7.5 Heritage impacts

Direct impacts

Lakemba Railway Station Group

The table below provides an assessment of the direct impacts of the 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 64: Assessment of direct impacts for Lakemba Railway Station Group

Element	Significance	Proposed action	Assessment of impact	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	The platform is proposed to be removed apart from the structure underneath the heritage building and the current concourse and stairs. This would have a major impact on the fabric of the platform including the loss of the original brick face. The platform would be reconstructed in a straight alignment and extended to accommodate the workings of the new Metro trains. This would result in the loss of the historic curved platform. This would have a major impact on the original platform layout. The platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. The demolition of Platform 1/2 to be reconstructed in straight lines and extended to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	Major
Platform building, platform 1/2 (Type 11) (1919) [135]	High	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to	Minor

[135] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
			remove any intrusive modifications to the structure. Additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. If these considerations are implemented, it is expected this aspect of the project would have a minor impact on the heritage values of the building and station overall.	
Footbridge and stairs (1926)	Moderate	Retention with new lifts constructed to platform	It is proposed to retain the footbridge and stairs and construct new lifts to the platform. The footbridge was assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy.[136] The retention of the footbridge and stairs and the construction of the new lifts to the platform would have a minor impact on the original footbridge and station overall.	Minor
War Memorial (1953)	High	Retention; construction of new platforms and toilets in proximity	It is proposed to retain the memorial. This would result in a neutral impact on the memorial and the station catchment. The construction of the new straight platforms and toilets in proximity of the memorial would have a neutral impact on the memorial provided that demolition and construction works are carried out so as to minimise any direct impacts and that the memorial is adequately protected during the works.	Neutral
Overhead booking office /concourse (2001)	Little/ Intrusive	Existing concourse structure retained and expanded with new lifts to platforms	It is proposed to retain the existing concourse structure including stairs to platforms, stairs and lifts to the north and south entries. The canopy over the stairs to platform would be removed and replaced with a new canopy. The existing lift to the platform would be removed and replaced. This would result in a neutral impact on the Lakemba Railway Station, whilst offering opportunity for a positive visual impact. The overhead booking office is not identified as significant in the Sydney Trains Overhead Booking Office Conservation Strategy.	Neutral
Canopies (2001)	Intrusive	Removal of the canopy over the stairs to the platform for replacement with new canopy. Retention of the concourse canopy.	It is proposed to remove the modern canopies over the stairs to the platform. The concourse canopy would be retained. This would result in a minor positive impact on the station catchment.	Minor positive

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

When considering cumulative impacts, it is assessed that the project would result in a moderate direct impact on Lakemba Railway Station Group overall.

Visual impacts

Lakemba Railway Station Group

The proposed new structures would be sited on the east side of Lakemba Station with the retained Platform 1/2 building located approximately in the centre of the platform. The contemporary nature of the new development would differ from the existing heritage character of the station group; this would create a contradistinctive relationship with the historic building. Platform canopies would be located between the new concourse and the platform building. This would result in a minor impact on views from a western angle when looking towards the west façade of the platform building. The building would be clearly visible from the concourse and stairs. Platform screen doors would generally have a moderate impact on internal views. The removal and replacement of the lifts to the platform would have a minor visual impact.

The visual impacts of the expanded concourse on Lakemba Railway Station Group would be moderate overall. The expanded concourse would add considerable footprint and bulk within the station and would be situated in proximity of the platform building. Although they would not obstruct any significant views, this is likely to dominate the platform building; this would have a moderate visual impact. There would be visual impacts resulting from the removal of the original brick face and curved layout of the platform. This visual impact would be major. There would be moderate visual impacts caused by the expansion of the existing concourse which incorporates elements of the original footbridge and stairs. The intrusive canopy structure currently obstructing views to the platform building would be removed.

It is proposed to undertake a maintenance works overhaul and apply waterproofing to the full deck of the Haldon Street overbridge situated in proximity of Lakemba Railway Station. The works would also include new compliant protection screens, medium level traffic barriers and a deflection wall enclosing the existing concrete columns. New post and panel retaining walls would be installed on either side of the corridor to accommodate track realignment and platform extension works. The works to the bridge would be located at a notable distance from the platform building and would be mostly screened by the concourse. These works are unlikely to significantly alter the existing aesthetics of the bridge. The new retaining walls would be located along the embankments and would not be visually intrusive. The visual impacts of the works to the Haldon Street overbridge on Lakemba Railway Station would be minor.

The new services building would not visually dominate the remaining heritage structures as it would be located around 200m to the west.

Overall, the project would add a contemporary layer of development on the east side of the station in contrast with the heritage components on the west side. Views onto the heritage buildings within the station catchment would not be obstructed, although the new structures would be large in scale and may be dominant. The expanded concourse would offer views onto the platform building. The project would alter the existing setting of Lakemba Railway Station but visual impacts would remain moderate.

When considering cumulative impacts, it is assessed that the project would result in a moderate visual impact on Lakemba Railway Station Group.

Federation weatherboard house

The Federation weatherboard house is located approximately 20m south of the railway corridor and 335m east of the eastern edge of the station platform. The construction in the vicinity of the Federation weatherboard house consists of new Metro tracks. Current views towards the railway line

are screened by vegetation. Any views on the new Metro tracks and overhead wiring 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. Therefore, views and vistas from the heritage item would not be impacted.

Visual impacts on the Federation weatherboard house would be neutral.

Inter-War post office building - Lakemba Post Office

The Inter-War post office is located approximately 25m south-west of the station entrance. The construction in the vicinity of the post office consists of a new station canopy and new station buildings including the expanded concourse. There are views between the post office and the current station entrance. The new canopy and station buildings would be mostly screened by existing single-storey retail buildings located on the north side of The Boulevarde. The proposed works would be larger in scale than the existing development and part of the new canopy would be seen above existing roof lines. However, the scale and character of the new structure would not significantly detract from the existing.

Visual impacts on the Inter-War post office would be negligible.

Electricity Substation no. 143

The electricity substation no.143 is located approximately 25m north of the railway corridor and 95m north-east of the eastern edge of the station platform. The construction in the vicinity of the substation consists of new Metro tracks. Current views towards the railway line and the station are screened by vegetation. Any views on the new Metro tracks and overhead wiring would be in keeping with the current views and vistas of the heritage item and would have a neutral visual impact. Distance and vegetation prevent views between the heritage item and Lakemba Station Catchment. The new canopy and northern entrance concourse would remain outside views from the heritage item.

Visual impacts on the electricity substation no.143 would be neutral.

Potential direct impacts

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

Table 65: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Lakemba Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Federation weatherboard house	Vibration levels would be under the cosmetic damage screening level.	Negligible
Inter-War post office building - Lakemba Post Office	Vibration levels would be under the cosmetic damage screening level.	Negligible
Electricity Substation no. 143	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.7.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 66: Summary of Heritage Impacts – Lakemba Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention of the Platform 1/2 building of high significance • Potential for positive heritage impacts during retrofitting and upgrade works to the platform building to be retained • Neutral to negligible visual impacts to heritage items in the vicinity • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Removal of elements of high significance within the station group including the original 1919 island platform • Major direct impacts caused by the removal of elements of high significance • Moderate visual impacts caused by the scale of the new development

6.7.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Lakemba Station Catchment and the 25-metre buffer zone:

Lakemba Railway Station Group

The direct impacts of the project on Lakemba Railway Station would be moderate. The original island platform would be removed. This would also result in a major direct impact. The visual impact of the new development on the setting of the station would be moderate overall. The expanded concourse would offer views on the platform building to be retained. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

The removal of the original 1919 island platform within Lakemba Railway Station would remove an element of high significance within the station group. The removal of this structure would alter the aesthetics and representativeness significance of the station and impact its integrity overall. The Platform 1/2 building would remain the tangible element to represent the heritage significance of the railway station. This would retain some of the historical values of the place as one of the original railway stations of the second stage of development of the Sydenham to Bankstown Line. The platform building is a good example of its type and would contribute to the aesthetic significance of the station. Overall, Lakemba Railway Station would continue to meet the threshold for local significance.

When assessed cumulatively, the level of heritage impact of the project on Lakemba Railway Station Group would be moderate. Based on the historical significance of the station and the heritage values of the retained platform building, the heritage item would continue to meet the threshold for local significance.

Federation weatherboard house

The direct impacts of the project onto the Federation weatherboard house would be neutral. The proposed works in the vicinity would result in a neutral visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Federation weatherboard house would be neutral. The heritage item would continue to meet the threshold for local significance.

Inter-War post office building - Lakemba Post Office

The direct impacts of the project onto the Inter-War post office building would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Inter-War post office building would be negligible. The heritage item would continue to meet the threshold for local significance.

Electricity Substation no. 143

The direct impacts of the project onto the Electricity Substation no. 143 would be neutral. The proposed works in the vicinity would result in a neutral visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Electricity Substation no. 143 would be neutral. The heritage item would continue to meet the threshold for local significance.

6.8 Wiley Park Station Catchment

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.

6.8.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 67: Heritage items within Wiley Park Station Catchment and buffer zone

Item	Suburb	Significance	Listing
Within project area			
Wiley Park Railway Station Group	Wiley Park	Local	RailCorp S.170 Heritage and Conservation Register (4801946) Canterbury LEP 2012 (I159)
Within buffer zone (outside project area)			
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)

Figure 255: Aerial map showing heritage items within study area: Wiley Park

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6.8.2 Existing environment

Wiley Park Railway Station Group

Wiley Park Station was designed by NSW Government Railways and built by Canterbury Council. Wiley Park Station consists of two wayside platforms with original platform buildings and an original overhead booking office, all which have been modified by varying degrees (Figure 256 to Figure 265). The platforms are accessed by earth supported ramps via the overbridge from King Georges Road, a main road (Figure 257 to Figure 259). The overhead booking office building is flanked by commercial shops. The 1974 concrete overbridge is excluded from this listing.

Wiley Park Station was opened on 19 June 1938, much later than other stations on the line. The reason for the station was suburban development of the 1930s and the need for an interchange with King Georges Road. Unusually, the station was financed and constructed by the local Council (Canterbury Council) and handed over to the NSW Government Railways after completion. The station was built with an overhead booking office as the major building with ramps leading down to the two side platforms and their small platform shelters. The building on the Platform 1 appears to have been modified in recent years.

Figure 256: View of station entrance, south-west aspect

Figure 257: View of access ramp, north-east aspect

Figure 258: View of platform, north-east aspect

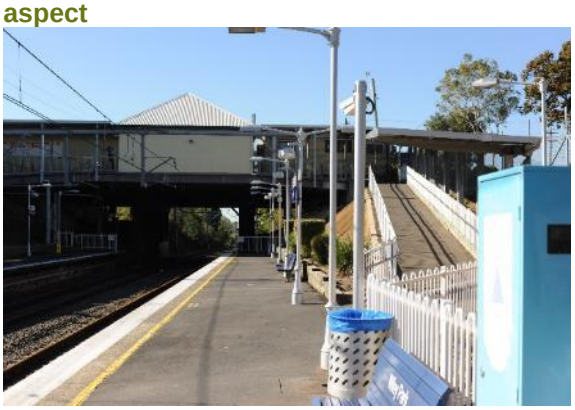


Figure 259: View of access ramp, east aspect

Figure 260: View of Platform 1 building, west aspect

Figure 261: View of Platform 1 building detail, west aspect

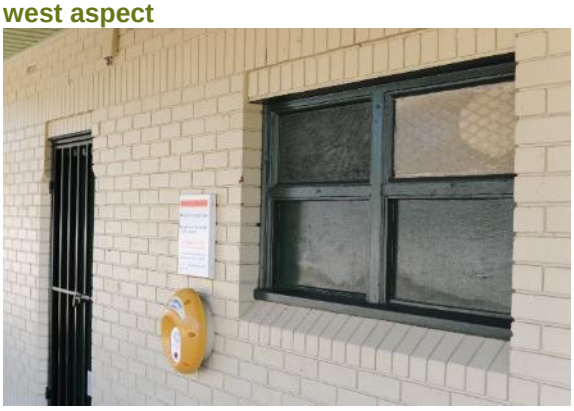


Figure 262: View of platforms, south-west aspect

Figure 263: View of Platform 2 building, south aspect

Figure 264: View of landscaping, east aspect

Figure 265: View of abutments of overbridge, north-east aspect

6.8.3 Description of elements

Wiley Park Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 68: Elements of Wiley Park Station Group

Elements	Date	Description	Condition	Significance
Platform 1	1938	Platform 1 is a wayside platform with asphalt surface, steel rail posts and concrete cast in situ platform walls and edge. Typical example of 1930s-1940s platform.	Generally good	High

Elements	Date	Description	Condition	Significance
Platform 2	1938	Platform 2 is a wayside platform with asphalt surface, steel rail posts and concrete cast in situ platform walls and edge. Typical example of 1930s-1940s platform.	Generally good	High
Platform building, platform 1 (Type 13) [137]	1938	External: Rectangular painted brick building which originally had a hipped terracotta Marseille pattern tile roof. The roof was detractingly replaced after a fire with a simple metal clad skillion roof which cantilevers at the platform side to form a boxed awning. The windows are timber framed and originally had glass louvres which have been removed and boarded up or fitted with fixed glass. Original single panel timber doors have been removed and replaced with flush doors. The brick work detailing includes brick-on-edge above the openings and a soldier course above, running around all elevations; a soldier course at ground level and splayed brick reveals to the openings. The building has lost integrity due to the replacement of its roof in form and material, and the brick facade having been painted. Internal: The building comprises a ladies waiting room and ladies toilets, a central station master's office (not used) and men's toilets. The toilets now have modern fitouts and finishes. A fire in the roof has resulted in the loss of the original ceilings. In the station master's office, the ceiling lining is the exposed underside of the metal deck and in the toilets a fibre cement sheeting.	Good	High
Platform building, platform 2 (Type 13) [138]	1938	External: Small rectangular red face brick shelter building with a hipped terracotta Marseille pattern tile roof in the same original style as the building on Platform 1. The building is enclosed on three sides with an opening to the platform for access to the timber seating on three sides. Windows on the lateral walls were originally timber framed in three bays each with three horizontal glazing bars, but have since been bricked up. The brick work detailing includes brick-on-edge above the openings and a soldier course above, running around all elevations; a soldier course at ground level and splayed brick reveals to the openings. The awning consists of the northern third of the main hipped roof supported on two hardwood cantilevers which rise vertically on brick haunches on each side of the main opening. The soffit lining is asbestos cement, extending around the building as an eaves soffit. Internal: Internally the shelter has a concrete floor, rendered walls and a hardboard ceiling with battens. The timber slatted seats are original.	Good.	High
Overhead booking office	1938	External: The overhead booking office is a timber framed, weatherboard clad building which was originally roofed with a hipped terracotta Marseille pattern tile roof, which following a fire in the roof has been replaced by corrugated steel. The frontage to King Georges Road has a cantilevered awning with Art Deco style horizontal banding supported on exposed hardwood cantilevers. The building retains original timber framed double hung windows, but the glazing	Good	High

[137] See Section 2.2.6 Station building types
[138] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		overlooking the station has been replaced with metal cladding. Internal: The building consists of the booking office, (the parcels office and its door to King Georges Road has been removed) an entry concourse and ticket collection booth. The two front ticket windows have been removed and the internal ticket window replaced. On the north side the original book stall has been removed for later retail spaces. Roof replaced with corrugated metal sheets; Internal fixtures and fittings replaced with modern office furniture; Internal floor plan reorganised and staff toilet added; Doors removed and/or replaced; Two ticket windows removed, one replaced with modern equivalent; Bookstall extended; front door and façade replaced with new shopfront glazing; Footbridge windows and weatherboard siding replaced with corrugated metal screen wall; Footbridge and ramps upgraded with new fencing and awnings. Notable original attributes: weatherboard siding; multi-pane sash windows; covered booking hall with AC ceilings; cantilever awning over footpath; original ticket collector's cabin and window; early safe. A good example of the restrained Inter-War Domestic style with good integrity.		
Footbridge	1938	Concrete platform supported on steel beams bearing on platform trestles and natural earth embankment on each side. Ramp balustrades have been replaced with tubular looped steel design. New corrugated steel canopies and metal handrails have been added to the footbridge.	Good	Moderate
Access ramp canopies	Modern	Modern steel framed and steel roofed canopies have been erected over both platform access ramps which continue up to the footbridge.	Good	Little
Landscape/natural features		Earth and stone formed retaining walls along southern boundary. Grass verges with mature plantings along both boundaries.	Good	High

The King Georges Road overbridge is excluded from the S170 and LEP listings for Wiley Park Railway Station.

6.8.4 Statements of significance

The following statement of significance for the heritage item located within the project area is reproduced from the SHI listing.

Table 69: Statements of significance for Belmore Station Catchment

Item	Statement of Significance	Listing
Wiley Park Railway Station Group	*Wiley Park Railway Station is historically significant at a local level as it was the last of the stations erected on the Sydenham to Bankstown Line which had been built to relieve congestion on the Main Southern Line and to promote agriculture and suburban development in the late 19th and early 20th centuries. The brick platform building and overhead booking*	SHI

Item	Statement of Significance	Listing
	office reflect the need to service the growing population in the area in the 1930s. The station is significant as unlike other stations in the Metro network it was a station which was not financed and constructed by the State Government, but by the Local Council. *While the overall integrity of the complex has been compromised by alterations and additions the overhead booking office and brick waiting room on platform 2 have a moderate level of integrity and are representative of the Inter-War Railway Domestic style utilised by NSW Railways at the time.*	

6.8.5 Heritage impacts

Direct impacts

Wiley Park Railway Station Group

The table below provides an assessment of the direct impacts of the 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 70: Assessment of direct impacts for Wiley Park Railway Station Group

Element	Significance	Proposed action	Assessment of impact	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	The platform is proposed to be removed and reconstructed in a straight alignment to accommodate the workings of the new Metro trains. This would have a major impact on the platform and include the loss of a typical example of its type. The new covered concourse, access stairs, lift shaft, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 1 to be reconstructed in straight lines to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	Major
Platform 2 (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	The platform is proposed to be removed and reconstructed in straight lines to accommodate the workings of the new Metro trains. This would have a major impact on the platform and include the loss of a typical example of its type. The new covered concourse, access stairs, lift shaft, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. The complete demolition of Platform 2 to be reconstructed in straight lines to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	Major

Element	Significance	Proposed action	Assessment of impact	Impact summary
Platform building, platform 1 (Type 13) (1938) [139]	High	Removal; replacement with platform canopies and platform screen doors to be anchored on new platform	The building is proposed to be removed. This would have a major impact on the building and on Wiley Park Railway Station as a whole.	Major
Platform building, platform 2 (Type 13) (1938) [140]	High	Removal; replacement with platform canopies and platform screen doors to be anchored on new platform	The building is proposed to be removed. This would have a major impact on the building and on Wiley Park Railway Station as a whole.	Major
Overhead booking office (1938)	High	Removal for replacement with new covered concourse including access stairs and lift shafts	The building is proposed to be removed. The overhead booking office scored seven out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy [141]. The strategy recommends adaptive reuse of the building. The removal of the overhead booking office would have a major impact on the building and on Wiley Park Railway Station as a whole.	Major
Footbridge (1938)	Moderate	Removal for replacement with new covered concourse including access stairs and lift shafts	It is proposed to remove the footbridge and stairs for replacement with a new covered concourse including access stairs and lift shafts. The stairs were assessed as having moderate significance as per the Railway Footbridges Heritage Conservation Strategy. [142] The removal of the footbridge and stairs would have a major impact on the footbridge and a moderate impact on the station overall.	Major
Access ramp canopies (Modern)	Little	Removal for replacement with new covered concourse including access stairs and lift shafts	It is proposed to remove the access ramp canopies. This would result in a neutral impact on the station catchment.	Neutral
Landscape/ natural features	Moderate	Retain in majority; new station building to be	It is proposed to mostly retain the existing landscape within the redevelopment of the station catchment apart from an area located west of the platforms along the southern	Moderate

[139] See Section 2.2.6 Station building types
[140] See Section 2.2.6 Station building types
[141] Australian Museum Consulting 2014. *Railway Overhead Booking Offices Heritage Conservation Strategy*. Prepared for Transport for NSW.
[142] NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

Element	Significance	Proposed action	Assessment of impact	Impact summary
		constructed along the southern boundary to the west of the platforms	boundary where a new station building would be erected. This would result in a moderate impact on the landscape features and a minor impact on Wiley Park Railway Station overall.	

When considering cumulative impacts, it is assessed that the project would result in a major direct impact on Wiley Park Railway Station Group overall.

Visual impacts

Wiley Park Railway Station Group

The proposed canopy above the new concourse would be larger in scale in comparison with the existing structures on the site. However, all station buildings which include the Platform 1 building, Platform 2 building and the overhead booking office are proposed to be removed. Therefore, the scale of the proposed new development would not visually impact the heritage components of the site as these would no longer be present. Visual impacts would rather result from the removal of all heritage structures at Wiley Park Railway Station. As all original elements of the station dated 1938 are removed, all views and appreciation of these elements would be lost. This would have a major visual impact on Wiley Park Railway Station as a whole. Any visual impacts resulting from the proposed upgrade works to the King Georges Road overbridge would not further detract significant views as the setting of the station would have been fully impacted.

Medium-scale canopies and platform screen doors would be located along the reconstructed platforms on the west side of the station. The nature of the new concourse, canopies and station buildings would introduce a contemporary design to the station in replacement of the existing heritage buildings. A new service building would be located at the western end of the platforms along the southern boundary. The scale and height of the proposed canopy structure, the footprint of the overall concourse, stairs, new platform and station buildings as well as the platform canopies and platform screen doors would add considerable bulk to the originally low-scale station catchment. The1930s station catchment would be redeveloped into a contemporary transport interchange.

The proposed removal of all significant buildings and structures within the station would result in a major visual impact as no original elements would be retained to demonstrate the significance of the station for future appreciation. The project would remove the late 1930s precinct.

When considering cumulative impacts, it is assessed that the project would result in a major visual impact on Wiley Park Railway Station Group.

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

The Lakemba Pumping Station is located approximately 40m south-west of the station platforms. The construction in the vicinity of the pumping station consists of new platform screen doors, platform canopies, and a concourse canopy to a height of approximately 6.15m above the 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 proposed works would be keeping with the current visual landscape to and from the heritage pumping station. Trees are proposed to be planted on the southern side of the station that would screen views further.

Visual impacts on the Inter-War water pumping station would be negligible.

Potential direct impacts

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

Table 71: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Wiley Park Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Inter-War water pumping station– Lakemba Pumping Station (WP0003)	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.8.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 72: Statement of Heritage Impacts – Wiley Park Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Negligible visual impacts on the Lakemba Pumping Station (WP0003) • Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Removal of all original elements within the catchment dated 1938: Platform 1, Platform 2, the Platform 1 building, the Platform 2 building, the overhead booking office and remaining original elements of the footbridge • Major direct and visual impacts on the station catchment due to the removal of all original structures and redevelopment of the 1930s station catchment into a contemporary transport interchange

6.8.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Wiley Park Station Catchment and the 25-metre buffer zone:

Wiley Park Railway Station Group

The impacts of the project on Wiley Park Railway Station would be major. All elements of high significance within the station would be removed. There would be no tangible elements of significance remaining. This would have major direct and visual impacts on the station as a whole. The new development would introduce contemporary structures and alter the character of the station from a

late 1930s precinct into a contemporary transport interchange. The setting of the station would be fully impacted.

The demolition of all original structures of high and moderate significance at Wiley Park Railway Station would remove the original station dated 1938. Wiley Park Railway Station is historically significant on the Sydenham to Bankstown Line for being an infill station and for being the last of the stations to be constructed. The station is also significant for having been financed and constructed by the Local Council rather than the State government. Therefore, the station has social and rarity values. The demolition of these structures would deprive the station of any tangible elements of significance. Good examples of the Inter-War Railway Domestic style in the NSW railway networks would be lost and the aesthetic significance of the station would be fully impacted. Although all original buildings have been subject to detracting modifications overtime, their significance is retained in their historical and representative values as well as in substantial original fabric. By removing all heritage components, the project would result in Wiley Park Railway Station no longer meeting the threshold for local significance.

When assessed cumulatively, the level of heritage impact of the project on Wiley Park Railway Station Group would be major. The significance of the station is encompassed in its historical use which is represented by tangible elements including platforms and individual buildings. By removing these elements, there would be no tangible elements to represent the historic role of the station. The aesthetic significance of the station found in its Inter-War Railway Domestic style would also be lost. Interpretation would be able to convey the previous significance of the site but would not fully mitigate impacts and would not enable the heritage item to retain its local significance. As a result of the project, the heritage item would no longer meet the threshold for local significance and is likely to be delisted.

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

The direct impacts of the project onto the Inter-War water pumping station would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Inter-War water pumping station would be negligible. The heritage item would continue to meet the threshold for local significance.

6.9 Punchbowl Station Catchment

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

6.9.1 Summary of heritage listings

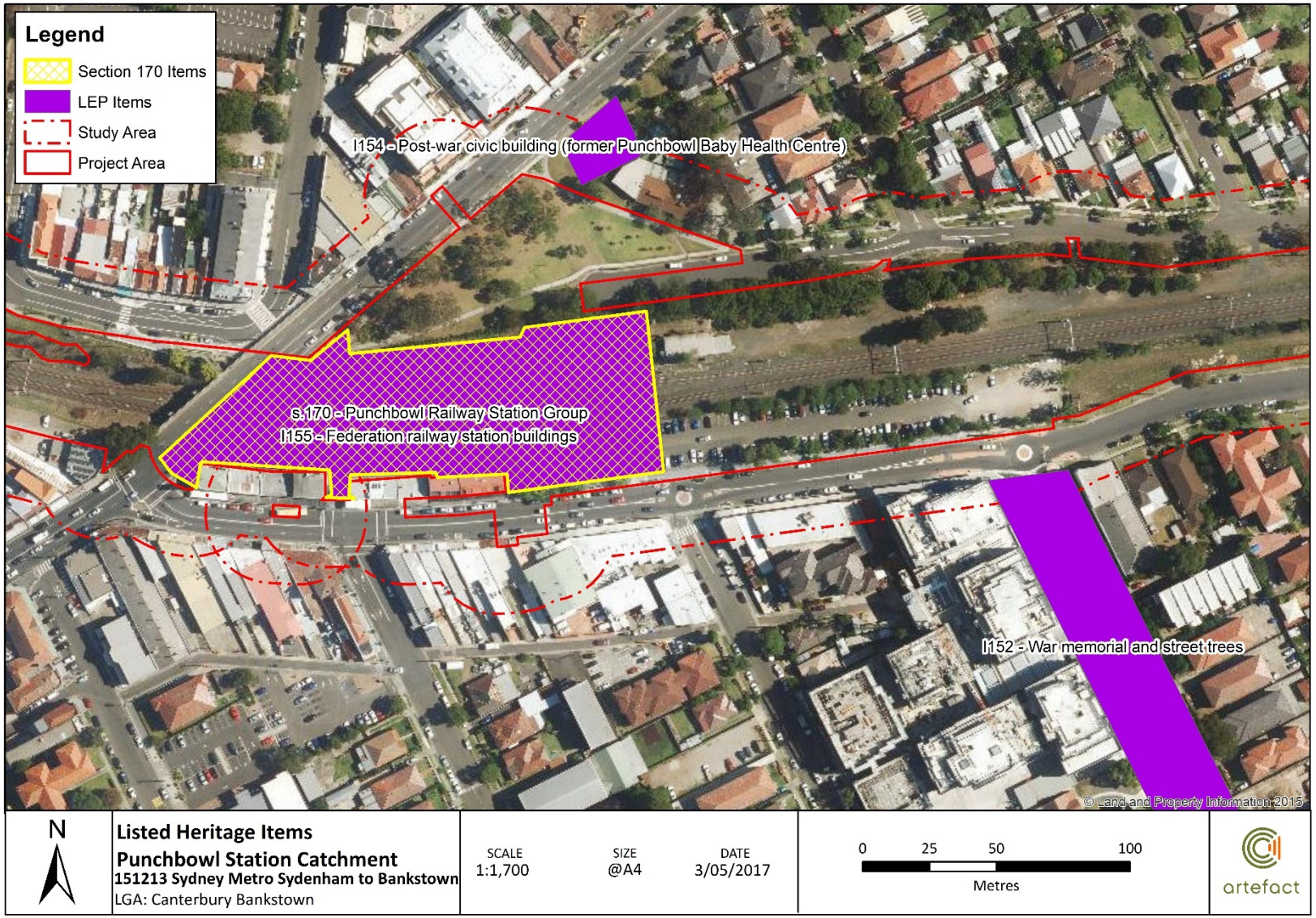
The table below provides a summary of the heritage items located within the station catchment and within the 25-metre buffer zone. An aerial map showing the heritage items within the station catchment is also provided below.

Table 73: Heritage items within Punchbowl Station Catchment and buffer zone

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

The War Memorial and street trees have been nominated for SHR listing as of 17 March 2016.

Figure 266: Aerial map showing heritage items within study area: Punchbowl



File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Punchbowl

6.9.2 Existing environment

Punchbowl Railway Station Group

Punchbowl Station was designed by NSW Government Railways and built by George Leggo between 1909 and 1929. Punchbowl Station consists of a single island platform with two later built station buildings (Figure 267 to Figure 274). The platforms are accessed by a central set of stairs which lead down from the footbridge associated with the original timber framed and weatherboard overhead booking office (Figure 275 to Figure 278). The station can be accessed by steps either from The Boulevard to the south, which is a major shopping street, or from the north via Warren Reserve and Punchbowl Road. Immediately to the west of the overhead booking office, the Punchbowl Road overbridge crosses the rail line.

The modern concrete girder overbridge is excluded from the listings.

Punchbowl Station was opened along with the line extension on 14 April 1909, at the same time as Bankstown and Lakemba. The contract for construction of station buildings was awarded to G. Leggo of Paddington. Block signalling was introduced in 1916, and a covering erected over the platform signal levers the next year.

A goods siding was opened in 1919 (removed 1981) and a station building awning added in 1924. In 1929 following electrification that occurred in 1926, there were further modifications with an overhead booking office erected, platforms lengthened, and the removal of the stairway to the overbridge. There were further developments in the 1940s, with the construction of a new lamp room and a new parcels office. A notable railway development in proximity of the station was the opening of an electric train depot in 1926. The depot closed in 1995.The northern and southern c.1930s footbridge stairs were replaced in 2014. [143]

Figure 267: View of platform building, east aspect

Figure 268: View of platform and overbridge, west aspect

[143] Artefact 2013

Figure 269: View of platform building, east aspect

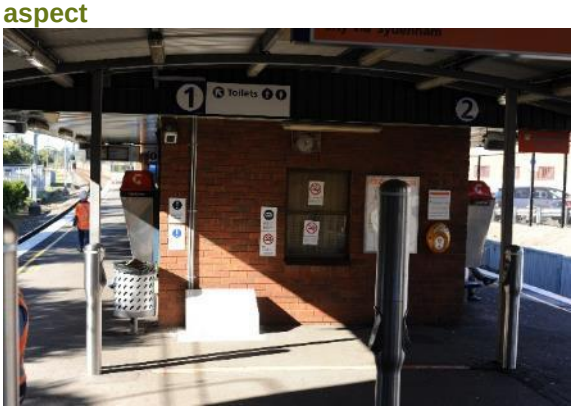


Figure 270: View of Platform 1, east aspect

Figure 271: View of platform building, east aspect

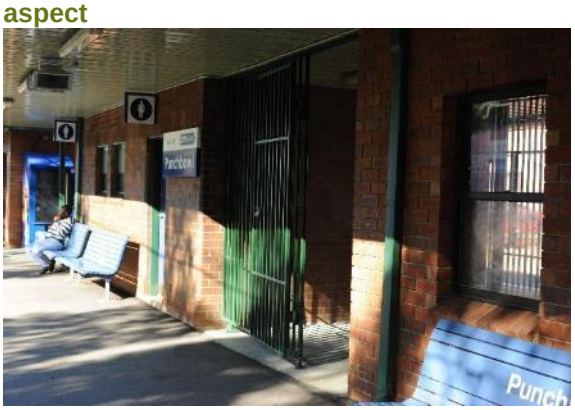


Figure 272: View of platform building, east aspect

Figure 273: View of platform building, west aspect

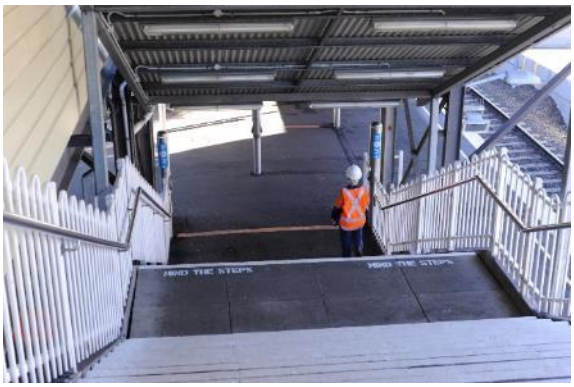
Figure 274: View of platform building, west aspect

Figure 275: View of overhead booking office and footbridge, north aspect

Figure 276: View of overhead booking office and footbridge, east aspect

Figure 277: View of overhead booking office and Platform 1, west aspect

Figure 278: View of stairs, east aspect



War Memorial and street trees

The War Memorial consists of a trachyte obelisk with laurel wreath and gilt name plate. It has a sandstone column constructed of blocks in the form of a cenotaph (Figure 279). It was dedicated in 1919 to the Punchbowl soldiers who fought in the Great War, 1914-1918. It is set in centre of the road in a memorial garden. The memorial was relocated from a site closer to Punchbowl Station in 1979. [144]

The War Memorial has the following inscription: "To the Punchbowl Soldiers who fought in the Great War 1914-1919. Their fellow citizens raised this token of appreciation".

The street trees are a planting of palms and exotics along a wide median strip up The Broadway, plus palms along Hillcrest Road (Figure 279, Figure 280). The listing includes a tall araucaria in front of No.28 The Broadway. The plantings around the War Memorial date from c.1960s and are not included in the listing.

Figure 279: View of War Memorial, south aspect

Figure 280: View of street trees, north-west aspect

6.9.3 Description of elements

Punchbowl Railway Station Group

[144] Register of War Memorials in NSW, *Punchbowl Cenotaph.*

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 74: Elements of Punchbowl Station Group

Elements	Date	Description	Condition	Significance
Platform 1/2	1909	One island platform with asphalt surface and original brick face and edge.	Generally good	High
Overhead booking office	1929	The overhead booking office is a timber framed, weatherboard clad building with a hipped corrugated steel clad roof. It is designed in the Inter-War Transitional style. The original 1929 roof configuration consisted of a simple hipped roof with Dutch gables on the eastern and western ends and which covered the booking office, the parcels office, the booking hall and the eastern and western footbridges. The later lamp room addition extended the western side of the building to the north to make the building L shaped. A bookstall was added which added a further northern but smaller extension with an awning roof. The ticket collection cabin connected to the main booking office has been removed. Overall form and patterns of glazing have been altered by the early addition of the hipped roof lamp room (now used for storage), skillion roof bookstall, enclosure of footbridges, and curvilinear profile of modern footbridge and stair awnings; lamproom and bookstall additions otherwise sympathetic to historic function; Internal fixtures and fittings replaced with modern office furniture; doors relocated; ticket windows replaced with modern ticket windows or removed; ticket collector's cabin removed; footbridge stairs, balusters and rails replaced. Notable original attributes: simple open floor-plan of bookings/parcels office; internal tongue-and-groove board lining; external weatherboard siding; multi-pane sash windows; covered booking hall with AC ceiling; Dutch-gable roof vents.	Good	High
Footbridge	1930, 2014	Typical footbridge with standard concrete platform supported on steel beams bearing on steel platform trestles and steel trestles on each side of the tracks from the Inter-War period. Extensive modifications including new balustrades to footbridge and stairs, new concrete treads and risers, a new glass enclosure and roofing canopies. The stairs to the street also have a new substructure.	Fair	Moderate
Toilet block, platform 1/2	1970s	The male and female toilets originally had a hipped roof which was replaced with a flat roof matching the adjacent main platform building. The roof spans between both buildings. Like the main building, the toilet is a simple rectangular building, with external walls of face brick, while the windows are aluminium framed.	Good	Moderate
Platform building, platform 1/2	Early 1980s	External: Simple rectangular face brick building with a flat metal deck roof and high profiled metal fascia which extends as a cantilever awning on both sides. The windows are timber double hung and the doors are flush. Internal: The building consists of a station master's office, sign-on room a store and waiting room. Inside the waiting room the walls are face brick with a concrete floor, while the other rooms have their internal walls rendered. The metal clad soffit of the awning continues through as the internal ceiling to all rooms.	Good	Moderate

Elements	Date	Description	Condition	Significance
Canopies and extensions to overhead booking office	c.2000s	A modern steel framed and steel roofed canopy has been erected over the platform access stairs and extends from the end of the main station building up to the overhead booking office. A contemporaneous canopy with glazed walling also extends across the southern footbridge.	Good	Little

6.9.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHI listings.

Table 75: Statements of significance for Belmore Station Catchment

Item	Statement of Significance	Listing
Punchbowl Railway Station Group	*Punchbowl Railway Station has local historical significance as it was one of the stations to be located on the Sydenham to Bankstown Line which was built to take pressure off the traffic on the Main South Line as well as promote agriculture and suburban development in the late 19th and early 20th centuries. The station reflects the extension of the line to Bankstown in 1909 and the overhead booking office, footbridge and stairs, reflect the development of suburbs in the area during the Interwar period.* *The overhead booking office has local aesthetic and technical significance as an example of the design by NSW Railways of these timber overhead structures built between 1910 and the 1950s. The overhead booking office is also significant as it is a fine example of its type, and because it is relatively intact with an unaltered lamp room.*	SHI
War Memorial and street trees	*An important streetscape with plantings typical of the early twentieth century in a street specially left wider than the others in the estate by the developer. Few other such streets survive in the Municipality.*	SHI

Punchbowl Station has been nominated for SHR listing as of 17 March 2016.

6.9.5 Heritage impacts

Direct impacts

Punchbowl Railway Station Group

The table below provides an assessment of the direct impacts of the 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 76: Assessment of direct impacts for Punchbowl Railway Station Group

Element	Significance	Proposed action	Assessment of impact	
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	The platform is proposed to be removed. This would have a major impact on the platform including the loss of the original brick face. The platform would be reconstructed in a straight alignment and extended to accommodate the workings of the new Metro trains. This would result in the loss of the historic curved platform. This would have a major impact on the original platform layout. The new covered concourse, access stairs, lift shaft, platform canopies and platform screen doors would be anchored and constructed on	Major

Element	Significance	Proposed action	Assessment of impact	
			the new platform. This would not further impact on significant fabric. The complete demolition of Platform 1/2 to be reconstructed in straight lines and extended to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	
Overhead booking office (1929)	High	Removal for replacement with new covered concourse including access stairs and lift shafts	It is proposed to remove the original overhead booking office for replacement with a new covered concourse including access stairs and lift shafts. The overhead booking office scored seven out of nine in the Sydney Trains Overhead Booking Offices Heritage Conservation Strategy [145]. The strategy recommends adaptive reuse of the building. The removal of the overhead booking office would have a major impact on the original footbridge and station overall.	Major
Footbridge (1930, 2014)	Moderate	Removal for replacement with new covered concourse including access stairs, lift shafts and station buildings	It is proposed to remove the footbridge for replacement with a new covered concourse including access stairs and lift shafts. The footbridge was assessed as having moderate significance in the Railway Footbridges Heritage Conservation Strategy. [146] This would have a major impact on the remaining original elements of the footbridge and a moderate impact on the station overall.	Major
Toilet block, platform 1/2 (1970s)	Moderate	Removal for replacement with new covered concourse including access stairs and lift shafts	It is proposed to remove the toilet block on Platform 1/2 for replacement with a new covered concourse including access stairs, lift shafts and new station buildings. This would have a major impact on the toilet block of moderate significance and a moderate impact on the station overall.	Major
Platform building, platform 1/2 (early 1980s)	Moderate	Removal for replacement with new covered concourse including access stairs, lift shafts and station buildings	It is proposed to remove the main building on Platform 1/2 for replacement with a new covered concourse including access stairs, lift shafts and new station buildings. This would have a major impact on the building of moderate significance and a moderate impact on the station overall.	Major
Canopies and extensions to	Little	Removal for replacement with new covered concourse	It is proposed to remove the canopies and extensions. This would result in a neutral impact on the station catchment.	Neutral

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

Element	Significance	Proposed action	Assessment of impact
overhead booking office (c.2000s)		including access stairs and lift shafts	

When considering cumulative impacts, it is assessed that the project would result in a major direct impact on Punchbowl Railway Station Group overall.

Visual impacts

Punchbowl Railway Station Group

The proposed canopies above the new concourse would be larger in scale in comparison with the existing structures on the site. However, all station buildings including the Platform 1/2 building and toilet block as well as the overhead booking office and footbridge are proposed to be removed. Therefore, the scale of the proposed new development would not visually impact the heritage components of the site as they would no longer be present. Visual impacts would rather result from the removal of all structures at Punchbowl station. As the original platform dated 1909 and the original overhead booking office and stairs dated 1929-30 are proposed to be removed, all views and appreciation of these elements would be lost. There would be visual impacts resulting from the removal of the original brick face and curved layout of the platform, and of the replacement of the original island platform with two wayside platforms. This would result in a major visual impact on Punchbowl Railway Station. The removal of later structures including the 1970s toilet block and early 1980s platform building would have moderate visual impacts on the station. Any visual impacts resulting from the proposed upgrade works to the Punchbowl Road overbridge would not further detract significant views as the setting of the station would have been fully impacted.

The nature of the new concourse, canopies and station buildings would introduce a contemporary design to the station in replacement of the existing buildings. New platform buildings, medium-scale canopies and platform screen doors would be located along the reconstructed platforms on the east side of the station. The scale and height of the proposed canopy structure, the footprint of the overall concourse, stairs, new platform and station buildings as well as the platform canopies and platform screen doors would add considerable bulk to the originally low-scale station catchment. As a result, the new Metro station would come to replace the early nineteenth-century railway station with layers of 1970s and 1980s development with a contemporary transport interchange.

The proposed removal of all significant buildings and structures within the station would have a major visual impact where no original elements are retained to demonstrate the significance of the station for future appreciation. The project would fully re-develop the existing early nineteenth-century railway station with layers of 1970s and early 1980s development into a modern precinct.

When considering cumulative impacts, it is assessed that the project would result in a major visual impact on Punchbowl Railway Station Group.

War Memorial and street trees

No works are proposed to the War Memorial and street trees located on The Broadway as part of the project. A small section of the curtilage of the War Memorial and street trees is located within the study area where roads in proximity of Punchbowl Railway Station would provide access during the construction phase of the project. The area of impact does not comprise any of the significant trees which from part of the heritage significance of the item, and the War Memorial is located outside the project area to the south-east. Therefore, it is assessed that visual impacts to the heritage item would remain neutral and that any visual impacts of road works would be negligible.

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 neutral visual impact on the item.

Visual impacts on the War Memorial and street trees would be negligible.

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, platform canopies, and a concourse canopy to a height of approximately 5.4m above the concourse. 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.

Potential direct impacts

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

Table 77: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Punchbowl Railway Station Group	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
War Memorial and street trees	Vibration levels would be under the cosmetic damage screening level.	Negligible
Post-war Civic Building (former Punchbowl Baby Health Centre)	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.9.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW OEH (Statement of Heritage Impact, 2002).

Table 78: Summary of Heritage Impacts – Punchbowl Station Catchment

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items located within the	• Neutral direct and negligible visual impacts on the War Memorial and street trees located along The Broadway • Negligible visual impacts on the Post-war Civic Building (former Punchbowl Baby Health Centre)

Impact on a heritage item	Discussion
station catchment and the 25-metre buffer zone.	• Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Removal of all elements of high significance within the station group including the 1909 island platform and the 1929 overhead booking office • Removal of all elements of moderate significance within the station group including the remaining original elements of the 1930 footbridge, the 1970s toilet block and the early 1980s platform building • Major direct and visual impacts on the station catchment due to the removal of all original structures and redevelopment of the early nineteenth-century catchment into a contemporary transport interchange

6.9.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Punchbowl Station Catchment and the 25-metre buffer zone:

Punchbowl Railway Station Group

The impacts of the project on Punchbowl Railway Station would be major. All elements of high and moderate significance within the station would be removed. There would be no tangible elements of significance remaining. This would have major direct and visual impacts on the station as a whole. The new development would introduce contemporary structures and alter the character of the station from an early nineteenth-century station with layers of 1970s and early 1980s development into a contemporary transport interchange. The setting of the station would be fully impacted.

The demolition of all original structures of high and moderate significance at Punchbowl Railway Station would remove the original station developed between 1909 and 1929 as well as its later layers of development dated from the 1970s and early 1980s. Punchbowl Railway Station is historically significant for being one of the original railway stations dated from the second stage of development of the Sydenham to Bankstown Line. A good example of an Inter-War Transitional style overhead booking office in the NSW railway networks would be lost, as would the original island platform. Therefore, the aesthetic significance of the station would be fully impacted. Although the existing structures have been subject to modifications overtime, their significance is retained in their historical and representative values as well as in substantial original fabric.

When assessed cumulatively, the level of heritage impact of the project on Punchbowl Railway Station Group would be major. The significance of the station is encompassed in its historical use which is represented by tangible elements including platforms and individual buildings. By removing these elements, there would be no tangible elements to represent the historic role of the station. The aesthetic significance of the station demonstrated in its nineteenth-century architecture with layers of 1970s and early 1980s development would also be lost. Interpretation would be able to convey the previous significance of the site but would not fully mitigate impacts and would not enable the heritage item retain its local significance. Therefore, the heritage item would no longer meet the threshold for local significance and would likely be delisted.

War Memorial and street trees

The direct impacts of the project onto the War Memorial and street trees would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the War Memorial and street trees would be negligible. The heritage item would continue to meet the threshold for local significance.

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

The direct impacts of the project onto the Post-war Civic Building would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Post-war Civic Building would be negligible. The heritage item would continue to meet the threshold for local significance.

6.10 Bankstown Station Catchment

The Bankstown Station Catchment includes two heritage items, the Bankstown Railway Station Group and the Bankstown Parcels Office (former). The buffer zone around the station catchment includes one heritage item.

6.10.1 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. An aerial map showing the heritage items within the station catchment is also provided below.

Table 79: Heritage items within Bankstown Station Catchment and buffer zone

Item	Suburb	Significance	Listing
Within project area			
Bankstown Railway Station Group	Bankstown	Local	RailCorp S.170 Heritage and Conservation Register (4802067) Bankstown LEP 2015 (I3)
Bankstown Parcels Office (former)	Bankstown	Local	RailCorp S. 170 Heritage and Conservation Register (4802067) Bankstown LEP 2015 (I4)
Within buffer zone (outside project area)			
Shop	Bankstown	Local	Bankstown LEP 2015 (I13)

Figure 281: Aerial map showing heritage items within study area: Bankstown

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_BT

6.10.2 Existing environment

Bankstown Railway Station Group

Bankstown Station was designed by NSW Government Railways and built by George Leggo between 1908 and 1948. Bankstown Station is accessed from North Terrace and Old Town Centre Plaza. It has one island platform, an original building on the platform, an overhead booking office, a footbridge and a former parcels office which is located on the south side of the station opposite the east end of the platform (Figure 282 to Figure 287). The North Terrace overbridge crosses over the western end of the station and runs parallel to the footbridge (Figure 288, Figure 289). There is a considerably high level of commercial activity on either side of the station.

The construction contract for the Belmore to Bankstown section was awarded to Monie Bro on 13 November 1907. Bankstown Station was opened as a terminal on 14 April 1909, with Lakemba and Punchbowl Stations also opening at the same date. The extension of the line to Bankstown triggered a huge real estate boom in the area from 1909 until the late 1920s.

The original island platform was 145 metre long, with the tender for construction of the original brick buildings being awarded to George Albert Leggo on 25 August 1908. A contract was also awarded around this time for the construction of a station master's residence, which was to be located on the northern side of the tracks, near the goods yard and a goods shed built to the west of the old Chapel Road overbridge.

During 1910 a single tier water tank on a steel stand was erected on the south side, at the western end of the platform, near the overbridge, for the use of locomotives off terminating trains. The tank was removed in c.1970s. In the early 1920s, a pillar water tank and ash pit were provided for the up track locomotives.

The station expanded as Bankstown developed into a major centre. The station was provided with a parcels office in 1915, though this was superseded by a new parcels office and booking office in 1925, as well as platform extensions in 1926 for the electrification of the railway.

A TAP upgrade was proposed on the footbridge and overhead booking office in 2012. Works including installation of new stairs, ramps, canopies and ticket barriers were completed in 2015.

Figure 282: View of platform building, west aspect

Figure 283: View of Platform 1, west aspect

Figure 284: View of platform building, east aspect

Figure 285: View of Platform 1, east aspect

Figure 286: View of platform building detail, east aspect

Figure 287: View of Platform 1, west aspect

Figure 288: View of overbridge, west aspect

Figure 289: View of overbridge abutment, west aspect

Bankstown Parcels Office (former)

The parcels office is a Railway Stripped Functionalist style building (Figure 290 to Figure 292). It is a polychromatic brick face building with a flat roofed structure with asymmetrical massing. The building is accessible from the tracks and from the street as it has an entrance portal to its western face, a brick and concrete entrance portico to its eastern face and a timber and metal platform facing the tracks. The building has a number of Inter-War Functionalist influenced elements such as steel-framed circular porthole windows, steel-framed, multi-paned ribbon windows which are set within recessed and continuous stretches of concrete sills and lintels. The parcels office is currently used as a storage facility.

The building is of masonry construction with a parapeted roof and simple geometric massing. The building relies on simple but effective fenestration for decorative effect, including ribbon and porthole

windows, as well as the use of heeler and bullnosed bricks. The main elevation uses simple stepped massing to create interest, with a central recessed portico flanked by two, bullnosed brick piers. A dominant porthole window with stepped recessed sills and eight bands of horizontal projecting dichromatic brickwork in a garden wall bond add to the visual effect. The rear elevation of the building is similarly arranged, with the addition of a cantilevered steel awning over the entrance and a single bullnosed brick pier. The street elevation of the building is defined by steel framed ribbon windows interspersed with courses of heeler bricks in a lighter colour than the main bond, and bands of projecting dichromatic brickwork in garden wall bond. The overall design is characteristic of twentieth century railway Functionalism and displays the heavy influence of naval design in both massing and decorative detail.

No original plans for the former Bankstown Parcels Office have been located, but it is an excellent example of the Functionalist style in a railway context. Between 1925 and 1950, the State Rail Authority of NSW (SRA) planned buildings at 70 locations that reflected Art Deco and Functionalist design influences.

The bulk of these were passenger platform buildings, but in some instances ancillary building (most commonly parcels offices) were also erected under these design influences. Of these, only one other example of a Functionalist parcels office has survived, at Granville Station in Sydney's west. Although useful as a comparative example, the Granville parcels office does not display the same degree of architectural finesse or design detail as the Bankstown Parcels Office. The buildings erected during this period fall into four major design categories, of which twentieth Century Functionalist is the least common. This style is characterised by the use of projecting parapets to conceal the roof form; curves in the plan form; cantilevered steel awnings; steel framed windows (usually arranged in horizontal or vertical strips of glazing); porthole windows (often with recessed sills); horizontal string courses; stacked forms; complex geometric massing and decorative brickwork. The design was strongly influenced by the work of Willem Dudok; a Dutch architect whose style became popular in England in the early twentieth century before making its way to Australia in the Inter-War period. The Dudok style was disseminated in Australia by a number of architects, particularly Harry Rembert, then an architect with the NSW Government Architect's Office. The twentieth Century Functionalist style was generally reserved for major junction or terminal stations and the appearance of this style is generally a good indicator of the station's importance in the metropolitan rail network. Interestingly, the platform buildings at Bankstown Station are earlier and not executed in this style. The former Bankstown Parcels Office is a particularly fine example of the style, indicating the presence of an experienced and confident architect, itself an unusual occurrence in a department that looked almost exclusively to its engineers for building design. Understandably, these buildings that were designed by architects from outside the railways tend to "stand out" and the former Bankstown Parcels Office is likely to be such a building.

Figure 290: View of parcels office, north aspect

Figure 291: View of parcels office, west aspect

Figure 292: View of parcels office, south-west aspect

6.10.3 Description of elements

Bankstown Railway Station Group

The table below outlines the main structures and elements comprised within the railway station group. Information such as date, description and condition is provided, and the significance of each element has been graded.

Table 80: Elements of Bankstown Station Group

Elements	Date	Description	Condition	Significance
Platform 1/2	1909	Platform 1/2 has is an island platform arrangement with original brick faces.	Good	High
Platform building, platform 1/2 (Type 11) [147]	1909, 1923	External: Rectangular building eight bays long with stretcher bond brickwork. The bays are defined by engaged brick piers that have decorative concrete corbels and standard steel double bowed brackets that support cantilevered awnings. The awnings which have curtain board fascia are integrated with the gable roof of the building and the roofing material for both the awning and the roof is corrugated steel. The roof has original timber finials. The brickwork is polychromatic with dark bricks throughout and a dado of lighter ochre coloured bricks which are also repeated at a ceiling level as a moulded course. Original chimneys with cement mouldings and terracotta flues have been retained. The external walls rise from a projecting brick plinth with a decorative two part cement dado moulding which is continuous between door and window openings. Cement window and door frames rise from the dado moulding. Most of the door and window openings are original and the windows feature a decorative moulded cement sill. The original timber windows were double hung with double paned lower sashes and in some cases louvered upper sashes and in others multi-paned upper sashes featuring coloured glass. The doors are timber panelled and had fanlights fitted with multi-paned coloured glass sashes. The eastern end brick gable wall features a louvre within a round brick window framed in voussoir shaped bricks, with four cement keystones. Most of the original windows have been retained, while some have	Good	Exceptional

[147] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		been fitted with steel safety grills towards the inside and in other cases a few windows have been removed and the openings have been bricked in. Most of the original doors have been retained, and some have been fitted with flyscreen meshes towards the outer side and aluminium safety grills towards the inside. The original door opening to the eastern end gable wall has been readjusted so as to centre it, and it has been fitted with a new timber panelled door and fanlight. Part of the western end gable wall has been demolished and the openings created have been fitted with two new multi-paned windows and fanlights. Internal: The building was originally six bays long and comprised of a booking office, a general waiting room, a ladies waiting room with an attached lavatory and male toilets. In 1923 two bays were added to the eastern end of the building and a parcels office was incorporated as part of the building. Currently the building comprises of a control room, staff locker and lounge areas, public toilets and a store. Original pressed metal ceilings with ceiling roses have been retained in some of the rooms.		
Overbridge	1909, 1997	The Bankstown City Plaza overbridge crosses over the western end of the station. The structure is a modified steel jack-arch overbridge which comprises of filled in arched brickwork between steel web-girders, supported by central brick piers and side brick abutments. The bridge has been widened and modified with new concrete structure and new surfacing. The brick piers and abutments have been retained. The concrete planks are supported on the existing brick piers and abutment banks seats. The overall length of the bridge is approximately 26m. The original brick parapets have been removed.	Fair	Moderate
Overhead booking office (Type 19) [148]	1948	External: It is a weatherboard structure occupying most of the western side of the footbridge and it includes an office space to the north. The booking office had five ticket windows facing onto the concourse. The attached office space has an original timber double hung window with multi-paned upper and lower sashes and an original timber multi-paned pivot fanlight. Both the windows have been fitted with steel safety grilles to the outside. Adjacent to the booking office is a three storey brick shopping centre which is not included in the listing. Internal: The original booking office was larger than it is currently. Part of the southern end of the original booking office was partitioned off and integrated with the tenancy space next to it. All the original windows along the western face of the booking office have been removed. There were initially five ticketing windows and one has been retained. Other original fabric that remains includes the original internal wall between the booking office and office space to its north and all steel structural columns.	Good	Moderate
Footbridge	1948	The footbridge runs over the western end of the platforms. The entrances to the station are from Old Town Centre Plaza and North Terrace via the footbridge. However, unlike this north-south orientated entrance, the original entrance to the station was along the east-west	Good	Little

[148] See Section 2.2.6 Station building types

Elements	Date	Description	Condition	Significance
		central axis of the footbridge connecting the existing stairs to the overbridge to the west. The footbridge comprises of a concourse area and stairs that lead down to the platforms. It is made of in-situ reinforced concentre slabs resting on a system of steel columns, girders and braces and is a fully covered structure. It has weatherboard walls and a combination of roof types including pyramid roofs and hipped roofs and all the roofs are made of corrugated steel sheeting. The original functions on the footbridge included a booking office and newsagency along its western end, two porter cabins and a staff room to the eastern edge. Currently the footbridge accommodates the booking office, a newsagency along its west end, the station manager's office at its south-western corner, a lift and ticket barriers to its north-western end.		
Canopies	Modern	The canopy which covers the space on the platforms between the platform building and the stairs leading down from the footbridge is a recent structure. It is composed of a series of overlapping canopies. The central canopy has two sections, one is a gabled roof structure made of aluminium and glass, the other is corrugated steel, flat roofed structure, and it is flanked on either side by corrugated steel, skillion roofed canopies. All the canopies rest on steel I columns and beams.	Good	Intrusive
Landscape/natural features		There is a palm tree planted next to the eastern end entrance portico of the former parcels office and it is possible that the tree was planted at the time of construction of the parcels office.	Good	Moderate

6.10.4 Statements of significance

The following statements of significance for the heritage items located within the project area are reproduced from the SHI listings.

Table 81: Statements of significance for Belmore Station Catchment

Item	Statement of Significance	Listing
Bankstown Railway Station Group	*Bankstown Railway Station complex has local significance as a station which dates from the early 20th century expansion of the railways between Belmore and Bankstown undertaken to accommodate suburban development, particularly the war service residential development which took place during the interwar period. The collection of railway structures dating from the 1909 opening of the station and its expansion in the 1940s reflect the real estate boom in the area and the development of Bankstown into a major centre. The 'initial island' platform building, Railway Stripped Functionalist style former parcels office, timber overhead booking office and footbridge collectively characterise the type of construction and architectural style employed in early 20th century railway station buildings and associated structures in the Sydney region.*	SHI
Bankstown Parcels Office (former)	*The Former Bankstown Parcels Office is an excellent example of Inter-War Functionalist design in an urban railway setting. The building is well executed and displays many typical stylistic elements of Functionalist station buildings in NSW. The building's design displays a sound understanding of the philosophies and architectural principles of Functionalism. The building has significance as part of a wider typological group in NSW, as well as part of a smaller sub-set of similar buildings in Sydney's western suburbs, and individually. The building is notable for its use of decorative bonded brickwork, bullnosed and heeler bricks,*	SHI

Item	Statement of Significance	Listing
	parapeted roof line, ribbon and porthole windows. The building demonstrates the effects of war time financial constraints on building programs for large organisations such as State Rail and has social value through its reflection of these war time values.	

6.10.5 Heritage impacts

Direct impacts

Bankstown Railway Station Group

The table below provides an assessment of the direct impacts of the 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 82: Assessment of direct impacts for Bankstown Railway Station Group

Element	Significance	Proposed action	Assessment of impact	Impact summary
Platform 1/2 (1909)	High	Existing station platforms would be retained and a new island platform would be provided to the east of the new station entrance. Platform to be rebuilt in straight alignment to the east; covered concourse, access stairs, lift shafts, platform canopies and platform screen doors to be anchored on section of extended platform	The platform is proposed to be retained except for the eastern end of the platform. The platform would be reconstructed in a straight alignment and extended to the east to accommodate the workings of the new Metro trains. This would result in the loss of the historic curved platform. This would have a major impact on the original platform layout. The new covered concourse, access stairs, lift shaft, platform canopies and platform screen doors would be anchored and constructed on the new platform. This would not further impact significant fabric. A platform canopy would be constructed on the existing platform to the east of the current station building. This would have a moderate direct impact to the platform. The partial removal of the eastern end of Platform 1/2 to be reconstructed in straight lines and extended to accommodate the workings of the new Metro trains would result in a major impact on the station group overall.	Major
Platform building, platform 1/2 (Type 11) (1909, 1923) [149]	Exceptional	Retention for re-use with potential retrofitting	The retention of the platform building is a positive heritage outcome in the context of the project. Retrofitting for new accommodation should be designed to minimise impacts to original fabric. Original layout should be preserved where possible. The opportunity could be taken to remove any intrusive modifications to the structure. Any additions to the building and platform should be designed to be sympathetic to the heritage context and minimise fabric and visual impacts. The project would have a minor impact on the heritage values of the building and station overall.	Minor

[149] See Section 2.2.6 Station building types

Element	Significance	Proposed action	Assessment of impact	Impact summary
Overbridge (1909, 1997)	Moderate	Retention and upgrades	The structure is proposed to be retained for ongoing use with a maintenance and protection works overhaul. This would involve removal and replacement of the non-significant parapets. This would result in a minor impact on the overbridge and Bankstown Railway Station.	Minor
Overhead booking office (Type 19) (1948) [150]	Moderate	Retention for ongoing use	The structure is proposed to be retained for ongoing use. This would result in a neutral impact on the overhead booking office and Bankstown Railway Station. The overhead booking office is not identified in the Sydney Trains Overhead Booking Office Conservation Strategy.	Neutral
Footbridge (1948, 2012-13)	Little	Retention for ongoing use	The structure is proposed to be retained for ongoing use. This would result in a neutral impact on the footbridge and Bankstown Railway Station. The footbridge was assessed as having little significance as per the Railway Footbridges Heritage Conservation Strategy.[151] Footbridges of little significance can be conserved and adapted or where there is no reasonable alternative, demolished.	Neutral
Canopies (Modern)	Intrusive	Retention for ongoing use	The structure is proposed to be retained for ongoing use. This would result in a neutral impact on Bankstown Railway Station.	Neutral
Landscape/ natural features	Moderate	Retention	Landscape elements at Bankstown Railway Station are limited to a palm tree next to the eastern end entrance portico which may have been planted at the time of construction of the parcels office. The tree is proposed to be retained as existing. This would result in a neutral impact on the existing landscape features and Bankstown Railway Station.	Neutral

When considering cumulative impacts, it is assessed that the project would result in a moderate direct impact on Bankstown Railway Station Group overall.

Bankstown Parcels Office (former)

The parcels office is a Railway Stripped Functionalist style building with polychromatic brick face, flat roofed structure with asymmetrical massing. The parcels office has good integrity and is currently used as a storage facility. The structure is proposed to be retained for ongoing use. This would result in a neutral direct impact on the parcels office and Bankstown Railway Station.

Any retrofitting for re-use of the parcels office should be designed to minimise impacts to original fabric. The original layout should be preserved where possible. The opportunity could be taken to

[150] See Section 2.2.6 Station building types
[151] NSW Government Architect's Office Heritage Group 2016. *Railway Footbridges Heritage Conservation Strategy*. Prepared for Sydney Trains.

remove any intrusive modifications to the structure. If these considerations are implemented, it is expected the project would have a minor direct impact on the heritage item.

Direct impacts of the works onto Bankstown Parcels Office (former) would be neutral.

Visual impacts

Bankstown Railway Station Group

The proposed new structures would be sited on the east side of Bankstown Station on a platform extension and be located at a distance from the existing station buildings. The overhead booking office, footbridge, platform building and part of the brick platform would remain on the west side. There would be a visual impact resulting from straightening of the eastern curved layout of the platform. This visual impact would be moderate overall.

The contemporary nature of the new development would differ from the existing heritage character of the station group, however, this would create a contradistinctive relationship with the historic components of the site. The new station buildings would be of a similar scale as the heritage buildings and located at a notable distance. This would have a minor visual impact. The new concourse and access stairs would add considerable footprint and bulk within the station. However, they would also be located at a distance of approximately 80 metres from the platform building. The bulk of the new covered concourse would be reduced by this distance so that visual impacts would remain minor. A new platform canopy would be located on the current platform to the east of the station building and would extend within two meters of the significant platform building resulting in a moderate visual impact.

Medium-scale canopies and platform screen doors would be located to the east of the new concourse and would be mostly screened from significant views. Platform screen doors would rise to human height along the platform extension to accommodate the specific workings of Metro trains. These screen doors would be made of a steel structure and glazing. The proposed platform screen doors would not be located along the original platform and would not obstruct views onto the platform building.

Overall, the project would add a contemporary layer of development on the east side of the station in contrast with the heritage components on the west side. Views onto the heritage buildings within the station catchment would be partially obscured by the large ribbon canopy extending from the concourse to the west. The new concourse would be large in scale but would be located at a notable distance from the heritage structures so that they would not be overly dominant. The project would alter the existing setting of Bankstown Railway Station and the large ribbon canopy would partially obstruct views onto the platform building, resulting in moderate visual impacts overall.

The services building would not visually dominate significant elements of the station catchment as it is located around 150m to the east.

When considering cumulative impacts, it is assessed that the project would result in a moderate visual impact on Bankstown Railway Station Group.

Bankstown Parcels Office (former)

The Railway Stripped Functionalist building has a number of Inter-War Functionalist influenced elements such as steel-framed circular porthole windows, steel-framed, multi-paned ribbon and has good integrity. The structure is proposed to be retained for ongoing use. This would result in a neutral visual impact on the parcels office and Bankstown Railway Station.

Any retrofitting for re-use of the parcels office should be designed to minimise impacts to original fabric and retain original detailing and features. The original layout should be preserved where

possible. The opportunity could be taken to remove any intrusive modifications to the structure. If these considerations are implemented, it is expected the project would have a minor visual impact on the heritage item.

Visual impacts on Bankstown Parcels Office (former) would be neutral.

Shop

The Shop is located approximately 55m south-east of the eastern end of the station platforms. Views towards the railway corridor and station are currently mostly screened by vegetation and the existing bus interchange along South Terrace. The proposed new canopy and concourse would be located in the eastern section of the station to the north of the heritage item but would remain mostly screened by existing development and vegetation.

Visual impacts on the Shop would be negligible.

Potential direct impacts

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

Table 83: Potential direct impact assessment

Item	Potential direct impact assessment	Impact
Bankstown Railway Station Group	Vibration levels would be under the cosmetic damage screening level.	Negligible
Bankstown Parcels Office (former)	Modelling indicates that the closest façade of this item would experience vibration levels above the screening level for cosmetic damage. Further assessment and management would be undertaken in accordance with management measures outlined in Technical Paper 2 - Noise and vibration assessment.	Minor
Shop	Vibration levels would be under the cosmetic damage screening level.	Negligible

6.10.6 Overview of impacts

The table below provides a summary of impacts in accordance with the guidelines by the NSW Office of Environment & Heritage (Statement of Heritage Impact, 2002).

Table 84: Summary of Heritage Impacts – Bankstown Station Catchment

Impact on a heritage item	Discussion
Aspects that enhance the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Retention for re-use of the element of exceptional significance, the Platform 1/2 building, with potential for positive heritage impacts during retrofitting and upgrade works • Retention for ongoing use of elements of moderate significance within the station including the overhead booking office and overbridge • Neutral impacts of the retention of elements of little or intrusive significance such as the modified footbridge or modern canopies • Neutral to minor direct and visual impacts of the retention of the Parcels Office, with potential for positive heritage impacts if retrofitted for re-use • Neutral to negligible visual impacts to heritage items in the buffer zone

Impact on a heritage item	Discussion
	• Provided that mitigation measures are implemented, negligible to minor potential direct impacts as a result of vibrational work in the vicinity of heritage items • Continued use of the heritage item in its historical function as part of the evolution of the Bankstown Line
Aspects that would detrimentally impact on the heritage significance of the heritage items located within the station catchment and the 25-metre buffer zone.	• Major direct and moderate visual impacts to the 1909 platform of high significance • Moderate visual impact on the Bankstown Railway Station Group overall

6.10.7 Statements of heritage impact

The following statements of heritage impact are provided for the heritage items located within Bankstown Station Catchment and the 25-metre buffer zone:

Bankstown Railway Station Group

The direct impacts on Bankstown Railway Station would be moderate. The platform building of exceptional significance would be retained with potential for positive impact. The eastern curve of the original platform of high significance would be removed which would result in a major direct impact. All other heritage elements would be retained. Views onto the heritage buildings would not be obstructed by the new Metro concourse which would be located at a notable distance from the existing station. Views onto the heritage buildings within the station catchment would be partially obscured by the large ribbon canopy extending from the concourse to the west. Due to the obstruction of views, visual impacts on the station would be moderate overall. Potential direct impacts as a result of vibration would be negligible.

The retention of all elements of significance at Bankstown Railway Station, apart from the curved eastern section of the original platform, would enable the station to continue to demonstrate its historic, aesthetic and representativeness significance. The retention of the platform building of exceptional significance would retain the historical values of the place as one of the original railway stations dating from the early 20th century expansion of the railways between Belmore and Bankstown on the Bankstown Line. The platform building is an excellent example of its type and would continue to contribute to the presentation of the station.

When assessed cumulatively, the level of heritage impact of the project on Bankstown Railway Station Group would be moderate. Based on the historical significance of the station and the heritage values of the retained buildings, the heritage item would continue to meet the threshold for local significance.

Bankstown Parcels Office (former)

The direct impacts of the project onto the Bankstown Parcels Office (former) would be neutral. The proposed works in the vicinity would result in a neutral visual impact overall. Potential direct impacts as a result of vibration would be minor provided that mitigation measures are implemented.

When assessed cumulatively, the level of heritage impact of the project on the Bankstown Parcels Office (former) would be neutral. The heritage item would continue to meet the threshold for local significance.

Shop

The direct impacts of the project onto the Shop would be neutral. The proposed works in the vicinity would result in a negligible visual impact overall. Potential direct impacts as a result of vibration would be negligible.

When assessed cumulatively, the level of heritage impact of the project on the Shop would be negligible. The heritage item would continue to meet the threshold for local significance.

7. ARCHAEOLOGICAL ASSESSMENT

The potential for a site to contain historical archaeology is assessed by identifying former land uses and associated features through historical research, and evaluating whether subsequent actions (either natural or human) may have impacted on evidence for these former land uses. The significance of those potential archaeological remains is then assessed using a framework based on the NSW heritage criteria.

This historical archaeological assessment is based on the following:

- review of heritage and archaeological site listings
- analysis of historical background and maps
- understanding of previous impacts
- assessment of archaeological significance.

7.1 Marrickville Station Catchment

7.1.1 Land use summary

The historical development of the Marrickville Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1850s) early land grants: land clearance, timber getting, farming, dairying, market gardens
- Phase 2 (1850s – 1890s) subdivision and industry: subdivision for country estates, Marrickville village and later residential development, market gardens and dairying give way to small-scale brickmaking businesses and other industry
- Phase 3 (1890s – 1920s) railway station: construction of railway station in 1894-5 with standard design, upgrades including Metropolitan Goods line in 1917, electrification in the 1920s
- Phase 4 (1930s – present) railway station: upgrades and continued use

Construction of the railway station and rail line in the late nineteenth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.1.2 Archaeological potential

The Marrickville Station CMP (David Scobie 2016) identified the following potential archaeological remains.

Table 85: Archaeological potential identified in CMP 2016

Station Element	Potential Archaeological Remains
Platform 1	• The remnants of the original stone copings on Platform 1 remain beneath the western end, as revealed in the 2015 excavations – confirmed relics and works with significance • Earlier alignment of the north side of the eastern end of the platform • The footscrapers at the door thresholds and buried services within the platforms concealed by later re-surfacing – a high potential for relics with significance; • Identified within the vicinity of the new lift and stairs are likely to be remnants of the original lever set. The manual set of levers for activating the points was demolished when the system was automated - a high potential for relics of significance in relation to signalling • The current concrete staircase replaced earlier stairs to the Illawarra Road bridge from Platform 1 – a high potential for works with low significance • The original bull nose canopies at the eastern and western ends of the Platform 1 building were replaced with extended skillion roofed canopies – a medium potential for works with low significance • Remnants of brick dwarf walls as part of the alignment of the eastern ends of the platforms running both north south and east west beneath the Platform 1 surfaces were revealed in the 2015 excavations for services – a high potential for works with low significance. • The Illawarra Road bridge replaced the original level crossing – a low potential for relics
Platform 2	• Potential for early works and relics at the western end • The Illawarra Road bridge replaced the original level crossing – a low potential for relics • The footscrapers at the door thresholds and buried services within the platforms concealed by later re-surfacing – a high potential for relics with significance
Platform 1 building	• One ceiling space has revealed an early water tank utilised to provide a head of pressure for the original toilets. Other ceiling and roof void spaces have the potential to reveal similar artefacts such as water tanks and redundant services; and • Areas within the building which have been subject to less substantial change have the potential to reveal early fabric and details which may have been concealed by later works such as fireplaces and chimney breasts.
Platform 2 booking office	• Archived drawings indicated that the building had been relocated and extended in 1945 to the current location at the western end of Platform 2. Simple brick footings and services connections were revealed at the last location. Similar footings with a concrete foundation were constructed in the new location.

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 86: Assessment of archaeological potential for Marrickville Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1850s)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with land clearance such as tree boles, evidence of dairy farming and market gardening including fence line postholes, former shed postholes, brick or paved yard surfaces, field drains, isolated artefact scatters.	Nil-low

Phase	Likely archaeological remains	Potential
2 (1850s – 1890s)	• No documentary evidence of specific activities such as brickmaking or residential development within the site. • Archaeological features associated with farming such as fence or shed postholes, field drains and isolated artefacts, drains or culverts associated with the former creek	Nil-low
3 (1890s – 1920s)	• Archaeological remains associated with the early phase of railway infrastructure such as ceramic service pits, brick drainage pits, electrical conduits and pits, stanchion bases, sleepers and rail track. • Identified remains of original stone copings, earlier alignment of platforms, footscrapers, buried services, original lever set, footings of former platform stairs, platform brick dwarf walls, and building footings. • Moderate potential for footings of former platform canopies • Low potential for former level crossing at the current Illawarrra Road overbridge • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.	Moderate-high
4 (1930s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate-high

7.1.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 87: Assessment of archaeological significance for Marrickville Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 and Phase 2 would be present within the site. Any remains would be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 3 former rail infrastructure would be able to contribute additional information not available from other historical resources.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and early twentieth centuries. Marrickville Station was built as part of the Bankstown Line between (1895-1939). The potential Phase 3 archaeological remains are associated with the historical development of Bankstown rail line and Marrickville Station.
Aesthetic or technical significance	• The potential archaeological remains are not likely to have aesthetic value. • Remains of former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains have potential to illustrate the early development of the railway station.

Criteria	Discussion
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Moderate to high potential for archaeological 'works'. • The potential Phase 3 and 4 archaeological remains are associated with the historical development of the Bankstown rail line and the Marrickville Station, although they are likely to be truncated. • Potential to reach the threshold for local heritage significance. Note that most potential remains identified by the CMP would be classified as works not relics.

7.1.4 Impact assessment

Proposed impacts within the Marrickville Station Catchment would include the construction of station platforms along the rail corridor, gas pipeline and CSR utility installation and trenching, the installation of drainage pipes, single grate drainage pits, gas pipelines and CSR utilities, the removal and replacement of the Illawarra Road overbridge, and the construction of a proposed noise wall along the southern boundary of the station between Riverdale Avenue and Charlotte Avenue overbridge. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are likely to be impacts to potentially significant archaeology as a result of these works.

7.1.5 Mitigation and management measures

The area within the Marrickville Station Catchment has been assessed as having low potential to contain archaeological remains associated with Phase 1 and 2 and moderate to high potential to contain archaeological remains associated with Phase 3 and 4 occupation of the site. The majority of potential archaeological remains are not considered likely to reach the threshold of local significance. However, remains associated with Phase 3 may reach the threshold for local significance if intact or substantial remains are found to exist within the project area.

The Marrickville Railway Station CMP (2016) identified a number of visible and potential remains that were discussed in terms of archaeology. While the majority of identified remains would be classified as works and would be managed archaeologically, a number such as the water tank in the celling cavity would be managed under the significant fabric salvage strategy (Section 10), as they would not be considered archaeological under the definition provided in the Heritage Act.

As there is potential for remains associated with Phase 3 occupation of the site to have local significance, it is recommended that an Archaeological Research Design be prepared to manage and mitigate impacts to the potential archaeological resource. Any items to be managed under the salvage strategy would be identified in an Archaeological Research Design prepared and implemented to identify the need for archaeological testing or monitoring.

Archaeological mitigation measures recommended in the archaeological research design would be carried out in accordance with Heritage Council guidelines, and where identified in the archaeological research design, would be supervised by a suitably qualified Excavation Director with experience in managing locally significant archaeology.

Where an archaeological research design is required, it would be prepared based on research information included in this report and would be supplemented by additional detailed historical research of each site with reference to the project design and proposed construction methods at each site. Based on the detailed literature review, the archaeological research designs would identify the need for and provide a detailed methodology for undertaking:

- Archaeological monitoring

- Investigation and recording archaeological remains identified in the CMP

7.2 Dulwich Hill Station Catchment

7.2.1 Land use summary

The historical development of the Dulwich Hill Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1840s) early land grants and the Petersham Estate: land clearance, timber getting, grazing, farming activity, deer hunting
- Phase 2 (1840s – 1890s) market gardening and subdivision: development of market gardening and orcharding, small scale industry such as brickmaking and potteries, and suburban subdivision
- Phase 3 (1890s – 1930s) railway station: construction of railway station in 1895, demolition of initial timber station buildings and construction of brick buildings, electrical and other upgrades in 1930s
- Phase 4 (1940s – present) railway station: upgrades and continued use

Construction of the railway station and rail line in the late nineteenth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.2.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 88: Assessment of archaeological potential for Dulwich Hill Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1850s)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with land clearance such as tree boles, evidence of estate farming activities such as fence line postholes, former shed postholes, field drains, isolated artefact scatters.	Nil-low
2 (1850s – 1890s)	• No documentary evidence of specific activities such as brickmaking or residential development within the site. • Archaeological features associated with farming and market gardening such as fence or shed postholes, field drains and isolated artefacts, drains or culverts.	Nil-low
3 (1890s – 1930s)	• Archaeological remains associated with the early phase of railway timber buildings such as postholes, drains and former surfaces, and early infrastructure such as ceramic service pits, brick drainage pits, electrical conduits and pits, stanchion bases, sleepers and rail track. • Evidence of former platforms that may remain within existing remodelled platforms. • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.	Low-moderate

Phase	Likely archaeological remains	Potential
4 (1940s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.2.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 89: Assessment of archaeological significance for Dulwich Hill Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 and Phase 2 would be present within the site. Any remains would be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 3 former timber station buildings, former platforms and rail infrastructure would unlikely contribute additional information not available from other historical resources. • It is unlikely that artefact-bearing deposits associated with the early timber station buildings accumulated or survived subsequent brick station building development.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and early twentieth centuries. Dulwich Hill Station was built in 1895 as part of the Bankstown Line. The potential Phase 3 archaeological remains are associated with the historical development of Bankstown rail line and Dulwich Hill Station.
Aesthetic or technical significance	• The potential archaeological remains are not likely to have aesthetic value. • Extensive and intact remains of former timber station buildings are not expected to be present. • Former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of Dulwich Hill or the early development of the railway station.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former 'works' including former platforms. Though the potential Phase 3 and 4 archaeological remains are associated with the historical development of the Bankstown rail line and the Dulwich Hill Station, they are likely to be truncated and not contribute further information regarding these development phases. • Unlikely to reach the threshold for local heritage significance.

7.2.4 Impact assessment

Proposed impacts within the Dulwich Hill Station Catchment would include the construction of a station service building, retaining wall along the southern boundary of the station and abutments of the Dudley Street overbridge, construction of new station platforms along the rail corridor, addition of Metro South West running tracks (MSWs), installation of drainage pipes, single grate drainage pits, gas pipelines and CSR utilities and the construction of a proposed segregation fence along the northern boundary of the station. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are unlikely to be impacts to significant archaeology as a result of these works.

7.2.5 Mitigation and management measures

The area within the Dulwich Hill Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1 and 2 and low to moderate potential to contain archaeological remains of Phase 3 and 4 occupation of the site. Potential remains are not considered likely to reach the threshold of local or State significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. Therefore, it is recommended that an Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

7.3 Hurlstone Park Station Catchment

7.3.1 Land use summary

The historical development of the Hurlstone Park Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1860s) early land grants: land clearance, timber getting, grazing, farming activity associated with the Campbell estate
- Phase 2 (1860s – 1890s) subdivision, farming and brickmaking: subdivision for smaller farms, agricultural industry such as dairy farming and small-scale brickmaking businesses
- Phase 3 (1890s – 1920s) railway station: construction of railway station in 1894, construction of the Metropolitan Goods line and platform in 1911, demolition of initial timber station buildings and construction of brick buildings in 1915, electrical and other upgrades in c1920s
- Phase 4 (1930s – present) railway station: upgrades and continued use

Construction of the railway station and rail line in the late nineteenth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.3.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 90: Assessment of archaeological potential for Hurlstone Park Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1860s)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with land clearance such as tree boles, evidence of estate farming activities such as fence line postholes, former shed postholes, field drains, isolated artefact scatters.	Nil-low

Phase	Likely archaeological remains	Potential
2 (1860s – 1890s)	• No documentary evidence of specific activities such as brickmaking or dairying within the site. • Archaeological evidence of dairying or farming includes fence line postholes, former shed postholes, brick or paved yard surfaces, field drains, isolated artefact scatters.	Nil-low
3 (1890s – 1920s)	• Archaeological remains associated with the early phase of railway timber buildings such as postholes, former floor surfaces, and early infrastructure such as ceramic service pipes, brick drainage pits, electrical conduits and pits, stanchion bases, sleepers and rail track. • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.	Low-moderate
4 (1930s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.3.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 91: Assessment of archaeological significance for Hurlstone Park Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 and Phase 2 would be present within the site. Any remains would be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 3 former timber station buildings and rail infrastructure would unlikely contribute additional information not available from other historical resources. • It is unlikely that artefact-bearing deposits associated with the early timber station buildings accumulated or survived subsequent brick station building development.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and twentieth centuries. Hurlstone Park Station (originally called Fernhill Station) was built in 1895 as part of the Bankstown Line. The potential Phase 3 archaeological remains are associated with the historical development of Bankstown rail line and Hurlstone Park Station.
Aesthetic or technical significance	• The potential archaeological remains are not likely to have aesthetic value. • Extensive and intact remains of former timber station buildings are not expected to be present. • Former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of Hurlstone Park or the early development of the railway station.

Criteria	Discussion
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former 'works'. Though the potential Phase 3 and 4 archaeological remains are associated with the historical development of the Bankstown rail line and the Hurlstone Park Station, they are likely to be truncated and not contribute further information regarding these development phases. • Unlikely to reach the threshold for local heritage significance.

7.3.4 Impact assessment

Proposed impacts within the Hurlstone Park Station Catchment would involve the construction of new station platforms along the rail corridor, construction of a retaining wall along the southern boundary of the station and rail corridor, addition of Metro South West running tracks (MSWs), installation of drainage pipes, single grate drainage pits, gas pipelines and CSR utilities and the construction of a proposed segregation fence along the northeast boundary of the rail corridor east of the Floss Street Overbridge. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are unlikely to be impacts to significant archaeology as a result of these works.

7.3.5 Mitigation and management measures

The area within the Hurlstone Park Station Catchment has been assessed as having low potential to contain archaeological remains associated with Phase 1 and 2 and low to moderate potential to contain archaeological remains associated with Phase 3 and 4 occupation of the site. Potential archaeological remains are unlikely to reach the threshold of local significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. Therefore, it is recommended that an Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

7.4 Canterbury Station Catchment

7.4.1 Land use summary

The historical development of the Canterbury Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1841): Early land grants: Land clearance, timber getting, grazing, farming activity associated with the Canterbury Farm;
- Phase 2 (1841 – 1855) Establishment of Canterbury and the Australasian Sugar Company works: Subdivision for smaller farms, development of country estates, small scale industry such as timber cutting, wool washing and mining, establishment of the Australasian Sugar Company works and construction of associated structures and outbuildings (some within study area) and small scale residential settlement in form of cottages;
- Phase 3 (1855 – 1895): Urban development and closure of the Australasian Sugar Company works: Sugar works closed and site remains unoccupied, post office, public school and race course opened, further subdivisions;

- Phase 4 (1895-1943): Canterbury Station, resumptions and development: Land resumed for railway, including residential buildings, construction of railway station in 1895, expansion and construction of the Metropolitan Goods line in 1916, electrification upgrades in 1926 and track realignment in 1927, mill site used for Canterbury Bacon Factory and later 'Hutton's Bacon Factory', possible removal of earlier outbuildings west of the Old Sugarmill site;
- Phase 4 (1943 – present): Suburban and urban development: Railway station upgrades and continued use, industrial, commercial and residential development west of Canterbury Road and within grassed park bounded by Close Street and the railway line.

7.4.2 Impacts to archaeological resources

Construction of the railway station and rail line in the late nineteenth century would have included a considerable amount of ground disturbance and excavation, especially within the rail corridor. Track realignment, station upgrades and road construction throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

Contemporary redevelopment to the south of Canterbury Station would have removed archaeological remains of the former Goods siding, platform, shed and weighbridge. In addition, contemporary redevelopment associated with the construction of a building fronting onto Close Street may have impacted potential archaeological resources.

7.4.3 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 92: Assessment of archaeological potential for Canterbury Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1841)	• No documentary evidence of specific activities or development with the site; • Archaeological features associated with land clearance such as tree boles, evidence of estate farming activities such as fence line postholes, former shed postholes, field drains, isolated artefact scatters.	Nil-low
2 (1841 – 1855)	• Archaeological remains of outbuildings, landscape modifications, fence lines, drains and other structural remains associated with the Australasian Sugar Company works; • Evidence of small scale mining activities; • Archaeological evidence of farming includes fence line postholes, former shed postholes, brick or paved yard surfaces, field drains, isolated artefact scatters; • Archaeological remains of early residential cottages including wells, cisterns and refuse pits.	Moderate to High
3 (1855 – 1895)	• Archaeological remains of early residential cottages including wells, cisterns and refuse pits; • Archaeological remains of outbuildings, landscape modifications, fence lines, drains and other structural remains associated with the Blackett and Co Canterbury Engineering Works;	Moderate to High

Phase	Likely archaeological remains	Potential
4 (1895-1943)	• Archaeological remains and evidence of early railway construction including rails, refuse pits, drains and timber sleepers. • Archaeological remains associated with the early phase of minor railway buildings (such as toilets) prior to track realignment such as postholes, brick footings, former floor surfaces, and early infrastructure such as ceramic service pipes, brick drainage pits, electrical conduits and pits, stanchion bases, sleepers and rail track. • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.	Moderate

7.4.4 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 93: Assessment of archaeological significance for Canterbury Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 would be present within the site. Any remains would be highly truncated or ephemeral and would not have research potential. • Potential archaeological remains associated with Phase 2 residential and industrial structures and activities (sugar works and mining) would have high research significance as they would yield information relating to the one of the earliest phases of development in Canterbury. Remains of the Old Sugarmill outbuildings could provide information relating to activities that took place around the mill, and the domestic lives of workers, if they were residing at the site. Remains of mining activities would provide insights into early small scale mining practices in the area. • If intact remains associated with Phase 3 residences and industrial activities (iron works) were located within the study area, they would have moderate research potential. They could yield information relating to domestic living conditions in Canterbury during the mid to late nineteenth century as well as providing insights into early iron works activities and the potential use of outbuildings or the surrounding landscape. • Potential archaeological remains associated with Phase 4 former structures and rail infrastructure would unlikely contribute additional information not available from other historical resources. • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.
Association with individuals, events or groups of historical importance	• The potential archaeological remains of Phase 2 occupation of the site are associated with the State significant ‘Canterbury Sugar Company works’ or ‘Old Sugarmill’. This site was associated with Robert Campbell, a prominent Sydney merchant. The establishment of the Old Sugarmill was highly influential on the subsequent development of Canterbury as a township in the early nineteenth century. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and twentieth centuries. Canterbury Station was built in 1895 as part of the Bankstown Line. The potential Phase 3 archaeological remains are associated with the historical development of Bankstown rail line and Canterbury Station.

Criteria	Discussion
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value, although exposed *in situ* archaeological remains may have distinctive/attractive visual qualities. • Extensive and intact remains of former station structures are not expected to be present. • Intact remains associated with the Canterbury Sugar Company works and/ Blackett and Co Canterbury Engineering Works have the potential to hold technical significance, as they would represent early technological advances and structures associated with threw respective industries. • Former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains associated with the Canterbury Sugar Company works and Phase 2 and 3 cottages may illustrate the historical development of Canterbury. If intact or substantial remains are found to exist within the project area, they have the potential to reach the threshold for State significance.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Moderate to high potential for remains of structures associated with the Canterbury Sugar Company works and outbuildings. These would have high research value and associative and historical significance at a local or State level depending on nature and intactness. • Moderate to high potential for remains of Phase 3 residential and industrial structures that once occupied land within the rail line. If intact remains were found, they would have moderate research potential and reach the threshold for local significance. • Low to moderate potential for archaeological remains of former 'works' associated with the railway. Though the potential Phase 4 archaeological remains are associated with the historical development of the Bankstown rail line and the Canterbury Station, they are likely to be truncated and not contribute further information regarding these development phases. • Remains associated with Phase 4 are unlikely to reach the threshold for local heritage significance.

7.4.5 Impact assessment

Proposed impacts within the Canterbury Station Catchment would involve the construction of new station platforms along the rail corridor, construction of a station service building, construction of a retaining wall along the southern boundary of the station and rail corridor, addition of Metro South West running tracks (MSWs), installation of installation of drainage pipes, single grate drainage pits, gas pipelines and CSR utilities and the construction of a proposed segregation fence along the northwest boundary of the rail corridor. These works would involve trenching and subsurface ground disturbance.

Although the location of the Canterbury Sugar Company works mill and former associated structures is outside of the study area, there is potential that remains of outbuildings and mining activities may exist within the rail corridor and compound site. These have the potential to reach the threshold for State significance, if intact or substantial remains are found to exist within the study area. There is also potential that remains associated with the Canterbury township Phases 2 and 3 (as shown in Figure 29 and Figure 30) may be present.

There is potential for impacts to occur to local and State significant archaeology within the Canterbury Station Catchment footprint and compound site.

7.4.6 Mitigation and management measures

The area within the Canterbury Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1 and moderate to high potential to contain archaeological remains associated with Phase 2 and 3 occupation of the site. Potential archaeological remains associated with Phase 2 occupation may have State heritage significance due to their association with the Canterbury township and SHR listed Old Sugarmill. Potential remains associated with Phase 3 may have potential to have local heritage significance. Potential remains associated with Phase 1 and 4 are not considered likely to reach the threshold of local or State significance.

As there is potential for remains of Phase 2 occupation of the site to have State heritage significance, and Phase 3 remains to have local significance, it is recommended that an Archaeological Research Design be prepared to manage and mitigate impacts to the potential archaeological resource.

An archaeological research design would be prepared and implemented to identify the need for archaeological testing or monitoring. Archaeological mitigation measures recommended in the archaeological research design would be carried out in accordance with Heritage Council guidelines, and where identified in the archaeological research design, would be supervised by a suitably qualified Excavation Director with experience in managing State or locally significant archaeology where relevant.

Where an archaeological research design is required, it would be prepared based on research information included in this report and would be supplemented by additional detailed historical research of each site with reference to the project design and proposed construction methods at each site. Based on the detailed literature review, the archaeological research designs would identify the need for and provide a detailed methodology for undertaking:

- Archaeological test excavation or test and salvage excavation
- Archaeological monitoring

7.5 Campsie Station Catchment

7.5.1 Land use summary

The historical development of the Campsie Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1890s) land grants and farming: land clearance, grazing and farming activity associated with the Campsie Farm
- Phase 2 (1890s – 1920s) railway station: construction of railway station and Goods line between 1895-1915, electrification upgrades in 1920s
- Phase 3 (1930s – present) railway station: upgrades and continued use

Construction of the rail line and railway station in the late nineteenth century and early twentieth century would have included a considerable amount of ground disturbance and excavation. Station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.5.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 94: Assessment of archaeological potential for Campsie Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1890s)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with land clearance such as tree boles, evidence of estate farming activities such as fence line postholes, former shed postholes, field drains, isolated artefact scatters.	Nil-low
2 (1890s – 1920s)	• Archaeological remains associated with the early infrastructure such as ceramic service pipes, brick drainage pits, electrical conduits and pits, stanchion bases, sleepers and rail track. • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.	Low-moderate
3 (1930s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.5.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 95: Assessment of archaeological significance for Campsie Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 would be present within the site. Any remains would be highly truncated or ephemeral and would not have research potential. • Potential archaeological remains associated with Phase 2 rail infrastructure would unlikely contribute additional information not available from other historical resources. • It is unlikely that artefact-bearing deposits associated with the early station accumulated or survived subsequent development and upgrades.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and twentieth centuries. Campsie Station was built between 1895 and 1915. The potential Phase 2 archaeological remains are associated with the historical development of Bankstown rail line and Campsie Station.
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value. • Former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of Campsie or the early development of the railway station.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former 'works'. Though the potential Phase 2 and 3 archaeological remains are associated with the historical development of the Bankstown rail line and the Campsie Station, they are likely to be truncated and not contribute further information regarding these development phases. • Unlikely to reach the threshold for local heritage significance.

7.5.4 Impact assessment

Proposed impacts within the Campsie Station Catchment would include the construction of an attenuation basin along the southern boundary of the station, north of Lillian Street, construction of new station platforms along the rail corridor, construction of a station service building, construction of a retaining wall along the southern boundary of the station and rail corridor, addition of Metro South West running tracks (MSWs), installation of drainage pipes, single grate drainage pits, gas pipelines and CSR utilities and the construction of a proposed segregation fence along the northwest boundary of the rail corridor. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are unlikely to be impacts to significant archaeology as a result of these works.

7.5.5 Mitigation and management measures

The area within the Campsie Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1 and 2 and low to moderate potential to contain archaeological remains associated with Phase 3 occupation of the site. Potential archaeological remains are not considered likely to reach the threshold for local significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. Therefore, it is recommended that an

Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

7.6 Belmore Station Catchment

7.6.1 Land use summary

The historical development of the Belmore Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1880) early land grants: land clearance, timber getting, grazing and farming activity
- Phase 2 (1880 – 1920s) subdivision and railway station: larger estates subdivided from 1880 into suburban blocks, limited in immediate vicinity of station, accelerated with the construction of railway station in 1895, extended to Bankstown in 1909, sidings extended in 1920s, substation and platform extension in 1925-26
- Phase 3 (1930s – present) railway station: upgrades and continued use

Construction of the railway station and rail line in the late nineteenth and early twentieth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.6.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 96: Assessment of archaeological potential for Belmore Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1880s)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with low intensity land use such as grazing and farming include tree boles, fence line postholes, field drains and isolated artefact scatters.	Nil-low
2 (1880 – 1920s)	• No documentary evidence of specific activities such as residential development within the site. • Archaeological features associated with continued grazing and farming include fence line and shed postholes, field drains, isolated artefact scatters and drains or culverts • Archaeological remains associated with the railway station goods shed occupying land to the near today's Wortley Avenue and a goods platform to the south near Bridge Road.	Low -moderate
3 (1930s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.6.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 97: Assessment of archaeological significance for Belmore Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 and the beginning of Phase 2 would be present within the site. Any remains would likely be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 2 and 3 former rail infrastructure such as services and sidings would be unlikely to contribute additional information not available from other historical resources. • Potential remains associated with the goods shed has the potential to yield information regarding early railway storage practices and construction methods related to utilitarian structures.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and early twentieth centuries. Belmore Station was built as the first part of the Bankstown Line in 1895 which was extended to accommodate the remainder of the Bankstown Line between (1909-1939). The potential Phase 2 archaeological remains are associated with the historical development of the Bankstown rail lines.
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value. • Remains of former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains have the ability to illustrate the early development of the railway station particularly activities surrounding the goods shed and sidings.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former 'works' such as sidings, drains, rails and sleepers. Though the potential Phase 2 and 3 archaeological remains are associated with the historical development of the Bankstown rail line and Belmore Station, they are likely to be truncated and not contribute further information regarding these development phases. • Low to moderate potential for the remains of a former goods shed to exist within the area. If intact and substantial remains of the goods shed were found, they would provide information relating to late 19th century railway building construction methods and activities surrounding the goods line. • If intact remains associated with later Phase 2 development associated with the goods shed were uncovered, they would have the potential to reach the threshold for local heritage significance. • Potential archaeological remains associated with Phase 2 and 3 may reach the threshold for local significance.

7.6.4 Impact assessment

Proposed impacts within the Belmore Station Catchment would include the construction of a new island platform within the rail corridor, construction of a station service building, construction of a retaining walls along the southern and northern boundary of the station and rail corridor, addition of Metro South West running tracks (MSWs), installation of drainage pipes, single grate drainage pits, gas pipelines and CSR utilities and the construction of a proposed segregation fence along the northwest boundary of the rail corridor. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There is potential that locally significant remains associated with the former goods shed may be impacted by the proposal.

7.6.5 Mitigation and management measures

The area within the Belmore Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1 and low to moderate potential to contain archaeological remains associated with Phase 2 and 3. The majority of potential archaeological remains are not considered likely to reach the threshold of local significance. However, remains associated with the goods shed may reach the threshold for local significance if intact or substantial deposits are found to exist within the project area.

As there is potential for remains associated with Phase 2 occupation of the site (former goods shed) to have local significance, it is recommended that an Archaeological Research Design be prepared to manage and mitigate impacts to the potential archaeological resource.

An archaeological research design would be prepared and implemented to identify the need for archaeological testing or monitoring. Archaeological mitigation measures recommended in the archaeological research design would be carried out in accordance with Heritage Council guidelines, and where identified in the archaeological research design, would be supervised by a suitably qualified Excavation Director with experience in managing locally significant archaeology.

Where an archaeological research design is required, it would be prepared based on research information included in this report and would be supplemented by additional detailed historical research of each site with reference to the project design and proposed construction methods at each site. Based on the detailed literature review, the archaeological research designs would identify the need for and provide a detailed methodology for undertaking:

- Archaeological test excavation or test and salvage excavation
- Archaeological monitoring

7.7 Lakemba Station Catchment

7.7.1 Land use summary

The historical development of the Lakemba Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1880s) early land grants: land clearance, grazing and farming activity
- Phase 2 (1880s – 1909) pioneer settlement: farming activity, homesteading, stables, tanneries, commercial nurseries, poultry farms and piggery
- Phase 3 (1909 – 1919) railway station and development: railway station constructed in 1909, suburban and commercial development follows
- Phase 4 (1919 – present) railway station upgrades: new brick station building replaces original timber structure, electrification of the line in 1926 and addition of footbridge and overhead booking office, continued use of railway.

Construction of the railway station and rail line in the twentieth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the second half of the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.7.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services, although potential remains of outbuildings associated with Lakemba may exist in the area.

Table 98: Assessment of archaeological potential for Wiley Park Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1880s)	• Initial land owners associated with moderately sized grants used for agricultural and pastoral purposes • Archaeological features associated with low intensity land use such as timber getting, grazing and farming include tree boles, fence line postholes, field drains and isolated artefact scatters.	Nil-low
2 (1880s – 1909)	• Establishment of the Taylor House (Lakemba), stables and potential outbuildings • Archaeological features associated with farming activities, domestic and agricultural structures, refuse pits and drains or culverts	Low
3 (1909 – 1919)	• Archaeological remains associated with the first timber island platform and initial railway infrastructure such as brick drainage pits, electrical conduits and pits, stanchion bases, timber footings and postholes, sleepers and rail track.	Low to moderate
4 (1919 – present)	• Archaeological remains associated with station and rail corridor upgrades such as utilities and drainage	Moderate

7.7.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 99: Assessment of archaeological significance for Lakemba Station Catchment

Criteria	Discussion
Research potential	• It is unlikely that archaeological remains associated with Phase 1 and Phase 2 would be present within the site. Any remains would be highly truncated and would not have research potential. • However, if intact or substantial remains associated with 'Lakemba' were found to exist, they may have the ability to yield information regarding early residential occupation in the area. • Potential archaeological remains associated with Phase 3 former rail infrastructure would unlikely contribute additional information not available from other historical resources.
Association with individuals, events or groups of historical importance	• The potential archaeological remains of 'Lakemba' are associated with Ben Taylor and his second wife Lucy Annie Johnston. Ben Taylor was a prominent local political figure, who was employed as an alderman, mayor and town clerk for the locality.
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value although exposed in situ archaeological remains may have distinctive/attractive visual qualities.

Criteria	Discussion
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains associated with structures or remains of 'Lakemba' have the ability to illustrate the historical development of the suburb of Lakemba. • The potential archaeological remains of the 1909 Lakemba Station platform have the ability to demonstrate past development phases associated with Lakemba Railway Station and changes to the suburb over time.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Potential remains of structures or deposits associated with • Remains associated with 'Lakemba' may have research and associative value. • Low to moderate potential for archaeological remains of former 'works'. Though the potential Phase 3 archaeological remains are associated with the historical development of the Bankstown rail line. • Remains associated with former rail infrastructure are unlikely to reach the threshold for local heritage significance. • Remains associated with the 1919 Lakemba Station timber island platform have the potential to demonstrate early development phases within the suburb of Lakemba. • Potential remains associated with 'Lakemba' and the Lakemba 1909 timber island platform may have local heritage significance.

7.7.4 Impact assessment

Proposed impacts within the Lakemba Station Catchment would involve the construction of a new island platform within the rail corridor, construction of a station service building to the south of the rail corridor, construction of a retaining wall along the southern and northern boundary of the station, installation drainage pipes, single grate drainage pits, cess drain, gas pipelines and CSR utilities, addition of Metro South West running tracks (MSWs) and the construction of a security fence along the southern boundary of the rail corridor. These works would involve earthworks, trenching and subsurface ground disturbance.

There is a low potential for the potentially locally significant remains associated with 'Lakemba' to exist within the study area and be impacted by the proposal, and low to moderate potential for the potentially locally significant remains of the 1919 Lakemba island platform to be impacted.

7.7.5 Mitigation and management measures

The area within the Lakemba Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1, low potential to contain archaeological remains of Phase 2 and low to moderate potential to contain archaeological remains associated with Phase 3 and 4 occupation of the site. Potential archaeological remains associated with Phase 1, 2 and 3 may reach the threshold for local significance. Potential archaeological remains associated with Phase 4 are unlikely to reach the threshold for local significance.

As there is potential for remains associated with Phase 2 and 3 occupation of the site to have local significance, it is recommended that an Archaeological Research Design be prepared to manage and mitigate impacts to the potential archaeological resource.

An archaeological research design would be prepared and implemented to identify the need for archaeological testing or monitoring. Archaeological mitigation measures recommended in the archaeological research design would be carried out in accordance with Heritage Council guidelines, and where identified in the archaeological research design, would be supervised by a suitably qualified Excavation Director with experience in managing locally significant archaeology.

Where an archaeological research design is required, it would be prepared based on research information included in this report and would be supplemented by additional detailed historical research of each site with reference to the project design and proposed construction methods at each site. Based on the detailed literature review, the archaeological research designs would identify the need for and provide a detailed methodology for undertaking:

- Archaeological test excavation or test and salvage excavation
- Archaeological monitoring

7.8 Wiley Park Station Catchment

7.8.1 Land use summary

The historical development of the Wiley Park Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1860s) early land grants: land clearance, timber getting, clay pipe manufacturing, grazing and farming activity
- Phase 2 (1860s – 1930s) pioneer settlement: more woodcutters moved to the area, slab houses formed nucleus of settlement
- Phase 3 (1930s – 1940s) railway station: suburban development in the 1930s, railway station constructed in 1938
- Phase 4 (1940s – present) railway station: upgrades and continued use of railway

Construction of the railway station and rail line in the twentieth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the second half of the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.8.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 100: Assessment of archaeological potential for Wiley Park Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1860s)	• Initial land owners produced clay pipes, but no documentary evidence of this activity occurring specifically in the site. • Archaeological features associated with low intensity land use such as timber getting, grazing and farming include tree boles, fence line postholes, field drains and isolated artefact scatters.	Nil-low
2 (1860s – 1930s)	• No documentary evidence of specific developments such as residential development within the site. • Archaeological features associated with farming or timber getting such as fence or shed postholes, field drains, isolated artefact scatters, drains or culverts and unrecorded slab house remains	Nil-low

Phase	Likely archaeological remains	Potential
3 (1930s – 1940s)	• Little in the way of archaeological remains due to the stations more modern construction. • Archaeological remains associated with the initial railway infrastructure such as brick drainage pits, electrical conduits and pits, stanchion bases, sleepers and rail track.	Nil-low
4 (1940s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.8.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 101: Assessment of archaeological significance for Wiley Park Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 and Phase 2 would be present within the site. Any remains would be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 3 former rail infrastructure would be unlikely to contribute additional information not available from other historical resources.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • Wiley Park Station was the last station built of the Bankstown Line in 1938 and is associated with the development of the Bankstown Line. However, because of its later construction date the archaeological remains are unlikely to have heritage significance.
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of Wiley Park or the development of the railway station.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former ‘works’. Though the potential Phase 3 archaeological remains are associated with the historical development of the Bankstown rail line, their more recent date means there is likely to be little archaeological material as most of the original fabric is still extent today. • Unlikely to reach the threshold for local heritage significance.

7.8.4 Impact assessment

Proposed impacts within the Wiley Park Station Catchment would include the construction of new platforms along the rail corridor, construction of a station service building, construction of retaining walls along the southern and northern boundary of the station, installation gas pipelines and CSR utilities and the construction of a noise wall along the northern boundary of the rail corridor. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are unlikely to be impacts to significant archaeology as a result of these works.

7.8.5 Mitigation and management measures

The area within the Wiley Park Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1, 2 and 3 and moderate potential to archaeological remains associated with Phase 4 occupation of the site. Potential archaeological remains are not likely to reach the threshold of local significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. Therefore, it is recommended that an Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

7.9 Punchbowl Station Catchment

7.9.1 Land use summary

The historical development of the Punchbowl Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1870s) early land grants: land clearance, timber getting, grazing and farming activity
- Phase 2 (1870s – 1909) farming and subdivision: continued farming and grazing
- Phase 3 (1909 – 1920s) railway station: station and line extension opened in 1909, station building awning added in 1924, electric train depot opened nearby and Bankstown Line electrified in 1926, in 1929 an overhead booking office was built, the platforms lengthened and the stairway to the overbridge was removed
- Phase 4 (1930s – present) railway station: upgrades and continued use

Construction of the railway station and rail line in the twentieth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.9.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 102: Assessment of archaeological potential for Punchbowl Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1870s)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with low intensity land use such as grazing and farming include tree boles, fence line postholes, field drains, isolated artefact scatters and former road surfaces.	Nil-low

Phase	Likely archaeological remains	Potential
2 (1870s – 1909)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with continued farming and grazing such as fence or shed postholes, field drains, isolated artefact scatters and drains or culverts	Nil-low
3 (1909 – 1920s)	• Less potential for archaeological remains due to twentieth century construction. • Archaeological remains associated with the initial railway infrastructure such as brick drainage pits, electrical conduits and pits, stanchion bases, sleepers, rail track and overbridge stairway.	Low
4 (1930s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.9.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 103: Assessment of archaeological significance for Punchbowl Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 and Phase 2 would be present within the site. Any remains would be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 3 former rail infrastructure would be unlikely to contribute additional information not available from other historical resources.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • Punchbowl Station was built in 1909 as part of the Bankstown Line. The potential Phase 3 archaeological remains are associated with the historical development of Bankstown rail line and Punchbowl Station.
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of Punchbowl or the development of the railway station.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former 'works'. Though the potential Phase 3 and 4 archaeological remains are associated with the historical development of the Bankstown rail line and the Punchbowl Station, they are likely to be truncated and not contribute further information regarding these development phases. • Unlikely to reach the threshold for local heritage significance.

7.9.4 Impact assessment

Proposed impacts within the Punchbowl Station Catchment would include the construction of new platforms along the rail corridor, construction of a station service building, construction of a retaining wall along the southern and northern boundary of the station and rail corridor, installation of a

concrete lined channel along the southern boundary of the rail corridor, installation of gas pipelines and CSR utilities and the addition of Up and Down MSWs within the rail corridor. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are unlikely to be impacts to significant archaeology as a result of these works.

7.9.5 Mitigation and management measures

The area within the Punchbowl Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1, 2 and 3 and moderate potential to contain archaeological remains associated with Phase 4 occupation of the site. Potential archaeological remains are not likely to reach the threshold of local or State significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. Therefore, it is recommended that an Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

7.10 Bankstown Station Catchment

7.10.1 Land use summary

The historical development of the Bankstown Station Catchment and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 – 1900s) early land grants: land clearance, timber getting, saw milling, brick and pottery making, grazing and farming activity
- Phase 2 (1909 – 1920s) railway station: station opened and line opened in 1909, water tank erected in 1910 (removed in 1970s), pillar water tank and ash pit provided in 1920s, parcels office opened in 1915 (replaced in 1925), platform extended when line electrified in 1926
- Phase 3 (1930s – present) railway station: upgrades and continued use

Construction of the railway station and rail line in the twentieth century would have included a considerable amount of ground disturbance and excavation. Rail and station upgrades throughout the twentieth century would have resulted in high levels of ground impacts throughout the station catchment.

7.10.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post-railway structures and services.

Table 104: Assessment of archaeological potential for Bankstown Station Catchment

Phase	Likely archaeological remains	Potential
1 (1788-1900s)	• No documentary evidence of specific activities such brickmaking or residential development within the site. • Archaeological features associated with low intensity land use such as grazing and farming include tree boles, fence line postholes, field drains, isolated artefact scatters.	Nil-low

Phase	Likely archaeological remains	Potential
2 (1900s – 1920)	• No documentary evidence of specific activities or development with the site. • Archaeological features associated with continued farming and grazing such as fence or shed postholes, field drains, isolated artefact scatters and drains or culverts	Nil-low
3 (1909 – 1920s)	• Less potential for archaeological remains due to twentieth century construction. • Archaeological remains associated with the initial railway infrastructure such as brick drainage pits, electrical conduits and pits, stanchion bases, sleepers, rail track and overbridge stairway.	Low
4 (1930s – present)	• Archaeological remains associated with upgrades such as utilities and drainage	Moderate

7.10.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 105: Assessment of archaeological significance for Bankstown Station Catchment

Criteria	Discussion
Research potential	• It is highly unlikely that archaeological remains associated with Phase 1 would be present within the site. Any remains would be highly truncated and would not have research potential. • Potential archaeological remains associated with Phase 2 former rail infrastructure would be unlikely to contribute additional information not available from other historical resources.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • Bankstown Station was built in 1909 as part of the Bankstown Line. The potential Phase 2 archaeological remains are associated with the historical development of Bankstown rail line and Bankstown Station.
Aesthetic or technical significance	• The potential archaeological remains are not likely to hold aesthetic value.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of Bankstown or the development of the railway station.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Low to moderate potential for archaeological remains of former 'works'. Though the potential Phase 2 and 3 archaeological remains are associated with the historical development of the Bankstown rail line and the Bankstown Station, they are likely to be truncated and not contribute further information regarding these development phases. • Unlikely to reach the threshold for local heritage significance.

7.10.4 Impact assessment

Proposed impacts within the Bankstown Station Catchment would include the construction of a new island platform along the rail corridor, construction of a station service building, construction of a retaining wall along the southern and northern boundary of the station and rail corridor, installation of

a concrete lined channel along the northern boundary of the rail corridor, installation of drainage channels, single grate drainage pits, gas pipelines and CSR utilities and the addition of tracks and Up and Down MSWs within the rail corridor. The majority of these works would involve trenching and subsurface ground disturbance within the existing rail and road corridor.

There are unlikely to be impacts to significant archaeology as a result of these works.

7.10.5 Mitigation and management measures

The area within the Bankstown Station Catchment has been assessed as having nil to low potential to contain archaeological remains associated with Phase 1, 2 and 3 and moderate potential to contain archaeological remains associated with Phase 4 occupation of the site. Potential archaeological remains are not likely to reach the threshold of local or State significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. Therefore, it is recommended that an Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

7.11 Rail corridor: Ancillary work and construction sites

7.11.1 Overview

The Bankstown Line was constructed in three stages between 1892 and 1939. Sydenham to Belmore was completed in 1895. The section to Bankstown was complete by 1909. The rail corridor cut through undeveloped country estate and farm land. Earthworks would have included areas of cut and fill with ballast to lay the track. Culverts and drainage channels were built where the rail line crossed over creeks. The line was electrified in 1926.

This section assessed archaeological potential and significance for the project area outside of the station catchments. The exception is the compound site located near the Canterbury Station Catchment. This area was assessed as part of the Canterbury Station Catchment.

Overall there was no particular areas of archaeological potential identified in the compound areas and worksites within and outside the rail corridor, or within the rail corridor itself, except where specified in the station catchment assessments.

7.11.2 Archaeological potential

Based on the history of the site and disturbance that has occurred in the area, archaeological remains are likely to consist of post- railway structures and services.

Table 106: Assessment of archaeological potential for the rail corridor

Phase	Likely archaeological remains	Potential
1 (1788-1890s)	• General background historical review and analysis of select historic maps indicates the rail corridor was constructed through undeveloped farm land. • Archaeological features associated with land clearance such as tree boles, and farming activities such as fence line postholes, former shed postholes, field drains, isolated artefact scatters.	Nil
2 (1890s – present)	• Archaeological remains associated with the early infrastructure such as culverts and drains (brick, stone or concrete), ceramic service pipes, brick drainage pits, electrical conduits and pits, sleepers and rail track. No	Low

Phase	Likely archaeological remains	Potential
	documentary evidence was found for former structures in additional compound sites and worksites.	

7.11.3 Archaeological significance

The following assessment of significance is based on the guidelines discussed in Section 2.3 of this report.

Table 107: Assessment of archaeological significance for the rail corridor

Criteria	Discussion
Research potential	• Archaeological remains associated with Phase 1 would not be present within the rail corridor considering the level of land modification to construct the track. • Potential archaeological remains associated with Phase 2 rail infrastructure would unlikely contribute additional information not available from other historical resources.
Association with individuals, events or groups of historical importance	• The potential archaeological remains are not associated with any particular individual of historical importance. • The development of the rail network facilitated economic development and suburban growth in Sydney in the latter half of the nineteenth and twentieth centuries. The potential Phase 2 archaeological remains are associated with the historical development of Bankstown rail line.
Aesthetic or technical significance	• The potential archaeological remains are not likely to have aesthetic value. • Former rail infrastructure may demonstrate changes in technology and rail engineering over time. However, they are not expected to demonstrate technical significance.
Ability to demonstrate the past through archaeological remains	• The potential archaeological remains are not considered to have the ability to illustrate the historical development of the rail line.
Statement of Significance	• Nil to low potential for archaeological remains associated with nineteenth century farming. Any remains unlikely to have research value. • Some potential for archaeological 'works'. Though the potential Phase 2 archaeological remains are associated with the historical development of the Bankstown rail line, they are not likely to contribute further information regarding this development • Unlikely to reach the threshold for local heritage significance.

7.11.4 Impact assessment

Proposed impacts within the rail corridor would involve the addition of tracks, Down and Up MSWs, CSR utilities, gas pipelines, drainage pipes, single and multi-grate drainage pits, retaining walls, noise walls and security and segregation fences along the rail corridor boundary. The construction of retaining walls would involve the removal of up to 1.2 m of top soil and detritus. Works associated with utilities and fencing would involve trenching and associated subsurface impacts.

Attenuation basins are proposed to be constructed near Marrickville, Dulwich Hill, Hurlstone Park and Campsie Stations, along the southern boundary of the rail corridor. The construction of these basins would involve excavations.

Traction substations are proposed to be constructed along the rail corridor at Dulwich Hill, Canterbury, Campsie, Lakemba and Punchbowl, also along the southern boundary of the rail corridor which would require excavation.

A number of construction sites are also proposed both within the rail corridor and outside it.

Depending on the depth of excavation for utilities and drainage, location of impacts within the construction sites (particularly the worksite area adjacent to the Old Sugarmill at Canterbury), ancillary works may have an impact on locally or State significant archaeological remains within the Canterbury Station Catchment locally or State significant archaeological remains within the Belmore and Lakemba Station Catchments. The Archaeological Research Design document would specify management zones in these station catchments that would be implemented dependant on the nature and depth of excavation works. Management of utilities within the corridor and beyond would be governed by mitigation measures contained in a Utilities Management Strategy for the project. An outline for the utilities management strategy is included in Chapter 9 Project description – construction, of the Environmental Impact Statement.

7.11.5 Mitigation and management measures

The area within the Bankstown Rail corridor has been assessed as having nil to low potential to contain archaeological remains associated with Phases 1 and 2. Potential archaeological remains are not considered likely to reach the threshold of local significance.

However, there is potential for unexpected archaeological remains of structures and activities associated with earlier phases to exist within the area. It is therefore recommended that an Unexpected Finds Policy be implemented during the proposed development to manage and mitigate potential impacts to the potential archaeological resource.

8. CONSTRUCTION COMPOUND ASSESSMENT

The section below provides a description of the proposed construction compounds that would be used during the construction phase of the project. A general description is provided followed by descriptions and impact assessments to heritage items within each individual station catchment. Mitigation and management measures are also provided which relate specifically to construction site impacts. It is assumed the entire project area is a worksite for the purposes of the heritage assessment. Worksites have not been assessed separately as any impacts to built heritage would be temporary and related to construction activities described in this impact assessment. Archaeological impacts to construction sites are discussed in Section 7.0 and not repeated in this section.

8.1 General description

The project area includes all areas required to construct the project. The majority of construction would be located within the rail corridor between east of Marrickville and west of Bankstown.

Within the project area, a number of construction compounds would be required to support construction activities, at stations, and at other key locations where civil works are required.

In addition to construction compounds, a number of worksites would be required outside the rail corridor to facilitate construction of certain project elements. For the purposes of the Environmental Impact Statement, it is assumed that construction activities would occur along the entire length of rail corridor within the project area.

Construction compounds would be required at each station to support construction activities and other associated works at the stations. A summary of each compound is provided in Table 108.

Construction compounds would generally include site offices, worker amenities (such as toilets, change rooms, meal rooms, shower facilities and first aid facilities), workshops, material storage and lay down areas (including dangerous goods storage), plant and vehicle parking, and spoil lay down, loading and removal areas, and site security facilities.

Compounds would generally be located on RailCorp owned land, mainly located in the existing rail corridor. Some compounds would need to be located on land outside of the rail corridor on public land (i.e. owned by a government agency such as a local council).

Table 108: Construction compounds

Reference	Location	Existing use	Duration of use
C1	Victoria Road, Marrickville	Rail corridor	Long term
C2	Station Street, Marrickville	Retail	Long-term
C3	Ewart Lane, Dulwich Hill	Rail corridor, parking	Long-term
C4	Floss Street, Hurlstone Park	Roads reserve	Long-term
C5	Broughton Street, Canterbury	Rail corridor and rail uses, open space	Long-term
C6	Charles Street, Canterbury	Rail corridor, parking	Long-term

Reference	Location	Existing use	Duration of use
C7	South Parade, Campsie	Rail corridor	Long-term
C8	North Parade/Wilfred Avenue, Campsie	Rail corridor, road reserve with parking	Long-term
C9	Lilian Street, Campsie	Rail corridor, parking	Long-term
C10	Tobruk Avenue, Belmore	Rail corridor, open space	Long-term
C11	Redman Parade, Belmore	Parking	Long-term
C12	Railway Parade, Belmore	Rail corridor, open space	Long-term
C13	Bridge Road, Belmore	Sydney Trains maintenance facility	Long-term
C14	The Boulevarde, Lakemba	Rail corridor, parking	Short-term
C15	Railway Parade, Lakemba	Rail corridor, parking	Short-term
C16	The Boulevarde, Lakemba	Rail corridor, parking	Short-term
C17	The Boulevarde, Wiley Park	Rail corridor, road verge	Long-term
C18	Urunga Parade, Wiley Park	Rail corridor, road verge	Long-term
C19	Urunga Parade, Punchbowl	Rail corridor	Long-term
C20	Urunga Parade, Punchbowl	Rail corridor, road reserve	Long-term
C21	The Boulevarde, Punchbowl	Parking	Long-term
C22	Bruest Place, Punchbowl	Rail corridor, school	Long-term
C23	South Terrace, Bankstown	Rail corridor	Long-term
C24	North Terrace, Bankstown	Rail corridor, road reserve	Long-term

Note 1: short-term: area is to be used for up to about 18 months, long-term: area is to be used for over 18 months and potentially for the entire construction period.

8.2 Site locations

The maps below show the location of construction sites for the project. Where construction compounds are located away from listed items (generally outside the station catchments) they have not been mapped and assessed in this section.

Figure 293: Construction compounds within study area: Marrickville Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Marrickville

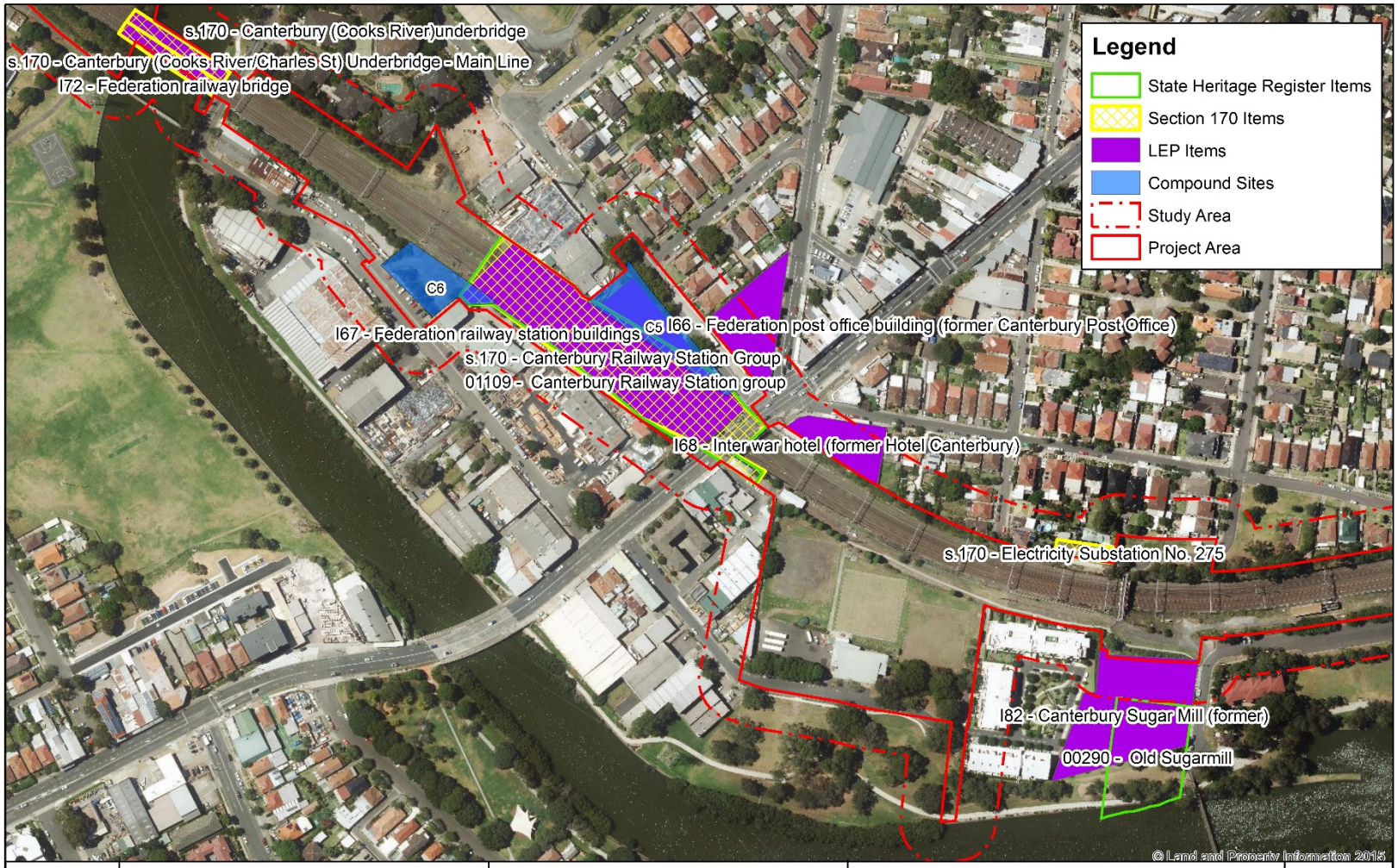
Figure 294: Construction compounds within study area: Dulwich Hill Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_DH

Figure 295: Construction compounds within study area: Hurlstone Park Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_HP

Figure 296: Construction compounds within study area: Canterbury Station Catchment



File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Canterbury

Figure 297: Construction compounds within study area: Campsie Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Campsie

Figure 298: Construction compounds within study area: Belmore Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Belmore

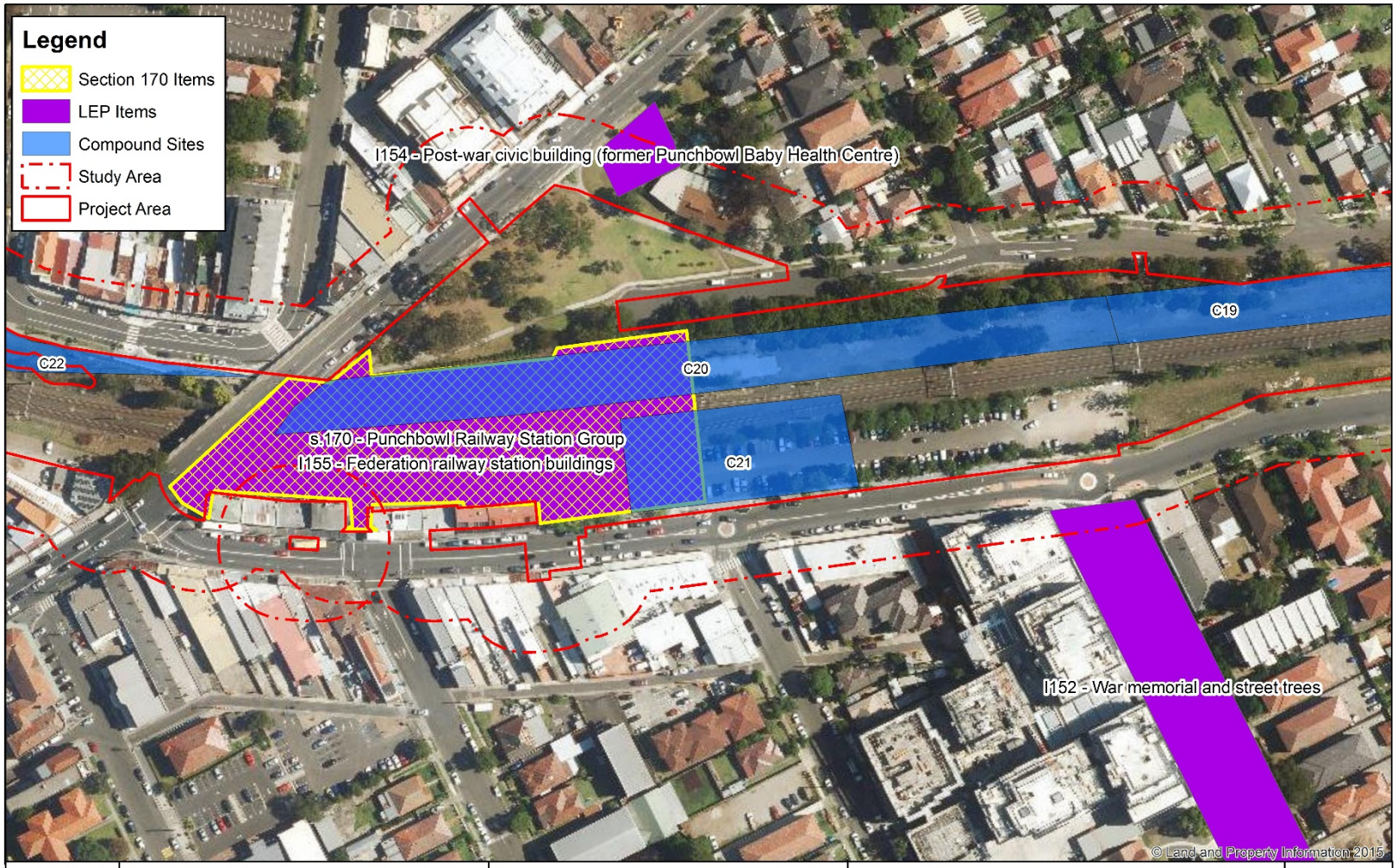
Figure 299: Construction compounds within study area: Lakemba Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Lakemba

Figure 300: Construction compounds within study area: Wiley Park Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_WP

Figure 301: Construction compounds within study area: Punchbowl Station Catchment



File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_Punchbowl

Figure 302: Construction compounds within study area: Bankstown Station Catchment

File Path: C:\Users\GIS\Desktop\GIS\GIS_Mapping\151213_Sydney_Metro_Bankstown_Sydenham\MXD\Heritage_Detail_BT

8.3 Built heritage impact assessment

8.3.1 Marrickville Station Catchment

Description

The entire rail corridor within Marrickville Station Catchment would be used as a worksite. Construction compound 1 (C1) would be located to the north-east of Marrickville Station and would result in a minor encroachment upon Marrickville Station curtilage. Construction compound 2 (C2) would also extend into the station curtilage.

The proposed construction sites maps relevant to the station catchment are provided in Figure 293.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 109: Construction compounds assessment for Marrickville Station Catchment

Item	Significance	Construction compounds impacts
Marrickville Railway Station Group	State	C1 would be partly located within the heritage curtilage of the item to the north-east of the existing island platform. The impact area is an unkempt grass area and does not contain elements of significance. The direct impacts of the site on the item would remain minor. There would be temporary moderate visual impacts on the item as a result of the construction and use of C1. C2 is located along the southern boundary of the rail corridor and would result in a minor encroachment on the heritage curtilage of the item. The direct impacts on the item would remain negligible. The site would include part of Station Street and involve the removal of existing properties to the south of the item. There are no significant views to and from the item and the properties to be removed. This would result in a neutral impact on the item. Provided that the site is remediated to minimise visual impacts on the item post-construction, this site would result in a temporary minor impact on the item. Impacts of construction compounds on the item would be minor.
Sewage Pumping Station 271	State	There are no construction compounds in the vicinity of this item therefore no impacts are expected
Stone house, including interiors	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected
Stonewalling, terracing and street planting	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected

8.3.2 Dulwich Hill Station Catchment

Description

The entire rail corridor within Dulwich Hill Station Catchment would be used as a worksite. Construction compound 3 (C3) would be partly established within the curtilage of Dulwich Railway Station along the rail corridor on the southern side of the heritage item.

The proposed construction sites map relevant to the station catchment is provided in Figure 294.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 110: Construction compounds assessment for Dulwich Hill Station Catchment

Item	Significance	Construction compounds impacts
Dulwich Hill Railway Station Group	Local	C3 would be partly established within the curtilage of Dulwich Hill Station along the rail corridor on the southern side. It would be located in areas of little significance on the edge of the heritage curtilage. The site would not impact significant fabric of the item. Provided that the impact area is remediated post-construction, the direct impacts of the site on the item would be minor. It would result in a temporary moderate visual impact on the item. Impacts of construction compounds on the item would be minor.
South Dulwich Hill Heritage Conservation Area	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Inter-War Heritage Conservation Area Group	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Gladstone Hall, including interiors	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.

8.3.3 Hurlstone Park Station Catchment

Description

The entire rail corridor within Hurlstone Park Station Catchment would be used as a worksite. Outside the rail corridor, construction compound 4 (C4) would be located along the northern boundary of Hurlstone Park Station on the eastern side outside its heritage curtilage within the existing car park.

The proposed construction sites map relevant to the station catchment is provided in Figure 295.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 111: Construction compounds assessment for Hurlstone Park Station Catchment

Item	Significance	Construction compounds impacts
Hurlstone Park Railway Station Group	Local	C4 would be located along the northern boundary of the heritage item on the eastern side outside its heritage curtilage. There would be some views onto the site from the heritage item. This would result in a temporary minor visual impact on the item.
Hurlstone Park Railway Underbridge	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected

8.3.4 Canterbury Station Catchment

Description

The entire rail corridor within Canterbury Station Catchment would be used as a worksite. Outside the rail corridor, construction compound 5 (C5) would be located along the northern boundary of Canterbury Station opposite the existing platform. This site would encroach slightly on the northern boundary of the heritage curtilage. Construction compound 6 (C6) would be located directly to the west of the station and would extend slightly into its curtilage. A worksite would be located between Canterbury Station and the Old Sugarmill within an existing park. The area would primarily be used for laydown.

The proposed Construction compounds map relevant to the station catchment is provided in Figure 296.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 112: Construction compounds assessment for Canterbury Station Catchment

Item	Significance	Construction compounds impacts
Canterbury Railway Station Group	State	C5 would be located along the northern boundary of the heritage item and encroach slightly on the northern boundary of its curtilage. The site would be located within a grassed area and would not impact significant fabric of the heritage item. Provided that the impact area is remediated post-construction, the direct impacts of the site would remain negligible. There would be views onto the site from the heritage item. This would result in a temporary moderate visual impact on the item. C6 would extend slightly into the western curtilage of the item. Impacts of construction compounds on the item would be minor.
Canterbury (Cooks River) underbridge	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected
Old Sugarmill	State	A worksite (primarily for laydown) would be located in the vicinity of the heritage item, to the west. There would be some views onto the site from the item. This would result in a temporary minor visual impact on the item. Limited views onto the sites would result in a temporary negligible visual impact on the item. Views onto the sites would be obstructed by existing development to the north and west of the item. Impacts of worksite on the item would be minor.
Inter-War Hotel (former Hotel Canterbury)	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Federation Post Office Building (former	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.

Item	Significance	Construction compounds impacts
Canterbury Post Office)		
Electricity substation no. 275	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.

8.3.5 Campsie Station Catchment

Description

The entire rail corridor within Campsie Station Catchment would be used as a worksite. Outside the rail corridor, construction compound 8 and 9 (C8 and C9) would be located partially within the curtilage of Campsie Railway Station along the northern and southern boundaries.

The proposed construction sites map relevant to the station catchment is provided in Figure 297.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 113: Construction compounds assessment for Campsie Station Catchment

Item	Significance	Construction compounds impacts
Campsie Railway Station Group	Local	C8 and C9 would be located partially within the curtilage of the heritage item on the northern and southern boundaries. The sites would be located within grass and car parking areas along the boundaries of the station and would not impact any significant fabric of the heritage item. Provided that the impact areas are remediated post-construction, the direct impacts of the sites would remain negligible. There would be views onto the sites from the heritage item. This would result in a temporary moderate visual impact on the item. Impacts of construction compounds on the item would be minor.
Federation commercial building– Coffill's Buildings	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Inter-War Commercial Building– Station House	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Inter-War Court House (former) Campsie Court House	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
War Memorial Clock Tower	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Federation house	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.

Item	Significance	Construction compounds impacts
Federation villa	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.

8.3.6 Belmore Station Catchment

Description

The entire rail corridor within Belmore Station Catchment would be used as a worksite. Outside the rail corridor, construction compounds 10 and 11 (C10 and C11) would be located partially within the curtilage of Belmore Railway Station along the northern and southern boundaries. Construction compounds 12 and 13 (C12 and C13) would be located to the west of Belmore Railway Station.

The proposed construction sites map relevant to the station catchment is provided in Figure 298.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 114: Construction compounds assessment for Belmore Station Catchment

Item	Significance	Construction compounds impacts
Belmore Railway Station Group	State	C10 and C11 would be located partially within the curtilage of the heritage item along the northern and southern boundaries, and would make a minor encroachment on the northern boundary of the heritage item. The sites would be located within grass and car parking areas along the edges of the station and would not impact any significant fabric of the heritage item. Provided that the impact areas are remediated post-construction, the direct impacts of the sites would remain negligible. There would be views onto the sites from the heritage item. This would result in a temporary moderate visual impact on the item. C12 and C13 would be located in the broader vicinity of the item along the rail corridor to the west. There would be limited views onto the site from the heritage item. This would result in a temporary negligible visual impact on the item. Impacts of construction compounds on the item would be minor.
Post-war bus shelter and public lavatories	Local	C11 would be located within the curtilage of the heritage item. The site would utilise the existing car parking area in the eastern portion of the item. The Post-war bus shelter and public lavatories are located in the western portion of the heritage item outside the proposed site location. No significant fabric of the heritage item would be affected by the site. Provided that the impact areas are remediated post-construction, the direct impacts of the site would be negligible. There would be views onto the site from the heritage item. This would result in a temporary moderate visual impact on the item. C10 would also be located in the vicinity of the item across the rail corridor to the south. Views would be partly obstructed by existing development within the station catchment. This would result in a temporary minor visual impact on the item Impacts of construction compounds on the item would be minor.
Federation House (former station master's cottage)	Local	C12 and C13 would be located in the vicinity of the heritage item opposite Burwood Road and across the rail corridor. There would be some views onto the sites from the item. This would result in a temporary minor visual impact on the item. Impacts of construction compounds on the item would be minor.

8.3.7 Lakemba Station Catchment

Description

The entire rail corridor within Lakemba Station Catchment would be used as a worksite. Outside the rail corridor, construction compounds 15 and 16 (C15 and C16) would be located partially within the curtilage of Lakemba Station. C15 would be located along the rail corridor in the northern portion of the item and extend into the northern curtilage, and C16 would make a minor encroachment along the southern boundary of the heritage curtilage of the station. Construction compound 14 (C14) would be located along the rail corridor on the other side of Haledon Street overbridge.

The proposed construction sites map relevant to the station catchment is provided in Figure 299.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 115: Construction compounds assessment for Lakemba Station Catchment

Item	Significance	Construction compounds impacts
Lakemba Railway Station Group	Local	C15 and C16 would be located partially within the curtilage of Lakemba Railway Station. C15 would be located along the rail corridor in the northern portion of the item and would extend into the northern section of the curtilage, C16 would make a minor encroachment along the southern boundary of the heritage curtilage of the station. The sites would be located on grass areas and would not impact any significant fabric of the heritage item. Provided that the impact areas are remediated post-construction, the direct impacts of the sites would remain negligible. There would be views onto the site from the heritage item. This would result in a temporary moderate visual impact on the item. C14 would be located on the other side of the Haledon Street overbridge to the east. There would be limited views onto the sites from the heritage item. This would result in a temporary minor visual impact on the item. Impacts of construction compounds on the item would be minor.
Federation weatherboard house	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.
Inter-War post office building - Lakemba Post Office	Local	C16 would be located in the vicinity of the heritage item opposite The Boulevarde. There would be some views onto the sites from the item. This would result in a temporary minor visual impact on the item. Impacts of construction compounds on the item would be minor.
Electricity Substation no. 143	Local	C14 would be located opposite the heritage item opposite the rail corridor. There would be views onto the sites from the item. This would result in a temporary minor visual impact on the item. Impacts of construction compounds on the item would be minor.

8.3.8 Wiley Park Station Catchment

Description

The entire rail corridor within Wiley Park Station Catchment would be used as a worksite. Outside the rail corridor, construction compounds 17 and 18 (C17 and C18) would be located within the curtilage of Wiley Park Railway Station along the rail corridor on grassed areas.

The proposed construction sites map relevant to the station catchment is provided in Figure 300.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 116: Construction compounds assessment for Wiley Park Station Catchment

Item	Significance	Construction compounds impacts
Wiley Park Railway Station Group	Local	C17 and C18 would be located within the curtilage of Wiley Park Railway Station along the rail corridor. The sites would be located on grassed areas and would not impact any existing significant fabric of the heritage item. Provided that the impact areas are remediated post-construction, the direct impacts of the sites would remain negligible. There would be views onto the sites from the heritage item. This would result in a temporary moderate visual impact on the item. Impacts of construction compounds on the item would be minor
Inter-War water pumping station– Lakemba Pumping Station (WP0003)	Local	C17 would be located opposite the heritage item across The Boulevarde on the southern side of the rail corridor. There would be views onto the cpmpound from the item. This would result in a temporary minor visual impact on the item.

8.3.9 Punchbowl Station Catchment

Description

The entire rail corridor within Punchbowl Station Catchment would be used as a worksite. Outside the rail corridor, construction compounds 20 and 21 (C20 and C21) would be partially located within the curtilage of Punchbowl Station along the rail corridor on grass and car parking areas. Construction compound 22 (C22) would be located along the rail corridor on the western side of the Punchbowl Road overbridge.

The proposed construction sites map relevant to the station catchment is provided in Figure 301.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 117: Construction compounds assessment for Punchbowl Station Catchment

Item	Significance	Construction compounds impacts
Punchbowl Railway Station Group	Local	C20 and C21 would be located within the curtilage of Punchbowl Railway Station along the rail corridor. The sites would be located on grass and car parking areas and would not impact any existing significant fabric of the heritage item. Provided that impact areas are remediated post-construction, the direct impacts of the site would remain negligible. There would be views onto the sites from the heritage item. This would result in a temporary moderate visual impact on the item. C22 would also be located along the rail corridor on the other side of the Punchbowl Road overbridge. There would be limited views onto the site from the heritage item. This would result in a temporary minor visual impact on the item. Impacts of the construction compounds on the item would be minor.
War Memorial and street trees	Local	C19 and C20 would be located opposite the heritage item across The Boulevarde on the northern side of the rail corridor. There would be some views onto the sites from the edge of the heritage curtilage of the item to the north. However, the War Memorial and street trees would be located outside the visual catchment of the site. This would result in a temporary negligible visual impact on the item.

Item	Significance	Construction compounds impacts
		The impacts of C20 and C19 on the item would be negligible.
Post-war Civic Building (former Punchbowl Baby Health Centre)	Local	There are no construction compounds in the vicinity of this item therefore no impacts are expected.

8.3.10 Bankstown Station Catchment

Description

The entire rail corridor within Bankstown Station Catchment would be used as a worksite. Construction compounds 23 and 24 (C23 and C24) would be located in close vicinity of Bankstown Station along the rail corridor on grass and car parking areas, with C24 making a minor encroachment on the heritage curtilage of the station to the south-east.

The proposed construction sites map relevant to the station catchment is provided in Figure 302.

Impact assessment

The following table provides an impact assessment in relation to construction compounds for each heritage item located within the station catchment.

Table 118: Construction compounds assessment for Bankstown Station Catchment

Item	Significance	Construction compounds impacts
Bankstown Railway Station Group	Local	C23 and C24 would be located in close proximity of Bankstown Railway Station along both sides of the rail corridor. C24 would make a minor encroachment on the heritage curtilage in the south-east corner. The sites would be located on grass and car park areas and would not impact any significant fabric of the heritage item. Provided that the impact areas are remediated post-construction, the direct impacts of the site would remain negligible. There would be views onto the sites from the heritage item. This would result in a temporary moderate visual impact on the item. Impacts of construction compounds on the item would be minor.
Bankstown Parcels Office (former)	Local	C23 would also be located opposite the heritage item across the rail corridor to the north. There would be some views onto the site from the item. This would result in a temporary minor visual impact on the item. C24 would be located in close proximity of the heritage item to the east along the rail corridor. There would be views onto the site from the heritage item. This would result in a temporary moderate visual impact on the item. Impacts of construction compounds on the item would be minor.
Shop	Local	C23 and C24 would be located opposite the heritage item across Bankstown City Plaza and North Terrace, being located opposite the rail corridor. There would be some views onto the sites from the heritage item. This would result in a temporary minor visual impact on the item. Impacts of construction sites on the item would be minor.

8.4 Mitigation and management measures

Site remediation

Site remediation measures related to construction sites would be incorporated within the Urban Design and Landscape Plan for the project. The objective of the scheme would be to minimize long-term impacts on the visual amenity of the items by recreating a sympathetic environment. In particular, a landscape scheme would be prepared for the Old Sugarmill to re-instate planting within the curtilage and in proximity of 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.

Construction Environmental Management Plan (CEMP)

Methodologies would be developed to minimise unforeseen impacts as a result of works in proximity of heritage items. A Construction Environmental Management Plan (CEMP) would provide specific management measures for heritage items in proximity of construction sites and for compound areas which extend outside the rail corridor.

9. CUMULATIVE IMPACT ASSESSMENT

9.1 The Bankstown Line

9.1.1 Overview of Impacts

A summary table of direct, visual, potential direct and archaeological impacts is provided below for each railway heritage item located on the Bankstown Line within the 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 project area.

Table 119: Summary of Heritage Impacts for the Bankstown Line

Item	Significance level	Direct	Visual	Potential direct	Construction sites	Significance level retained?
Marrickville Railway Station Group	State	**Major**	**Moderate**	Minor	Minor	Yes
Dulwich Hill Railway Station Group	Local	**Major**	**Major**	Minor	Minor	Yes
Hurlstone Park Railway Station Group	Local	**Major**	**Major**	Minor	Minor	Yes
Hurlstone Park Railway Underbridge	Local	Negligible	Negligible	Negligible	Neutral	Yes
Canterbury Railway Station Group	State	**Moderate**	**Moderate**	Minor	Minor	Yes
Canterbury (Cooks River) underbridge	Local	**Moderate**	Minor	Negligible	Neutral	Yes
Canterbury (Cooks River/Charles St) Underbridge - Main Line	Local	**Moderate**	Minor	Negligible	Neutral	Yes
Campsie Railway Station Group	Local	**Moderate**	**Moderate**	Minor	Minor	Yes
Belmore Railway Station Group	State	**Moderate**	**Moderate**	Minor	Minor	Yes
Lakemba Railway Station Group	Local	**Moderate**	**Moderate**	Minor	Minor	Yes
Wiley Park Railway Station Group	Local	**Major**	**Major**	Minor	Minor	**No**
Punchbowl Railway Station Group	Local	**Major**	**Major**	Minor	Minor	**No**
Bankstown Railway Station Group	Local	**Moderate**	**Moderate**	Negligible	Minor	Yes
Bankstown Parcels Office (former)	Local	Neutral	Neutral	Minor	Minor	Yes

9.1.2 Statement of Heritage Impact

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 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 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 project would result in major direct impacts to five stations, one of which is listed on the SHR, Marrickville. There would be moderate direct impacts to five stations, two of which are listed on the SHR: Canterbury and Belmore. Four stations would be subject to major visual impacts. Five stations would be subject to a moderate visual impact, three of which are listed on the SHR: Marrickville, Canterbury and Belmore. Two locally-listed stations, Wiley Park and Punchbowl, would no longer meet the threshold for local significance and would likely be delisted. All SHR stations would continue to meet the threshold for State significance under more than one significance assessment criteria.

Overall, all ten stations would be subject to moderate to major direct and visual impacts. Direct and visual impacts to three railway underbridges would be negligible to moderate. There would be major direct impacts to the Illawarra Road overbridge at Marrickville, which is within the station's SHR curtilage. 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 updated assessment of significance of elements and recommendations on curtilage changes, for example a possible reduction in curtilage at Marrickville Station as a result of impacts to the Illawarra overbridge. The CMP would also provide suggested site specific exemptions or management policies.

Station types

The ten railway stations within the project area could be divided into three main station types: the first layer of development of the Bankstown Line: Marrickville, Dulwich Hill (although fully redeveloped), Hurlstone Park, Campsie, Canterbury and Belmore; the second layer of development of the line: Lakemba, Punchbowl and Bankstown; and the inter-war development phase with the infill station at Wiley Park and the fully redeveloped Dulwich Hill station.

Stations constituting the first layer of development of the line would generally be retained, Dulwich Hill being excluded from this group as it was fully redeveloped in 1935. All platform buildings and general station configurations would be conserved at Marrickville, Hurlstone Park, Campsie, Canterbury and Belmore, but for the Platform 1 building at Hurlstone Park which would be removed.

Stations constituting the second layer of development of the line would mostly be conserved in their existing states. Lakemba and Bankstown's island platform configurations and platform buildings would be retained. Punchbowl Station would be subject to greater impacts as it would be fully redeveloped.

The inter-war layer of the Bankstown Line would be impacted with Wiley Park Station being fully redeveloped, constituting the loss of the only example of Inter-War Railway Domestic station on the line. The inter-war phase of redevelopment of Dulwich Hill station would also be altered with the loss of the overhead booking office and major visual impacts on the station building, although the latter, and the island platform configuration would be conserved.

The most significant stations on the line at Marrickville, Canterbury and Belmore dated from the first phase of development would retain their significant near-identical brick buildings of exceptional significance. The intermediate stations of the first phase of development have more modest brick buildings dated 1915 including Campsie and Hurlstone Park station. Campsie would retain its original configuration and buildings whilst Hurlstone Park would be subject to greater impacts with the more prominent of two platform buildings being removed. The configuration of two stations at Punchbowl and Wiley Park would be fully modified from island platforms to wayside platforms. The configuration of Bankstown Station would be retained and the station extended to the east.

Station elements

The Bankstown Line would conserve examples of each significant platform building type found on the Marrickville to Bankstown portion of the line. Examples of 1895 Type 11 buildings of exceptional significance would be conserved at Marrickville, Canterbury and Belmore stations. Several examples of 1911-1919 Type 11 buildings would be conserved at Marrickville, Hurlstone Park, Canterbury, Campsie, Lakemba and Bankstown to evidence the second historical layer of the line. Evidence of the transitional style of Inter-War railway architecture would be retained at Dulwich Hill, although the Inter-War domestic style buildings at Wiley Park would be lost.

A good example of an overhead booking office would be conserved at Belmore, whilst good to fair examples included in a TfNSW study of overhead booking offices would be removed at Dulwich Hill, Wiley Park and Punchbowl stations[152]. The platform booking office would be retained at Marrickville. A significant portion of original footbridges already impacted would be removed to meet the requirements of the new Metro concourses. A footbridge assessed to be of high significance within the NSW railway collection in a Sydney Trains' footbridge conservation strategy would be removed at Dulwich Hill, as would three footbridges of moderate significance at Hurlstone Park, Canterbury, and Wiley Park. [153]

Original platforms along the line would be removed to meet accessibility and operational requirements for straight platforms, except for the platforms at Bankstown Station which would be mostly retained. This would result in a substantial loss of curved wayside and island platforms, and of brick vertical and battered platform walls along the Bankstown Line. General platform configuration would be

[152] Australian Museum Consulting 2014. Railway Overhead Booking Offices Heritage Conservation Strategy. Prepared for Transport for NSW.
[153] NSW Government Architect's Office Heritage Group 2016. Railway Footbridges Heritage Conservation Strategy. Prepared for Sydney Trains.

retained apart from at Punchbowl and Wiley Park where original island platform configuration would be changed to two wayside platforms.

Overbridges on the line have generally been impacted over time. The majority of the overbridges would be conserved for upgrade and continued use, with the exception of the Illawarra Road overbridge at Marrickville which would be removed and replaced.

Archaeological impacts

Overall the study area has a nil-low potential to contain significant archaeological remains. There was limited development across the study area prior to development of the rail line. Construction of the railway stations and rail line in the late nineteenth and early twentieth century would have required a considerable amount of ground disturbance and excavation.

There are four locations that have the potential to contain significant archaeological remains, the Marrickville Station Catchment, the Canterbury Station Catchment and worksite, the Lakemba Station Catchment and Belmore Station Catchment. Other locations across the line may contain archaeological 'works' such as remains of culverts, former platforms (within existing remodelled platforms), and infrastructure such as drains.

Marrickville Station Catchment
There is a moderate-high potential for potentially local significant archaeological remains associated with the railway station to be impacted by the proposed works. These remains are generally works and former railway infrastructure as identified in the Marrickville Station draft CMP (Scobie 2016).

Canterbury Station Catchment and construction site
Although the location of the Old Sugarmill and former associated structures is to the east of the station, there is a moderate – high potential that remains associated with this period of occupation may also extend into the station catchment and worksite to the south of the rail line adjacent to the Old Sugarmill SHR item. These remains would have local or State significance depending on their nature and intactness.

The former Canterbury Township is located to the east of Canterbury Station. Any subsurface works within the rail corridor and worksite have a moderate – high potential to impact any associated intact archaeological remains. These remains would have local significance.

Lakemba Station Catchment
There is a low potential for locally significant archaeology associated with the early settlement of Lakemba including structures associated with the Taylor House (Lakemba) such as outbuildings and stables and archaeological features associated with farming activities, domestic and agricultural structures, refuse pits and drains or culverts. Works within the station catchment have the potential to impact any associated intact archaeological remains.

Belmore Station Catchment
There is a low-moderate potential for locally significant archaeological remains associated with the railway station goods shed and goods platform to be impacted by the proposed works.

Construction compounds impact

The construction compounds impact assessment considered impacts of temporary construction compounds on the heritage items located within the project area. Overall, impacts of construction sites would be minor and temporary. Provided that mitigation measures are implemented to remediate the sites following the completion of the project, overall impacts from the construction of the project on the current Bankstown Line would be negligible.

Conclusion

The contrasting contemporary design of the Metro stations would generally be distinguishable from the heritage character of the historic stations and provide enhanced views of significant platform buildings. The new Metro line would be read as the latest phase of development of the Bankstown Line and would enable the line to function in its original use within a modern railway infrastructure context. The continued use of the stations in their historic function, the retention of a majority of platform buildings for re-use and enhanced views of significant buildings would constitute positive heritage impacts in the context of the project and its requirements.

9.2 The Study Area

9.2.1 Overview of impacts

A summary table of direct, visual, potential direct and archaeological impacts is provided below for each heritage item located within the study project area. An assessment is provided of whether the overall significance level of the heritage item is retained following the impacts.

Table 120: Summary of Built Heritage Impacts for the Study Area

Station	Item	Significance	Direct	Visual	Potential direct	Construction sites	Significance level retained?
Marrickville	Marrickville Railway Station Group	State	**Major**	**Moderate**	Minor	Minor	Yes
	Sewage Pumping Station 271	State	Neutral	Negligible	Minor	Neutral	Yes
	Stone house, including interiors	Local	Neutral	Negligible	Minor	Neutral	Yes
	Stonewalling, terracing and street planting	Local	Neutral	Negligible	Negligible	Neutral	Yes
Dulwich Hill	Dulwich Hill Railway Station Group	Local	**Major**	**Major**	Minor	Minor	Yes
	South Dulwich Hill Heritage Conservation Area	Local	Negligible	Negligible	Minor	Neutral	Yes
	Inter-War Heritage Conservation Area Group	Local	Neutral	Negligible	Minor	Neutral	Yes
	Gladstone Hall, including interiors	Local	Neutral	Neutral	Minor	Neutral	Yes
Hurlstone Park	Hurlstone Park Railway Station Group	Local	**Major**	**Major**	Minor	Minor	Yes

Station	Item	Significance	Direct	Visual	Potential direct	Construction sites	Significance level retained?
	Hurlstone Park Railway Underbridge	Local	Negligible	Negligible	Negligible	Neutral	Yes
Canterbury	Canterbury Railway Station Group	State	**Moderate**	**Moderate**	Minor	Minor	Yes
	Canterbury (Cooks River) underbridge	Local	**Moderate**	Minor	Negligible	Neutral	Yes
	Canterbury (Cooks River/Charles St) Underbridge - Main Line	Local	**Moderate**	Minor	Negligible	Neutral	Yes
	Old Sugarmill	State	Neutral	Negligible	Minor	Minor	Yes
	Inter-War Hotel (former Hotel Canterbury)	Local	Neutral	Neutral	Negligible	Neutral	Yes
	Federation Post Office Building (former Canterbury Post Office)	Local	Neutral	Neutral	Minor	Neutral	Yes
	Electricity substation no. 275	Local	Neutral	Negligible	Negligible	Neutral	Yes
Campsie	Campsie Railway Station Group	Local	**Moderate**	**Moderate**	Minor	Minor	Yes
	Federation commercial building–Coffill's Buildings	Local	Neutral	Negligible	Negligible	Neutral	Yes
	Inter-War Commercial Building–Station House	Local	Neutral	Negligible	Minor	Neutral	Yes
	Inter-War Court House (former) Campsie Court House	Local	Neutral	Neutral	Negligible	Neutral	Yes
	War Memorial Clock Tower	Local	Neutral	Neutral	Negligible	Neutral	Yes
	Federation house	Local	Neutral	Negligible	Negligible	Neutral	Yes
	Federation villa	Local	Neutral	Negligible	Negligible	Neutral	Yes

Station	Item	Significance	Direct	Visual	Potential direct	Construction sites	Significance level retained?
Belmore	Belmore Railway Station Group	State	**Moderate**	**Moderate**	Minor	Minor	Yes
	Post-war bus shelter and public lavatories	Local	Neutral	Minor	Negligible	Minor	Yes
	Federation House (former station master's cottage)	Local	Neutral	Negligible	Minor	Minor	Yes
Lakemba	Lakemba Railway Station Group	Local	**Moderate**	**Moderate**	Minor	Minor	Yes
	Federation weatherboard house	Local	Neutral	Neutral	Negligible	Neutral	Yes
	Inter-War post office building - Lakemba Post Office	Local	Neutral	Negligible	Negligible	Minor	Yes
	Electricity Substation no. 143	Local	Neutral	Neutral	Negligible	Minor	Yes
Wiley Park	Wiley Park Railway Station Group	Local	**Major**	**Major**	Minor	Minor	**No**
	Inter-War water pumping station– Lakemba Pumping Station (WP0003)	Local	Neutral	Negligible	Negligible	Minor	Yes
Punchbowl	Punchbowl Railway Station Group	Local	**Major**	**Major**	Minor	Minor	**No**
	War Memorial and street trees	Local	Neutral	Negligible	Negligible	Negligible	Yes
	Post-war Civic Building (former Punchbowl Baby Health Centre)	Local	Neutral	Negligible	Negligible	Neutral	Yes
Bankstown	Bankstown Railway Station Group	Local	**Moderate**	**Moderate**	Negligible	Minor	Yes
	Bankstown Parcels Office (former)	Local	Neutral	Neutral	Minor	Minor	Yes
	Shop	Local	Neutral	Negligible	Negligible	Minor	Yes

9.2.2 Statement of Heritage Impact

Impact summary

Five SHR items, thirty-two items of local significance and two heritage conservation areas are located within the study area. The 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 project area considered direct, visual, and potential direct (vibration) impacts. An archaeological assessment and assessment of impact was provided for the entire project area. Assessment for heritage items in the buffer zone considered visual, and potential direct (vibration) impacts. All construction sites are included in the project area.

Among the five SHR items in the study area, it was assessed that the project would result in a major direct impact to one item (Marrickville Railway Station Group), moderate direct impacts to two items (Canterbury Railway Station Group and Belmore Railway Station Group), and neutral direct impacts to two items (Sewage Pumping Station 271 and Old Sugarmill). The 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 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, four would have major direct impacts and four major visual impacts. Among the four items of local significance to have major impacts, two would no longer meet the threshold for local significance and would likely be delisted. Among the heritage items and conservation areas located within the buffer zone, impacts would range from neutral to minor with a majority of impacts being neutral or negligible, and temporary as a result of operation of construction sites.

Residual impacts

Heritage impacts caused by the 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-use/relocation or refurbishment of significant elements where possible. However, impacts assessed as major would not be fully mitigated and there would be some residual impacts.

Residual impacts would include items 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.

10. MITIGATION AND MANAGEMENT MEASURES

Mitigation measures identified in other technical papers and other chapters of the Environmental Impact Statement that are relevant to the management of potential heritage impacts include:

- Chapter 12 (Construction noise and vibration) and Chapter 13 (Operational noise and vibration) with respect to management of potential vibration impacts (Technical Paper 2 – Noise and vibration assessment)
- Chapter 19 (Landscape character and visual amenity) with respect to management of potential visual impacts during construction and operation (Technical Paper 7 – Landscape and visual assessment).

Mitigation and management measures are provided below and relevant heritage items concerned summarized for easy reference. These would be implemented to address heritage impacts on non-Aboriginal heritage sites and areas of archaeological potential within the study area.

Table 121: Mitigation and management measures

Measure	Guidelines	Would apply to
NAH1	Appropriate heritage interpretation would be incorporated into the design for the project in accordance with the NSW Heritage Manual, the NSW Heritage Office's Interpreting Heritage Places and Items: Guidelines (August 2005), and the NSW Heritage Council's Heritage Interpretation Policy.	• Each railway station in the project area • Hurlstone Park Railway Underbridge • Overbridge- Illawarra Road, • Canterbury (Cooks River) Underbridge • Canterbury (Cooks River/Charles St) Underbridge - Main Line • Post-war bus shelter and public lavatories • Bankstown Parcels Office (former)
NAH2	The appropriately qualified and experienced heritage architect who is part of the Sydney Metro City & Southwest Design Review Panel would provide independent review periodically throughout detailed design.	• Project area in relation to all heritage items
NAH3	The project design would be sympathetic to impacted items (including retained significant elements) and surrounding heritage items by minimising impacts to sight lines, views and setting. Detailed design would be carried out in accordance with the relevant specific element principles, including the significant fabric strategy, in the Design Guidelines.	• Project area in relation to all heritage items
NAH4	Except for heritage significant elements affected by the project, direct impact on other heritage significant items elements would be avoided.	• Project area in relation to all heritage items
NAH5	Where heritage significant items or elements are to be retained within the operational area, detailed design would consider appropriate retrofitting and reuse. As part of the design, retrofitting and reuse would be developed in consultation with a heritage architect and the Design Review Panel. Where retrofitting and reuse is not practicable for significant elements, justification would be	• Project area in relation to all heritage items

Measure	Guidelines	Would apply to
	provided to the Design Review Panel and for SHR items, to the NSW Heritage Council.	
NAH6	A moveable heritage item strategy would be prepared for the Bankstown Line. The strategy would be prepared by a suitably qualified heritage consultant in consultation with Sydney Trains, and 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 a broader interpretation strategy for the Bankstown Line.	• Bankstown Line: each railway station in the project area apart from Bankstown, and Bankstown Parcels Office (former)
NAH7	Fabric of high and exceptional significance of items proposed for removal would be identified and catalogued according to the significant fabric strategy prior to design development and would be re-used where possible in the design development phase. Where not re-used within the design of the project, the significant fabric strategy would indicate appropriate storage locations as well as appropriate types of buildings and structures where the salvaged elements may be reused in the future. Where large elements are impacted a sample of fabric may be appropriate.	• Marrickville Railway Station Group: Overbridge- Illawarra Road, • Dulwich Hill Railway Station Group: overhead booking office and access stairs • Hurlstone Park Railway Station Group: Platform 1 building • Campsie Railway Station Group: overhead booking office and Parcels office • Wiley Park Railway Station Group: Platform 1 building, Platform 2 building and overhead booking office • Punchbowl Railway Station Group: overhead booking office and footbridge
NAH8	Methodologies for the removal of existing structures and construction of new structures and installation of railway infrastructure would be developed to minimise direct and visual impacts to other elements within the curtilages of the heritage items or to heritage items located in the vicinity of works. These methodologies would be included within the overall Construction Environmental Management Plan (CEMP).	• Project area in relation to all heritage items
NAH9	Site remediation measures related to construction sites would be incorporated within the Urban Design and Landscape Plan. The objective of the remediation would be to minimize long-term impacts on the visual amenity of the items by recreating a sympathetic environment. In particular, a landscape scheme would be prepared for the Old Sugarmill to re-instate planting within the curtilage and in proximity of 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.	• Project area in relation to all heritage items • Old Sugarmill

Measure	Guidelines	Would apply to
NAH10	An archaeological research design would be prepared and implemented to identify the need for archaeological testing or monitoring. Archaeological mitigation measures recommended in the archaeological research design would be carried out in accordance with Heritage Council guidelines, and where identified in the archaeological research design, would be supervised by a suitably qualified Excavation Director with experience in managing State significant archaeology. An Unexpected Finds Policy would be implemented during the project to manage and mitigate potential impacts to the potential archaeological resource.	• Bankstown Line (Management framework for unexpected finds and management of 'works') • Marrickville Station Catchment (specific requirements) • Canterbury Station Catchment and worksite (specific requirements) • Belmore Station Catchment (specific requirements) • Lakemba Station Catchment (specific requirements)
NAH11	Ancillary works required by the project related to power supply, drainage facilities, railway tracks, overhead wiring and any other works would be designed and constructed to minimise impacts on heritage items and areas of archeological potential as much as feasible within the context of the project.	• Project area
NAH12	Photographic Archival Recording and reporting 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). The record would be prepared by a suitably qualified heritage consultant using archival-quality material. Records for SHR listed items would be held at the NSW Heritage Council and State Library. Records for LEP-listed items would be held by the local Council and local library. A copy of the record would be held by the owner of the asset.	• Each railway station in the project area • Overbridge- Illawarra Road, • Hurlstone Park Railway Underbridge • Canterbury (Cooks River) Underbridge • Canterbury (Cooks River/Charles St) Underbridge - Main Line • Post-war bus shelter and public lavatories • Bankstown Parcels Office (former)
NAH13	Design and construction within the Marrickville Station State Heritage register curtilage would consider the recommendations of the 2016 Conservation Management Plan and the significant fabric strategy.	• Marrickville Railway Station Group
NAH14	A Conservation Management Plan (CMP) would be prepared by the Metro Operator for all SHR listed stations in accordance with NSW Heritage Council Guidelines. The CMP would address any changes to the item including updated assessment of significance of elements and recommendations on curtilage changes. The CMP would also provide suggested site specific exemptions and management policies.	• Marrickville Railway Station Group • Canterbury Railway Station Group • Belmore Railway Station Group
NAH15	A Conservation Management Strategy (CMS) would be prepared by the Metro Operator for all s170 register listed stations not listed on the SHR in accordance with NSW Heritage Council Guidelines. A CMS would not be required for Wiley Park and Punchbowl stations which would no longer reach the threshold of local significance. The CMS would address any changes to the item including updated assessment of significance of	• Dulwich Hill Railway Station Group • Hurlstone Park Railway Station Group • Campsie Railway Station Group

Measure	Guidelines	Would apply to
	elements and recommendations on curtilage changes. The CMP would also provide management policies.	• Lakemba Railway Station Group • Bankstown Railway Station Group

11. REFERENCES

Artefact Heritage 2013. *Punchbowl Railway Station Stair Replacement Statement of Heritage Impact*. Prepared for GW Hyder Consulting.

Australian Museum Business Services 2012. *Bankstown Railway Station Upgrade. Statement of Heritage Impact*. Prepared for Transport for New South Wales.

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

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

Bickford, A and Sullivan, S 1984. 'Assessing the research potential of historic sites', in Sullivan, S & Bowdler, S (eds) *Site surveys and significance assessment in Australian archaeology*, Department of Prehistory, Research School of Pacific Studies, Australian National University, Canberra.

Cashman, Richard and C. Meader 1990 *Marrickville, rural outpost to inner city*. Hale & Iremonger.

City of Canterbury Library History Pages

"Campsie NSW"

"Lakemba – Name Origin"

"Lakemba NSW"

"Wiley Park NSW"

David Scobie Architects Pty Ltd 2012. *Sydenham Railway Station. Heritage Impact Statement*. Prepared for Arenco (NSW) Pty Ltd.

David Scobie Architects Pty Ltd 2016. *Marrickville Railway Station Conservation Management Plan.* Prepared for TfNSW and Arenco.

DPWS Heritage Design 2002*. Lakemba Station Stage 1 Upgrade: Statement of Heritage Impact*. Prepared for NSW Department of Public Works and Services.

ICOMOS 2011. *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties.*

Jervis, James. 1951 *A History of the Municipality of Canterbury*, Canterbury Municipal Council.

Larcombe, F.A. 1971 *Change and Challenge: A History of the Municipality of Canterbury*, Canterbury Municipal Council.

Madden, Brian and L. Muir 2008 "Hurlstone Park" Dictionary of Sydney

2009 "Belmore" Dictionary of Sydney

1985 "Punchbowl NSW" City of Canterbury Library history pages.

1988 Campsie's Past: *A History of Campsie and Croydon Park NSW*, Canterbury Municipal Council.

McKillop, B. 2016 The Railways of Sydney: Shaping the City and its Commerce. Accessed via the dictionaryofsydney.org, 26 June 2016

Meader, C. 2008 “Sydenham” Dictionary of Sydney.

2008a “Marrickville” Dictionary of Sydney.

2008b “Dulwich Hill” Dictionary of Sydney

Muir, L. 2013. “From a fine stream to an industrial watercourse” Dictionary of Sydney. Accessed online at: http://dictionaryofsydney.org/entry/from_a_fine_stream_to_an_industrial_watercourse 27/02/2017.

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

NSW Heritage Office 2002. *Assessing Heritage Significance*. Update to the *NSW Heritage Manual.*

NSW Heritage Office 2009. *Assessing Significance for Historical Archaeological Sites and ‘Relics’.*

NSW State Heritage Inventory, NSW Heritage Brach, Office of Environment and Heritage, Parramatta, NSW.

“Hurlstone Park Railway Station Group”

“Lakemba Railway Station Group”

“Punchbowl Railway Station Group”

“Belmore Railway Station Group”

“Bankstown Railway Station Group”

“Canterbury Railway Station Group”

“Campsie Railway Station Group”

“Sydenham Railway Station Group”

“Wiley Park Railway Station Group”

“Dulwich Hill Railway Station Group”

“South Dulwich Hill Heritage Conservation Area”

Office of Rail Heritage 2012. *Conservation Guide: Railway Station Platform Furnishings*.

Register of War Memorials in NSW, *Punchbowl Cenotaph.* Accessed online at http://www.warmemorialsregister.nsw.gov.au/content/punchbowl-cenotaph (23/06/2016)

Rose, Sue 1996. *Bankstown: A sense of Identity*. Hale & Iremonger Pty Limited.

RPS 2013. *Marrickville Station Upgrade. Statement of Heritage Impact.* Prepared for Transport for NSW.

Simpson Dawbin Associates 2002. *Campsie Railway Station: Statement of Heritage Impact for easy access and upgrading development.* Prepared for Rail Development State Rail Authority.

Sydney Water 2004. *Sydenham Pit & Drainage Pumping Station 1. Draft Conservation Management Plan*. Prepared for Sydney Water.

Sydney Water 2005. *Sewage Pumping Station SP0271. Conservation Management Plan*. Prepared for Sydney Water.

Sydney Trains n.d. *Overview of Railway Station Buildings (1856-2009) for S170.*

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SYDENHAM TO BANKSTOWN

ENVIRONMENTAL IMPACT STATEMENT

> Technical Paper 3 – Non-Aboriginal heritage impact assessment