Appendix J

HISTORICAL HERITAGE IMPACT ASSESSMENT

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Powering Sydney's Future
TransGrid

Potts Hill to Alexandria transmission cable project

Historical Heritage Impact Assessment

Potts Hill to Alexandria transmission cable project

Historical Heritage Impact Assessment

Client: TransGrid

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Glossary, acronyms and abbreviations

Glossary

Term	Definition
Archaeological potential	The likelihood of undetected surface and/or subsurface archaeological materials existing at a location.
Bore	Constructed connection between the surface and a groundwater source, that enables groundwater to be transferred to the surface either naturally or through artificial means.
Cable bridges	A purpose built bridge made typically of reinforced concrete structures, through which the transmission cables are integrated for support and protection.
Cable circuit	A series of three phase alternating current transmission cables which make up an electrical circuit to carry an electrical current. A single circuit transmission cable typically comprises a minimum of three cables per circuit.
Conduit	A protective tube or pipe system for individual electric cables. Sometimes referred to as a 'duct'.
Construction	Includes all physical work required to construct the project and also includes construction planning such as the development of construction management plans.
Construction laydown areas	Areas required for temporarily storing materials, plant and equipment and providing space for other ancillary facilities, such as project offices, during construction. Some construction laydown areas would be used for stockpiling.
Community	A group of people living in a specific geographical area or with mutual interests that could be affected by the project.
Detailed design	The stage of the project following concept design where the design is refined, and plans, specifications and estimates are produced, suitable for construction.
Earthworks	All operations involved in loosening, excavating, placing, shaping and compacting soil or rock.
Fill	The material placed in an embankment.
Greater Sydney area	The area generally from Penrith in the west to the east coast and from Hornsby in the north to Campbelltown in the south.
Heritage artefact	Any object which has been physically modified by humans.
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
Pre-construction	All work prior to, and in respect of the state significant infrastructure, that is excluded from the definition of construction.

Term	Definition
Project area	The project area comprises the overall potential area of direct disturbance by the project, which may be temporary (for construction) or permanent (for operational infrastructure) and extend below the ground surface. The project area includes the location of operational infrastructure and construction work sites for: • the transmission cable route (including the entire road reserve of roads traversed); • special crossings of infrastructure or watercourses; • substation sites requiring upgrades (noting that all works would be contained within the existing site boundaries); and • construction laydown areas.
Roadway	Any one part of the width of a road devoted particular to the use of vehicles, inclusive of shoulders and auxiliary lanes.
Road reserve	The area comprising roads, footpaths, nature strips and public transport infrastructure.
Secretary's Environmental Assessment Requirements (SEARs)	Requirements and specifications for an environmental assessment prepared by the Secretary of the NSW Department of the Planning and Environment under section 5.16 of the NSW Environmental Planning and Assessment Act 1979.
state significant infrastructure (SSI)	Infrastructure projects for which approval is required under Division 5.2 of the NSW Environmental Planning and Assessment Act 1979.
Transmission cable	An insulated wire that conducts an electrical current at voltages greater than 132 kV.
Underboring	This is a trenchless method for installing cables involving passing the conduits under infrastructure (such as a road or railway corridor) or a watercourse. Underboring could be via thrust boring (also known as micro tunnelling) or horizontal directional drilling.
Work site	A specific section of the project area for carrying out project construction activities such as trenching and excavation, establishment of a joint bay, underboring or installing a cable bridge. The work site would be fenced off from public access and may include associated activities such as traffic management measures.

Abbreviations and acronyms

Abbreviation/ Acronym	Definition
ACT	Australian Capital Territory
CHMP	Cultural Heritage Management Plan
DoEE	Department of the Environment and Energy
DPE	NSW Department of Planning and Environment
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
CEMP	Construction Environmental Management Plan
CHL	Commonwealth Heritage List
EIS	Environmental Impact Statement
EP&A Act	NSW Environmental Planning and Assessment Act 1979
HCA	Heritage Conservation Areas
IHO	Interim Heritage Order
kg	kilogram
kV	kilovolt
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NSW	New South Wales
RNE	Register of the National Estate
SEARs	Secretary's Environmental Assessment Requirements
SHI	NSW State Heritage Inventory
SHR	NSW State Heritage Register
t	tonne

Executive summary

TransGrid is the manager and operator of the major high-voltage electricity transmission network in New South Wales (NSW) and the Australian Capital Territory (ACT). TransGrid is seeking approval under Division 5.2 of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the construction and operation of a new 330 kilovolt (kV) underground transmission cable circuit between the existing Rookwood Road substation in Potts Hill and the Beaconsfield West substation in Alexandria (the project).

The project has been identified as a solution to address existing issues in the electricity supply network for inner Sydney, which is characterised by ageing and deteriorating electricity infrastructure and forecast increases in consumer demand.

As the project is state significant infrastructure under section 5.12 of the EP&A Act, an Environmental Impact Statement (EIS) has been prepared to assess the impacts of the project. This technical report has been developed in support of the EIS.

The purpose of this report is to identify any registered (historic) heritage sites and Heritage Conservation Areas (HCAs) under relevant local, State and Commonwealth legislation, as well as potential items of heritage significance, within the study area[1]. This report also identifies the likely direct and indirect impacts to any identified historical values and the appropriate mitigation and management measures to ensure that impacts are managed throughout the project.

Register searches undertaken for this assessment identified the following items within the study area:

- two items listed under the State Heritage Register (SHR);
- two Sydney Water Section 170 Register items;
- 45 locally listed items, including 10 HCAs and the Local Environmental Planning listing for the Alexandra Canal (which is also listed separately on the SHR).

There were no relevant listings under the World Heritage List, National Heritage List, Commonwealth Heritage List or Australian Heritage Database.

Overall, there are nine heritage items (including HCAs) that would potentially be directly impacted by the project. There are two heritage items listed on the SHR that are partially located within the study area but are outside the project area. These are the Potts Hill Reservoirs 1 and 2 and the Alexandra Canal. The Potts Hill Reservoir is listed on both the SHR and the Sydney Water Section 170 Heritage and Conservation Register. Similarly, the Alexandra Canal is also listed on two heritage registers, the SHR and Sydney LEP. There are 37 heritage items (including the Potts Hill Reservoir and Alexandra Canal sites) that are located within the study area that would not be directly impacted, however they may be susceptible to indirect impacts, such as from vibration or change in views as a result of the project.

Direct Impacts

The project area primarily consists of road reserves, with the exception of private property and open space areas, such as at the Cooks River in Croydon Park/Campsie, Henson Park, Cooke Park, Peace Park, Camdenville Park and Sydney Park, where the transmission cable route extends outside of the road reserve.

Within the road reserves, construction works are likely to represent only temporary impacts and would not introduce permanent above ground structures within the curtilage of the HCAs. This means there would be no long term change to the existing character or fabric of the HCAs. The exception to this is tree removal, if required, which would have an impact on heritage significance on the five HCA's that would be directly impacted by the project.

There is not expected to be any potential for archaeological relics to be present within the areas of proposed ground disturbance due to the majority of these areas being road reserves, open space

[1] The study area is a 20 metre buffer around the project area as defined in **Section 3.1**.

areas, and other areas (such as construction laydown areas) having undergone significant past disturbance.

The project area at the location of the proposed Cooks River crossing has been previously disturbed from past land uses and therefore is not expected to contain any historical archaeological potential. Camdenville Park and Sydney Park have been highly disturbed in the past from historic uses such as brickwork sites and/or recent demolition and landscaping works.

The project would have no direct impact on either of the two SHR listed items whose curtilage are adjacent to the project area (i.e. Potts Hill Reservoirs 1 and 2 (SHR 01333) and Alexandra Canal (SHR 01621)). Works would be located adjacent to both of these sites and mitigation measures will be included in relevant construction management plans to avoid any indirect impacts to these items.

Indirect/vibration impacts

Indirect impacts would occur via vibration impacts from the excavation, and from temporary visual impacts associated with the construction works to heritage items within the study area. Vibration impacts would be mitigated by recommending minimum work distances for the use of jack hammers and hydraulic hammers from heritage items.

Once construction works are completed, the road surface would be reinstated to its original condition and there would be no permanent visual impacts to heritage items.

Mitigation measures

Based on the historical research and understanding of the project, potential impacts to heritage items would be limited to direct incursion into the curtilage of heritage items and HCAs. This includes trenching, tree removal, temporary visual impacts and potential impacts caused by vibration during construction. Mitigation measures have been proposed to manage these potential impacts and are outlined in **Section 6.1.2**.

1.0 Introduction

TransGrid is the manager and operator of the major high-voltage electricity transmission network in New South Wales (NSW) and the Australian Capital Territory (ACT). TransGrid is seeking approval under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of a new 330 kilovolt (kV) underground transmission cable circuit between the existing Rookwood Road substation in Potts Hill and the Beaconsfield West substation in Alexandria (the project).

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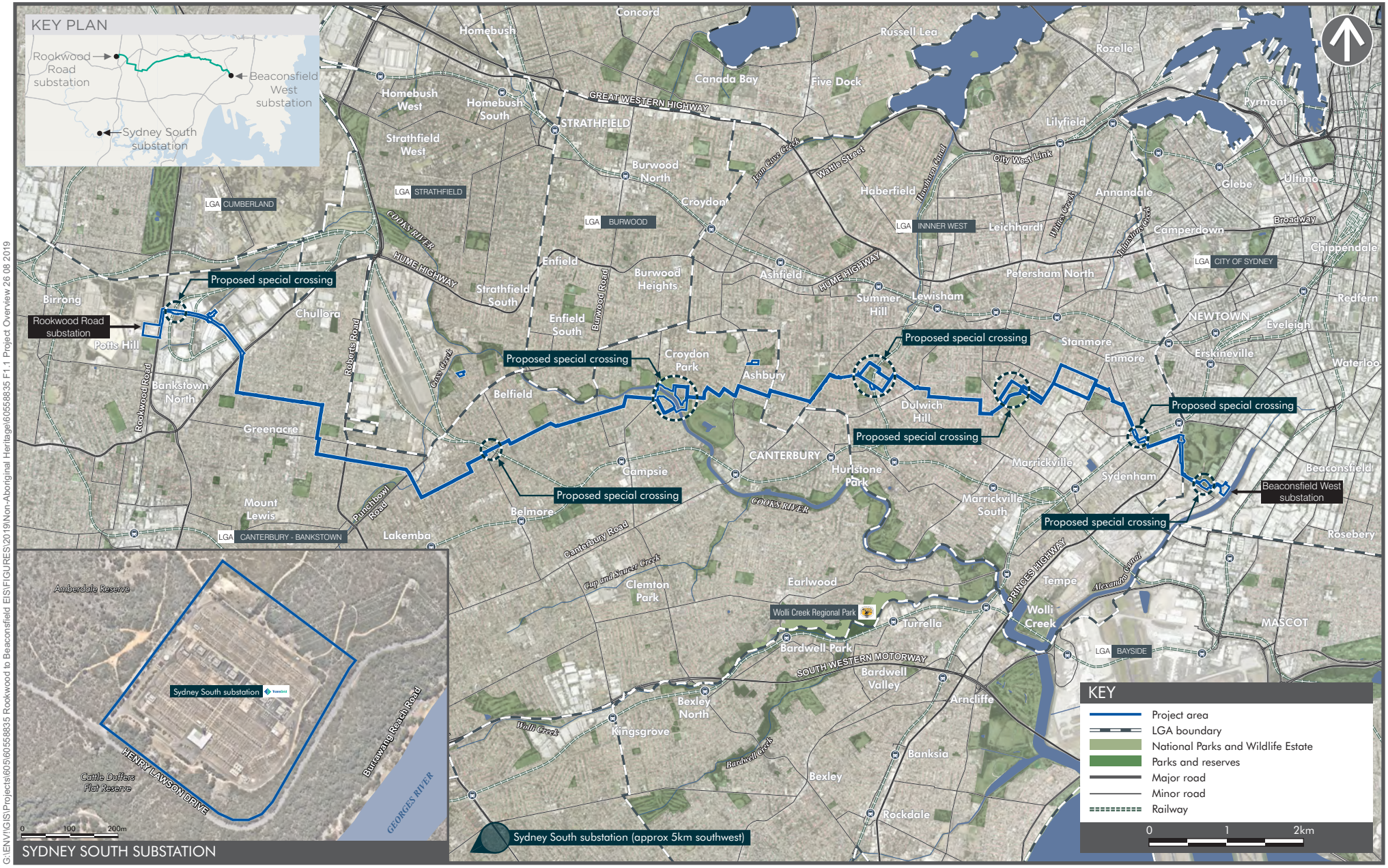
1.1 Project overview

The transmission cable circuit would be about 20 kilometres long and would generally be located within existing road reserves, at existing electrical infrastructure sites, within public open space and on previously disturbed areas as shown in **Figure 1-1**. The project would comprise the following key components:

- cable works connecting Rookwood Road substation with the Beaconsfield West substation;
- special crossings of infrastructure or watercourses;
- upgrade works at the Rookwood Road and Beaconsfield West substations;
- conversion works at the Beaconsfield West and Sydney South substations; and
- temporary construction laydown areas to facilitate construction of the project.



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PROJECT OVERVIEW

Powering Sydney's Future

Potts Hill to Alexandria Transmission Cable Project

Note: The project area is confined to the roadway reserve with the exception of parks and existing substations
Source: Department of Finance, Services and Innovation - Spatial Services (2018), Nearmap (2018)

FIGURE 1-1

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1.2 Purpose of this technical report

This technical report has been prepared in accordance with the revised Secretary's Environmental Assessment Requirements (SEARs) issued for the project on 20 August 2019 by the Planning Secretary of the NSW Department of Planning, Industry and Environment (DPIE).

The SEARs relevant to this historic heritage technical assessment are presented in **Table 1-1**.

Table 1-1 SEARs

SEARs		Section Addressed
Heritage	An assessment of the impact on environmental heritage including heritage conservation areas and State and local heritage items, as defined under the *Heritage Act 1977*, having regard to the NSW Heritage Manual.	Please note that Aboriginal heritage is assessed in a separate report (refer to **Appendix I** (Aboriginal cultural heritage assessment report) of the EIS). The assessment on environmental heritage relating to historical heritage is addressed in this report. **Section 3.0** outlines the methodology and legislation requirements. **Section 4.0** details the known and potential heritage and archaeological items within the study area, including heritage conservation areas and State and local heritage items, as defined under the *Heritage Act 1977*. **Section 5.1** assesses the significance of all known and potential heritage items in the study area. **Section 5.0** contains the heritage impact assessment of the proposed works in relation to the significance of all known and potential heritage items within the study area, as required in the NSW Heritage Manual. **Section 6.0** outlines the management and mitigation measures.

1.3 Report limitations

This report has been produced based on the information available at the time of this assessment. It should be noted that legislation, regulations and guidelines change over time and users of the report should satisfy themselves that the statutory requirements have not changed since the report was written.

Within this report, predictions have been made about the probability of subsurface archaeological materials occurring within the study area, based on surface indications, historical research and environmental contexts. However, it is possible that materials may occur in areas without surface indications and in any environmental context.

2.0 Description of the project

2.1 Project components

Key components of the project are listed below. A detailed description of the project is provided in **Chapter 4 Project description** of the EIS:

- cable works connecting Rookwood Road substation with the Beaconsfield West substation comprising:
  - a 330 kV underground transmission cable circuit comprising three cables installed in three conduits;
  - another set of three conduits for a possible future 330 kV transmission cable circuit if it is required;
  - four smaller conduits for carrying optical fibres;
  - around 26-30 joint bays, per circuit, where sections of cable would be joined together, located approximately every 600-800 metres along the transmission cable route;
  - link boxes and sensor boxes associated with each joint bay to allow cable testing and maintenance;
  - optical fibre cable pits for optical fibre cable maintenance;
- seven special crossings of infrastructure or watercourses including two rail lines (at Chullora and St Peters), one freight line (Enfield Intermodal rail line at Belfield), one light rail line (at Dulwich Hill), the Cooks River and its associated cycleway (at Campsie/Croydon Park), a playground (at Marrickville) and the southern wetland at Sydney Park (at Alexandria);
- upgrade works at the Rookwood Road and Beaconsfield West substations to facilitate the new 330 kV transmission cable circuit;
- conversion works at the Beaconsfield West and Sydney South substations to transition the existing Cable 41 from a 330 kV connection to a 132 kV connection; and
- five temporary construction laydown areas to facilitate construction of the project.

Associated works required to facilitate the construction of the project, such as potential utility relocations, have been considered. No major relocations are anticipated and where smaller services may need to be moved to accommodate the transmission cable circuit, this relocation would be restricted to within the project area assessed in this EIS.

The project does not include the cable pulling and jointing works for the possible future second transmission cable circuit. This activity, should it be required, would be subject to separate assessment and approval as per the requirements of the *EP&A Act*.

Several route options and alternative construction methods are being considered as part of the project. These are described further in **Section 2.4**.

2.2 Project location

The project would be located in the suburbs of Potts Hill, Yagoona, Chullora, Greenacre, Lakemba, Belmore, Belfield, Campsie, Croydon Park, Ashbury, Ashfield, Dulwich Hill, Marrickville, Newtown, St Peters, Alexandria and Picnic Point in the following local government areas (LGAs):

- City of Canterbury-Bankstown;
- Strathfield;
- Inner West; and
- City of Sydney.

The location of the project is shown on **Figure 1-1**.

The project would be located primarily within road reserves, at existing electrical infrastructure sites, within public open space and on previously disturbed areas. The project has been and would continue

to be designed to avoid impacts to private property and open spaces where possible; however, there would be a need for both the use of public open space and easements over some private commercial properties due to significant existing constraints within the road reserve. Land uses adjacent to the road reserves in which the project would be located are mainly residential, with relatively short sections of commercial and mixed uses in the suburbs of Dulwich Hill and Petersham. The project would be located close to industrial areas at the western and eastern ends of the project around Potts Hill, Chullora, Greenacre, Marrickville, St Peters and Alexandria. The existing Sydney South substation at Picnic Point is surrounded by the Georges River National Park.

The location of the proposed special crossings is provided in **Table 2-1**.

Table 2-1 Location of proposed special crossings

Location	Crossing type	Infrastructure or watercourse crossed
Muir Road, Chullora	Cable bridge	Rail line
Enfield Intermodal, Belfield	Underbore	Freight rail line
Cooks River, Campsie/Croydon Park/Ashbury	Cable bridge or underbore (preferred)	Cooks River and cycleway
Arlington Light Rail Station, Dulwich Hill	Underbore	Dulwich Hill light rail line or station
Amy Street, Marrickville	Underbore	Playground near Henson Park
Bedwin Road, St Peters	Cable bridge	Rail line
Sydney Park, Alexandria	Underbore	Wetland

2.3 The project area

The project area comprises the overall potential area of direct disturbance by the project, which may be temporary (for construction) or permanent (for operational infrastructure) and extend below the ground surface. It includes all options under consideration for the project, as described in **Section 2.4**.

The project area includes the location of operational infrastructure and construction work sites for:

- the transmission cable route (including the entire road reserve[2] of roads traversed);
- special crossings of infrastructure or watercourses;
- substation sites requiring upgrades (noting that all works would be contained within the existing site boundaries); and
- construction laydown areas.

While the boundaries of the project area represent the physical extent of where project infrastructure may be located, or construction works undertaken, it does not mean that this entire area would be physically disturbed or that indirect impacts would not be experienced beyond this area. Should the project be approved, the detailed design would aim to refine the location of project infrastructure and work sites within the boundaries of the project area assessed in this EIS.

There is a possibility that to minimise impacts on other utilities or transport corridors (roads and rail), that deviations from the assessed project area may be required. In this event, specific impacts of this approach would be assessed further. Future changes to the project may require additional assessment and approval as described in more detail in **Chapter 5 Statutory planning and approval process** of the EIS.

The location of joint bays and the location of the transmission cable circuit within the road reserve (e.g. kerbside or non-kerbside) is yet to be determined and is subject to detailed design.

[2] Road reserve is defined as the area comprising roads, footpaths, nature strips and public transport infrastructure (including indented bus bays, bus shelters and bus stop signage).

2.4 Options under consideration

The project includes route options and alternative construction methods in locations as outlined below and shown in Figure 4-6 in **Chapter 4 Project description** of the EIS. As the project design develops, a preferred option would be selected for each location. However, approval may be sought for some options where further design and engineering information is required before a preferred option can be selected.

The project options are discussed below by geographical area, from west to east.

2.4.1 Cooks River

There are three options for the transmission cable route in the vicinity of the Cooks River at Campsie/Croydon Park and two options for special crossing methods, including:

- Option 1: the transmission cable route travels in a south-easterly direction along Cowper Street from the intersection with Brighton Avenue, Campsie and then east on Lindsay Street. At the cul-de-sac at the end of Lindsay Street, there are two special crossing options of the Cooks River into Lees Park before the transmission cable route continues on to Harmony Street, Ashbury:
    - Option 1a: construct a cable bridge parallel to and to the north of the existing Lindsay Street pedestrian bridge; or
    - Option 1b: install the conduits under the Cooks River via underboring (this is the preferred option); or
- Option 2: the transmission cable route travels in a north-easterly direction from Byron Street at the intersection with Brighton Avenue, Campsie, through Mildura Reserve. From this parkland, the conduits would be underbored beneath the Cooks River, surfacing in Croydon Park near the cul-de-sac of Croydon Avenue in Croydon Park. The transmission cable route then travels north along Croydon Avenue, east along Dunstan Street, and south along Hay Street, before continuing east along Harmony Street; or
- Option 3: the transmission cable route travels in an easterly direction from Byron Street at the intersection with Brighton Avenue, Campsie, then in a south-easterly direction through Mildura Reserve, between residences and the Cooks River until the cul-de-sac at Lindsay Street. From here, there are two special crossing options of the Cooks River into Lees Park before the transmission cable route continues on to Harmony Street, Ashbury, which are the same for Option 1:
    - Option 3a: construct a cable bridge parallel to and to the north of the existing Lindsay Street pedestrian bridge; or
    - Option 3b: install the conduits under the Cooks River via underboring.

A description of the cable bridge and underboring methods is provided in **Section 2.5**, with further detail in **Chapter 4 Project description** of the EIS.

2.4.2 Dulwich Hill light rail corridor

There are two options for the transmission cable route crossing of the Dulwich Hill Light Rail corridor in the vicinity of the Arlington Light Rail station, Dulwich Hill. This includes:

- Option 4a: the transmission cable route travels northeast along Windsor Road from the intersection with Arlington Street, then east on Terry Road. At the Terry Road cul-de-sac, the conduits would be underbored beneath the rail corridor, surfacing at the Hill Street cul-de-sac. From here the transmission cable route continues along Hill Street to Denison Road; or
- Option 4b: the transmission cable route travels southeast along Constitution Road from the intersection with Arlington Street, before crossing into the southern end of Johnson Park. From here, the conduits would be underbored beneath the rail corridor near the Arlington light rail station. The transmission cable route then continues along Constitution Road and then north on Denison Road.

2.4.3 Henson Park

There are two options for the transmission cable route crossing in the vicinity of Henson Park, Marrickville including:

- Option 5a: the transmission cable route continues northeast on Centennial Street to a car park. From here it travels in an easterly direction through a grassed verge between the tennis courts and Henson Park oval to near the Amy Street playground. The conduits would be underbored beneath the playground, surfacing at Amy Street. The transmission cable route then turns east on to Horton Street; or
- Option 5b: the transmission cable route travels north on Sydenham Road from Centennial Street, turning northeast on to Neville Street, then southeast on Surrey Street to Amy Street before continuing along Charles Street.

2.4.4 Marrickville

There are two options for the transmission cable route in the vicinity of Addison Road, Marrickville. Note that the project may include one or both options at this location including:

- Option 6a: the transmission cable route travels north along Agar Street from the intersection with Illawarra Road, then east on to Newington Road and south down Enmore Road to the intersection with Scouller Street; and/or
- Option 6b: splitting the two circuits as there is insufficient space along Addison Road to accommodate both circuits. One circuit would travel along Newington Road (as for Option 6a) and one circuit would travel east on Addison Road from the intersection with Illawarra Road, then north on Enmore Road to the intersection with Scouller Street.

2.5 Construction works

Construction activities would be limited to the identified project area and include the activities summarised in **Table 2-2**. A substantial portion of the transmission cables would be installed using pre-laid conduits. The conduits would only require the excavation of short sections of trench at a time (an average of 20 metres at any one location), with backfilling occurring as soon as each section of the conduits has been installed. Depending on the overall construction program and associated number of work crews required, it is expected that trenching and excavation would occur concurrently at multiple work sites along the transmission cable route.

The project would involve the construction of seven special crossings that would involve either the installation of a cable bridge or underboring (i.e. an underground crossing). Works for these crossings would be undertaken in coordination with the relevant asset owner (e.g. road or rail authorities).

The construction of the project would require a number of work sites along the transmission cable route and at special crossings. Each work site represents an area of disturbance required to undertake the construction activity (e.g. trenching, cable bridge installation, underboring) and would be located within the project area.

Table 2-2 Summary of construction activities

Construction activity	Description
Site preparation	• implementation of traffic management changes (such as safety barriers and road signage) to facilitate access and egress to/from the work sites; • installation of environmental control measures (such as sediment barriers); • vegetation clearing and tree removal, where required; • establishing construction laydown areas and ancillary facilities including temporary offices and worker amenities, site fencing and provision of power/services; and • delivery and storage of plant and equipment at construction laydown areas and work sites.
Trenching and excavation	• clearing of surface vegetation along excavation area if required; • saw cutting of the road surface/pavement and lifting this material using a backhoe/front end loader. If rock is encountered, a rock breaker may be used to loosen the material; • removal of material down to the base of the trench using an excavator and placement of spoil directly onto trucks to be transported to a licensed facility. The trench would typically be around 3 metres wide and 1.2 metres deep but could be deeper or shallower depending on the presence of utilities; and • installation of shoring as a precaution against slump or collapse where necessary, particularly where deeper sections of trench are required (i.e. deeper than 1.4 metres).
Relocation of minor utilities/services	• use of non-destructive digging methods to expose buried services to guide the excavator; and • minor relocations, if required, would occur within the road reserve and be subject to consultation with the relevant asset owner/operator.
Conduit installation and backfilling	• laying the transmission cable conduits on plastic spacers to provide the required clearance from the side walls and bottom of the trench; • placing the optic fibre communication cable conduits into position; • backfilling the trench with engineered backfill; • laying of polymeric covers and warning tape, marked with appropriate warnings in case of accidental excavation; and • installation of the road base and temporary restoration of the road surface to allow vehicles and other road users to travel across the area.

Construction activity	Description
Excavation and establishment of joint bays	• excavation of joint bays via open trenching; • installation of erosion and stormwater flow controls and barriers; • erecting fencing or hard barriers as required; • provision for vehicle access, worker amenities and equipment storage; • temporary covering with steel plates to provide access to adjacent properties where required; and • excavation of nearby pits to facilitate the installation of link and sensor boxes.
Cable pulling and jointing	• installation of a tent or demountable building over the joint bay to provide a controlled work environment and dry work site; • pulling cables through the conduits which is fed from large drums holding 600-800 metres of cable; and • connecting sections of cables at the joint bay.
Permanent road restoration	• removing the temporary road surface; • backfilling with road base up to surface level, where required; • reinstating pavement; and • reinstating the remaining areas that were excavated with spoil or other fill material to pre-construction levels and final finishing to match existing as appropriate (e.g. footpath and/or kerb and gutter) or as otherwise agreed with the relevant roads authority.
Cable markers	• once restoration activities have been completed, cable markers would be installed along the transmission cable route to give warning of the presence of the cables and the need to make enquiries before digging; • markers may include: - small signs attached to road kerbs; - concrete marker posts (between 800-900 millimetres tall) along the transmission cable route in vegetated areas where surface markers would be difficult to see; or - flush-markers constructed of concrete that are around 50-100 millimetres thick.
Cable bridges	• establishment of the work site and access including vegetation clearing (where required); • boring and earthworks for the bridge piers; • installation of the pre-cast cable bridge and steel cage (where required) by crane; • integration with the conduits in the road reserve; and • reinstatement of the work site.
Underboring	• underboring around 4 to 10 metres below the ground surface by either thrust boring or horizontal directional drilling (HDD); • thrust boring would require a launch pit (at least 4 m metres deep) and associated work site of up to around 800 square metres and a receive pit and work site of about 100 square metres; • HDD would require a work site at the drill launch area of up to around 800 square metres and a receive pit for the drill exit of around 1.5 metres deep; and • work sites would be restricted to the road reserve and public open space areas where feasible and reasonable to limit the need for vegetation removal.

Construction activity	Description
Substation upgrades	• site establishment; • earthworks and excavations needed for cable entries and footings for new equipment; • installation of new infrastructure (such as switchbays and busbars); • removal of redundant infrastructure; • installation and connection of new cables; • commissioning of cables; and • demobilisation.

2.5.1 Staging and timing of construction activities

An indicative duration of construction activities is provided in **Table 2-3**. The timing is subject to the detailed design and the final construction approach. For example, some works, such as trenching and excavation, would be undertaken by multiple work crews working along the transmission cable route. Staging of activities outside of certain hours would also influence the construction approach.

Should the project be approved, construction is planned to occur over 24 months, commencing in 2020. It is estimated that around 15 months would be required for civil construction works and conduit installation and about nine months for cable pulling and jointing, testing and commissioning. The transmission cable circuit is expected to be completed and commissioned in 2022/23.

Table 2-3 Indicative timing of typical construction activities

Construction activity	Indicative duration
Excavation, conduit (pipe) installation and trench backfilling	Conduits for each 600-800 metre cable section would take up to eight weeks to install (with most properties exposed to around two weeks of trench excavation activity).
Joint bay construction	Each individual joint bay would take up to three weeks to establish (in addition to trenching works). Each joint bay contains one cable circuit.
Cable pulling	Cable pulling at each joint bay for each 600-800 metre cable section would typically take up to two weeks to complete.
Cable jointing	Cable jointing would typically take up to three weeks to complete at each joint bay.
Cable bridges	Each cable bridge crossing is expected to take around 10 weeks to complete in total, however works would be staged and not continuous over the 10 week period.
Underboring	Each underbore crossing is expected to take around eight to 10 weeks to complete in total, however works would be staged and not continuous over this period.
Substation works	Construction works at the Rookwood Road substation is expected to take around four to six months, while works at the Beaconsfield West and Sydney South substations are expected to take around six to nine months at each site.

2.5.1.1 Construction hours

Construction works would be undertaken during standard daytime construction hours as specified in the *Interim Construction Noise Guideline* (DECC, 2009) where reasonable and feasible to do so. However, it is expected that works outside standard construction hours would also be required, as described below.

Standard construction hours are:

- Monday to Friday 7am to 6pm;
- Saturday 8am to 1pm; and

- No work on Sundays and public holidays.

It is likely that construction works would be required at night time (after 10pm) due to the requirements of relevant road and rail authorities. These works could include, but are not limited to, works within major road reserves (i.e. on State and regional roads such as Rookwood Road and Old Canterbury Road), through signalised intersections, or at special crossings. Work outside standard construction hours may be required for safety reasons and/or to limit disruption to road traffic and rail services.

Cable jointing works at each joint bay would need to be undertaken continuously i.e. 24 hours. Some works at the substation sites may also need to be undertaken outside of standard construction hours due to outage constraints on the existing infrastructure (i.e. the need to maintain power supply to customers).

Cable bridges and underboring at rail corridors would be timed with other rail works to limit disruption to freight and/or passenger rail services. These works could be undertaken outside of standard construction hours including at night time or over weekends, subject to approval of the relevant rail authority.

Scheduled construction activities, work hours and duration would be further refined through consultation with relevant government agencies and would be outlined in the CEMP for the project.

2.5.2 Construction precincts

The transmission cable route has been divided into five construction precincts to aid the characterisation of the existing environment and assessment of project impacts. These precincts broadly align with similar land uses. A description of each precinct follows:

- **Precinct 1** includes the areas between the Rookwood Road substation and the Hume Highway, including the industrial area of Chullora along Muir Road;
- **Precinct 2** includes the areas between the Hume Highway and Brighton Avenue near the Cooks River including the residential areas of Greenacre, Lakemba, Belmore, Belfield and Campsie;
- **Precinct 3** includes the areas from the Cooks River to Illawarra Road including the residential areas of Croydon Park, Ashbury, Ashfield, Dulwich Hill and Marrickville;
- **Precinct 4** includes the area between Illawarra Road and the Bankstown rail line including the residential areas of Marrickville, Enmore and Newtown; and
- **Precinct 5** includes the areas between the Bankstown rail line and the Beaconsfield West substation including the residential areas of St Peters and the recreational area of Sydney Park in Alexandria.

2.5.3 Construction laydown areas

As part of the construction of the project, temporary construction laydown areas would be required to store materials, equipment, excavated spoil and provide space for other ancillary facilities such as site offices. Five locations have been investigated as potential construction laydown areas. The final number and location is subject to ongoing consultation with the relevant landowners and would be determined during detailed design.

Stockpiling of excavated spoil at the construction laydown areas would be ongoing for the duration of the civil works (around 15 months). Stockpiling would be managed by erosion and sediment controls in accordance with *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) (The Blue Book).

While it is expected that construction would require the use of transportable roadside facilities for individual work sites, provision for temporary site offices would be located within construction laydown areas for the duration of construction (up to two years).

Construction laydown areas would be fenced and would have lighting for security and to facilitate night works.

Driveways may need to be created from gravel or similar material to enable heavy vehicles to enter/exit the site. At construction laydown areas at Cooke Park and Peace Park, extended driveways would be required to access the laydown area. The construction of these driveways would require ground disturbance and potentially tree removal.

Temporary infrastructure at the construction laydown areas, including noise mitigation controls (such as hoardings), driveways and stockpile areas, would involve minimal subsurface ground disturbance (i.e. excavation) and would be removed once construction is complete.

For works at the Rookwood Road and Sydney South substation sites, sufficient space exists at each location to store materials and equipment; therefore, no additional laydown areas would be required.

The proposed locations and area required for the five potential construction laydown areas are listed in **Table 2-4**.

Table 2-4 Potential construction laydown areas

Potential construction laydown area	LGA	Potential area (hectares)
12 Muir Road, Chullora	City of Canterbury-Bankstown	0.48
Cooke Park, Belfield	Strathfield	0.37
Peace Park, Ashbury	Inner West Council	0.45
Camdenville Park, St Peters	Inner West Council	0.18
Beaconsfield West substation, Alexandria	City of Sydney	0.85

2.6 Cable operation and maintenance

Once the transmission cables have been installed, generally only visual inspections would be required. This would involve regularly driving along the transmission cable route to check for hazards or activities (such as excavation works in the vicinity) that could impact the underground cables or cable bridges. Ongoing physical access to the transmission cables is not required however ongoing monitoring of the cable for damage (missing/worn cable markers) and outages would occur. This would be through access to the link boxes and sensor boxes located near the joint bays. Optical fibre cables installed alongside the transmission cables would be monitored at the optical fibre cable pits.

Pits for link and sensor boxes and optical fibre cables would generally be located in the footpath/road verge but in some cases where there is insufficient space, they may be required in the roadway. Roadway access would be managed with standard traffic controls.

Regular checks of the pits would ensure they are accessible and that the pit does not contain water or tree roots. Cable bridge structures would be inspected to ensure structural integrity and aesthetics are being maintained.

3.0 Assessment methodology

3.1 The study area

The study area for this technical assessment is shown in **Figure 3-1**. It comprises the project area (as defined in **Section 2.3**) plus a 20 metre buffer around the project area.

3.2 Statutory context, policy and guidelines

The relevant legislation, policies and guidelines for the protection of historical sites in NSW that have been considered during the preparation of this report include:

- Commonwealth legislation under the *Environment Protection and Biodiversity Conservation Act 1999*;
- NSW state based legislation including the *Environmental Planning and Assessment Act 1979* and the *Heritage Act 1977*; and
- Local Environmental Plans (LEPs) for each LGA.

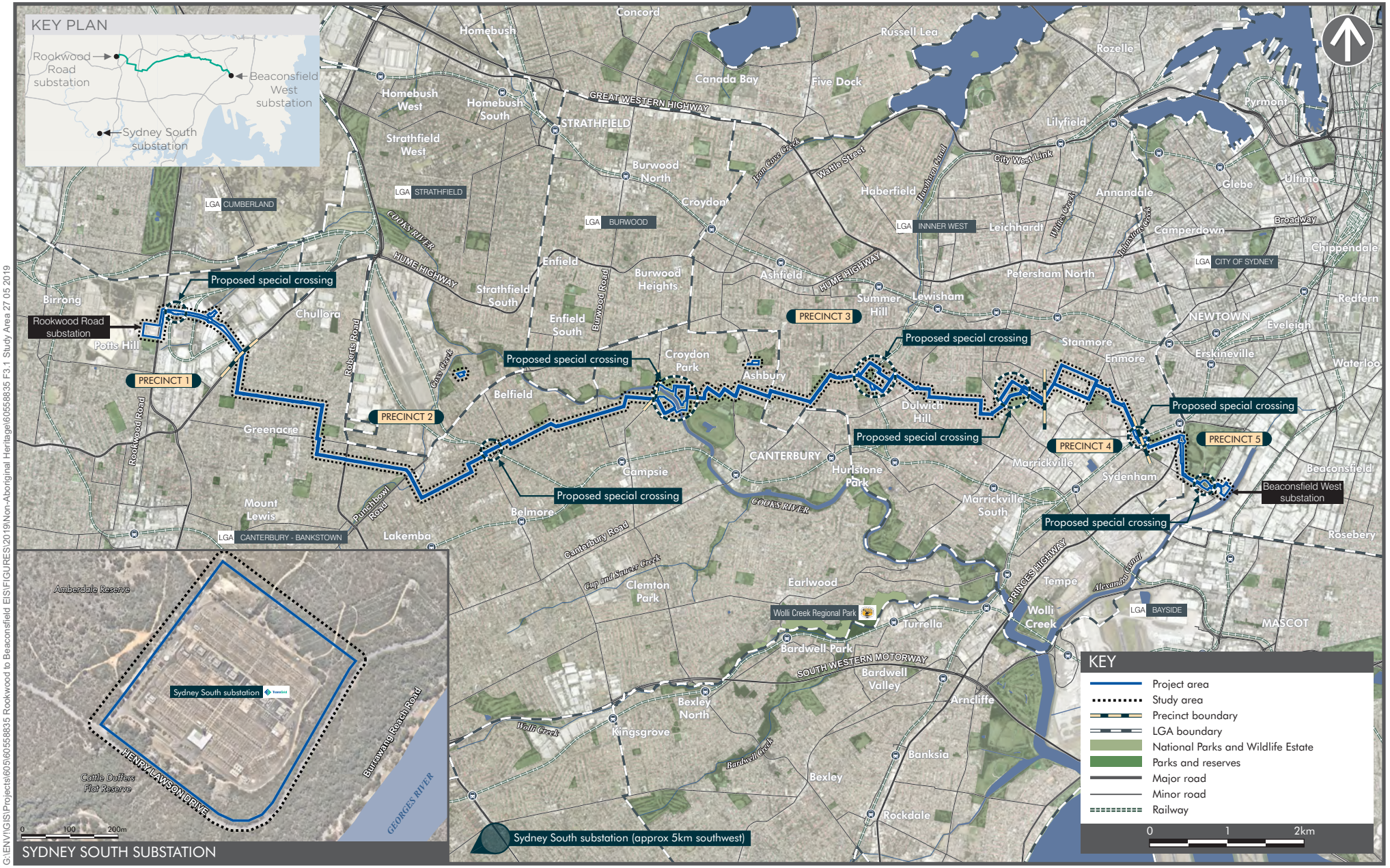
These are further described in the following sections.

3.2.1 Commonwealth legislation

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

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

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



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STUDY AREA

Powering Sydney's Future
Potts Hill to Alexandria Transmission Cable Project

Note: The project area is confined to the roadway reserve with the exception of parks and existing substations
Source: Department of Finance, Services and Innovation - Spatial Services (2018), Nearmap (2018)

FIGURE 3-1

3.2.1 Environmental Planning and Assessment Act 1979

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), administered by the NSW Department of Planning and Environment (DPE), requires that consideration be given to environmental impacts as part of the land use planning and development assessment process. In NSW, environmental impacts are interpreted as including impacts to Aboriginal and historic (i.e. European) cultural heritage.

TransGrid is seeking approval for the project under Part 5, Division 5.2 of the EP&A Act. The project has been declared to be state significant infrastructure. Pursuant to Section 5.23(1) of the EP&A Act, approval under Part 4, or an excavation permit under section 139 of the Heritage Act 1977 are not required for projects approved under Division 5.2 of Part 5 of the EP&A Act. The requirement to undertake heritage assessments is determined in the preparation of the SEARs as specified under Section 5.16 of the EP&A Act.

3.2.2 Heritage Act 1977

The *Heritage Act 1977* (as amended) was enacted to conserve the environmental heritage of NSW. Under Section 32, places, buildings, works, relics, movable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the NSW State Heritage Register (SHR). Items that are assessed as having State heritage significance can be listed on the SHR by the NSW Minister for Planning on the recommendation of the NSW Heritage Council.

Projects to alter, damage, move or destroy places, buildings, works, relics, movable objects or precincts protected by an IHO or listed on the SHR require an approval under Section 60. The 'relics provision' requires that no archaeological relics be disturbed or destroyed without prior consent from the Heritage Council of NSW. Therefore, no ground disturbance works may proceed in areas identified as having archaeological potential without first obtaining an Excavation Permit pursuant to Section 60 (Part 4) of the Heritage Act 1977, or an Archaeological Exemption.

As this project is being undertaken as a state significant infrastructure (SSI) project under the EP&A Act, the provision to apply for approvals under the Heritage Act do not apply.

Section 146 of the Heritage Act requires the Heritage Council to be notified if a relic is discovered during construction works, and if it is reasonable to believe that the Heritage Council is unaware of the location of the relic.

Under Section 170 of the Heritage Act 1977, NSW Government agencies are required to maintain a register of heritage assets to be known as a Section 170 Heritage and Conservation Register (hereafter Section 170 Register). Items that are listed on an Agency's Section 170 Register are also added to the State Heritage Inventory (SHI). The Section 170 Register places obligations on the agencies, but not on non-government proponents, beyond their responsibility to assess the impact on surrounding heritage items and manage the impact accordingly. This may include permits for impacts to potential archaeological deposits, conservation or recording works prior to construction works.

3.2.3 Local Government

As the project is being undertaken as an SSI project, the provisions in LEPs do not strictly apply. However, as part of identifying known heritage items within the study area, Schedule 5 of the relevant LEPs was searched for listed heritage items.

The project is located across four LGAs: Canterbury-Bankstown, Strathfield, Inner West and City of Sydney. Both the Canterbury-Bankstown and Inner West LGAs were formed in 2016 as a result of the amalgamation of the former Canterbury and Bankstown LGAs and former Ashfield, Leichhardt and Marrickville LGAs, respectively. Existing LEPs for these four LGAs remain in force until combined LEPs have been gazetted. The relevant LEPs considered are:

- Canterbury Local Environmental Plan 2012;
- Strathfield Local Environmental Plan 2012;
- Ashfield Local Environmental Plan 2013;
- Marrickville Local Environmental Plan 2011; and

- Sydney Local Environmental Plan 2012.

3.2.4 NSW Heritage Manual

The NSW Heritage Manual has been used as a reference for these works in conjunction with other relevant heritage guidelines that have been issued since its release following amendments to the Heritage Act. This includes reference to relevant individual documents that were originally part of the NSW Heritage Manual, including Assessing Heritage Significance, History and Heritage, Investigating Heritage Significance, NSW Government and Heritage, Planning and Heritage and Statements of Heritage Impact.

3.3 Approach and methodology

The following methodology was undertaken to complete the assessment:

- identification of registered heritage items and conservation areas under local, State and Commonwealth legislation in the study area, as well as any potential heritage items that may be impacted by the project. This includes searches of relevant historical registers, such as:
  - World Heritage List;
  - National Heritage List;
  - Commonwealth Heritage List;
  - Australian Heritage Database;
  - NSW State Heritage Register;
  - Section 170 Registers; and
  - Schedule 5 of relevant LEPs.
- review of existing literature and background reports to gain an understanding of the historical context of the identified heritage conservation areas and heritage sites;
- a combined vehicle and pedestrian inspection of the study area to inform potential heritage impacts and the current condition of listed items;
- completion of a technical report including:
  - identification of known heritage items and areas;
  - identification of archaeological potential (if any) within the study area;
  - assessment of the potential direct and indirect impacts to any historical values within the study area throughout the construction and operation of the project, contextualised through the grading of heritage significance for identified items, assessing archaeological potential and grading impacts likely to occur during construction and operation (if any) as per the requirements outlined in the NSW Heritage Manual; and
  - identification of measures to reduce, avoid or mitigate impacts to any known or potential heritage items located within and in proximity to the study area. This includes a number of feasible mitigation measures to manage impacts on historical heritage values resulting from the project as per the requirements outlined in the NSW Heritage Manual.

4.0 Description of the existing environment

4.1 Register searches

A search of relevant heritage lists and registers was undertaken on 29 May 2019, the results of which are presented in **Table 4-1** and shown in **Figure 4-1** to **Figure 4-4**. The results shaded in grey in the table below, identify those heritage listings that:

- are located within the project area and have the potential for direct impacts (curtilages directly intersected by the project area); and
- heritage items listed on the State Heritage Register that are partially located within the study area but are outside the project area, and have the potential for indirect impacts.

The LEP items listed in the table below are presented within each LEP section in order of their listing ID. Heritage Conservation Areas (HCAs) are listed at the end of each LEP section. This ordering is maintained throughout the document for the presentation of listed items.

Table 4-1 Heritage list search results

Heritage list	Listed item	Listing ID	Level of significance
World Heritage List	No listings	N/A	N/A
National Heritage List	No listings	N/A	N/A
Commonwealth Heritage List	No listings	N/A	N/A
Australian Heritage Database	No listings	N/A	N/A
NSW State Heritage Register	Potts Hill Reservoirs 1 and 2 and Site	SHR 01333	State
	Alexandra Canal	SHR 01621	State
Sydney Water Section 170 Register	Potts Hill Reservoir site	SHI 4573701	State
	City Tunnel	SHI 4574202	Local
Ashfield Local Environmental Plan 2013	House	1	Local
	House	2	Local
	School	3	Local
	Yeo Park (public reserve)	335	Local
	Former Baby Health Centre	587	Local
	House	586	Local
	School 'headmaster's house and chapel	608	Local
	Service Avenue Heritage Conservation Area	C18	Local
Canterbury Local Environmental Plan 2012	Federation house	I2	Local
	Federation house	I3	Local
	Federation house	I4	Local
	Federation house	I5	Local
	Federation house	I6	Local
	Federation house	I7	Local
	Inter War Street Trees	I55	Local
	Canterbury Park Racecourse	I80	Local
	Federation weatherboard house	I147	Local

Heritage list	Listed item	Listing ID	Level of significance
	Ashbury Heritage Conservation Area	HCA1	Local
Marrickville Local Environmental Plan 2011	Holy Trinity Church of England, including interiors	I15	Local
	The Rectory, including interiors	I16	Local
	Victorian filigree style villa — 'Fairview', including interiors	I17	Local
	Victorian italianate style villa — 'Malvern', including interiors	I23	Local
	Waratah Flour Mill	I25	Local
	Golden Barley Hotel, including interiors	I34	Local
	Henson Park	I71	Local
	Enmore Park and entry gates and Port Jackson fig trees	I75	Local
	Terrace housing, including interiors	I76	Local
	Victorian italianate corner shop and adjacent pair of Victorian terrace houses,	I90	Local
	Tunneyfall Terrace	I91	Local
	Brick paving	I98	Local
	Electricity substation No. 1458	I315	Local
	Lewisham Estate Heritage Conservation Area	C26	Local
	Dulwich Hill Commercial Precinct Heritage Conservation Area	C28	Local
	Hoskins Park and Environs (Dulwich Hill) Heritage Conservation Area	C36	Local
	St Pius Church, Church Hall and Presbytery, including interiors	I147	Local
	Terrace housing, including interiors	I273	Local
	Electricity substation No. 549	I369	Local
	The Abergeldie Estate Heritage Conservation Area	C1	Local
	Enmore House Estate Heritage Conservation Area	C13	Local
	Goodsell Estate Heritage Conservation Area	C16	Local
	Llewellyn Estate Heritage Conservation Area	C14	Local
Strathfield Local Environmental Plan 2012	Birriwa Avenue Conservation Area, Belfield- Inter-War California Bungalow Style Group	C1	Local
Sydney Local Environmental Plan 2012	Alexandra Canal	I3	State
	Terrace group including interiors	I12	Local
	Former brickworks group	I27	Local

The searches identified 49 items within the study area. These include:

- two items listed under the SHR;
- two Sydney Water Section 170 Register items
- 45 locally listed items, including 10 HCAs and the LEP listing for Alexandra Canal (which is also listed separately on the SHR). The breakdown of items per LEP are as follows:
  - Canterbury LEP 2012 – nine items and one HCA (total 10) (refer to **Figure 4-1**);
  - Strathfield LEP 2012 – one HCA (refer to **Figure 4-1**)
  - Ashfield LEP 2013 – seven items and one HCA (total eight) (refer to **Figure 4-2** and **Figure 4-3**);
  - Marrickville LEP 2011 – 17 items and seven HCAs (total 24) (refer to **Figure 4-3** and **Figure 4-4**); and
  - Sydney LEP 2012 – three items (one of which is the State significant Alexandra Canal which is also listed on the SHR) (refer to **Figure 4-4**).

There were no relevant listings under the World Heritage List, NHL, CHL or the Australian Heritage Database.

There are nine heritage items (including HCAs) that would potentially be directly impacted from the project. There are two heritage items listed on the SHR that are located immediately adjacent to the project area; the Potts Hill Reservoirs 1 and 2 and the Alexandra Canal. The Potts Hill Reservoir is listed on both the SHR and the Sydney Water Section 170 Heritage and Conservation Register. Similarly, the Alexandra Canal is also listed on two heritage registers, the SHR and the Sydney LEP. There are another 37 locally listed heritage items, including the Sydney Water listing of the Potts Hill Reservoirs and the Sydney LEP listing of the Alexandra Canal, that are located within the study area associated with the project and would not be directly impacted from the proposed works. However, there is the potential for indirect vibration impacts to occur as a result of the excavation associated with the trenching works. These 37 heritage items will be assessed for indirect impacts, such as vibration and visual impacts, collectively. The two SHR items that are located within the study area immediately adjacent to the project area has been assessed individually due to their State significance rating.

These 12 heritage items that would be directly impacted or listed on the SHR are summarised in **Table 4-2** in relation to the assessment precincts for the project.

Table 4-2 Heritage items that will be assessed within this report

Heritage item	Precinct					
	1	2	3	4	5	Construction laydown area
Potts Hill Reservoirs 1 and 2 and Site (SHR 01333)	x					
Inter War Street Trees		x				
The Abergeldie Estate Heritage Conservation Area			x			
Henson Park			x			
Service Avenue Heritage Conservation Area			x			
Ashbury Heritage Conservation Area			x			Peace Park
Goodsell Estate Heritage Conservation Area				x		Camdenville Park
Llewellyn Estate Heritage Conservation Area				x		
Brick Paving				x		
Alexandra Canal (SHR 01621)					x	
City Tunnel (SHI 4574202)	x			x	x	

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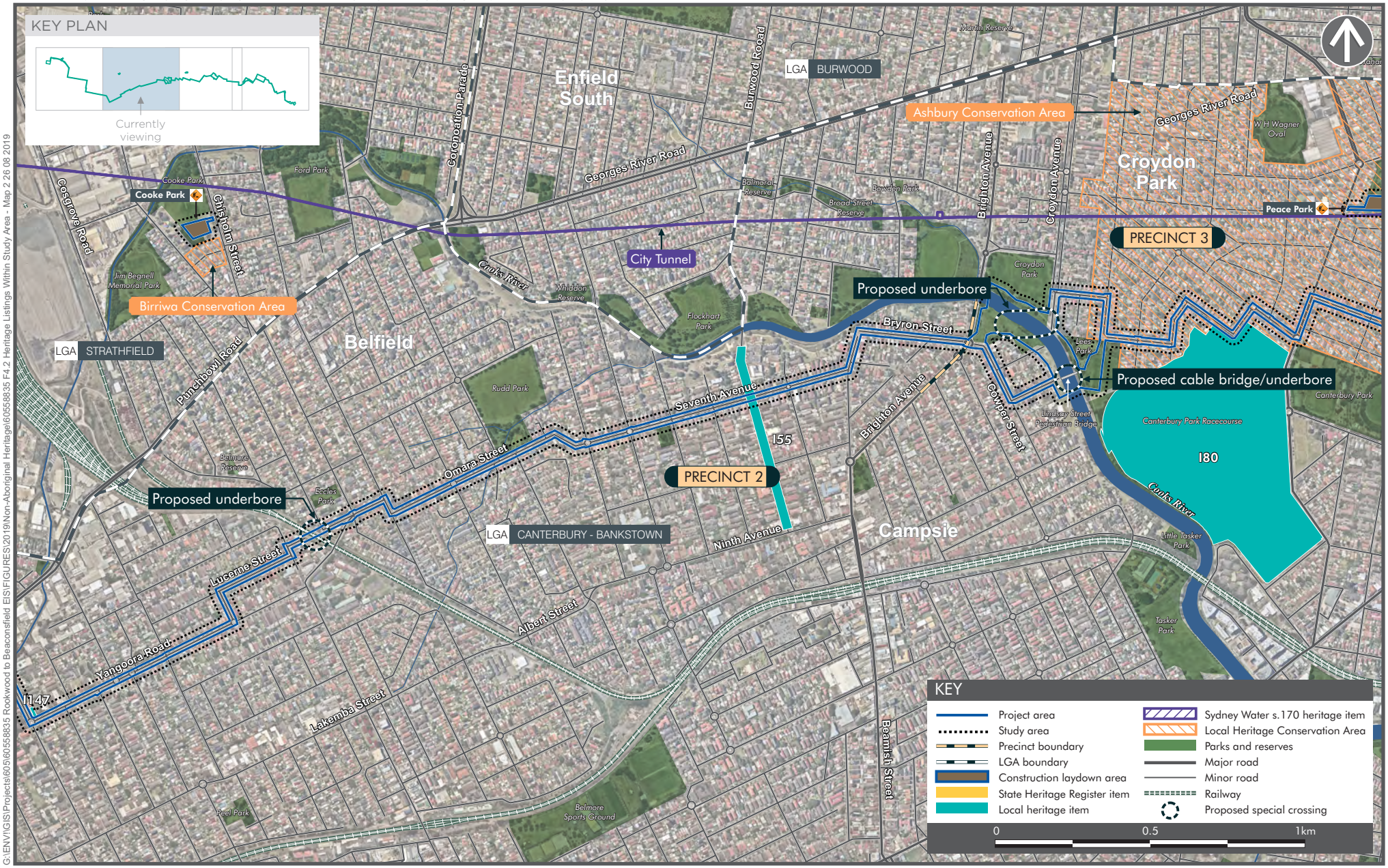
HERITAGE LISTINGS WITHIN STUDY AREA - MAP 1

Powering Sydney's Future
Potts Hill to Alexandria Transmission Cable Project

Note: The project area is confined to the roadway reserve with the exception of parks and existing substation
Source: Department of Finance, Services and Innovation - Spatial Services (2018), Nearmap (2018)

FIGURE 4-1



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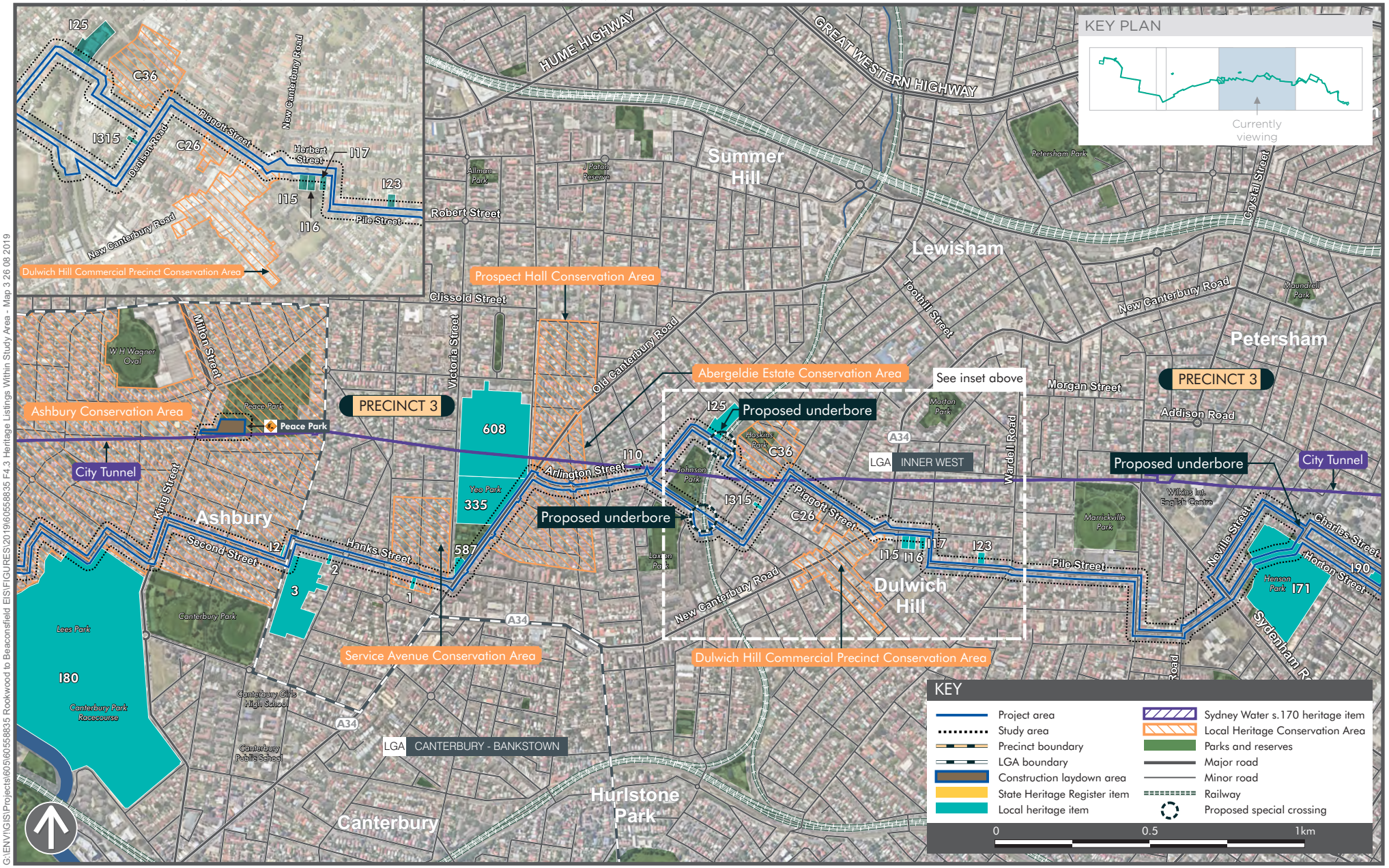
HERITAGE LISTINGS WITHIN STUDY AREA - MAP 2

Powering Sydney's Future
Potts Hill to Alexandria Transmission Cable Project

Note: The project area is confined to the roadway reserve with the exception of parks and existing substation
Source: Department of Finance, Services and Innovation - Spatial Services (2018), Nearmap (2018)

FIGURE 4-2



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HERITAGE LISTINGS WITHIN STUDY AREA - MAP 3

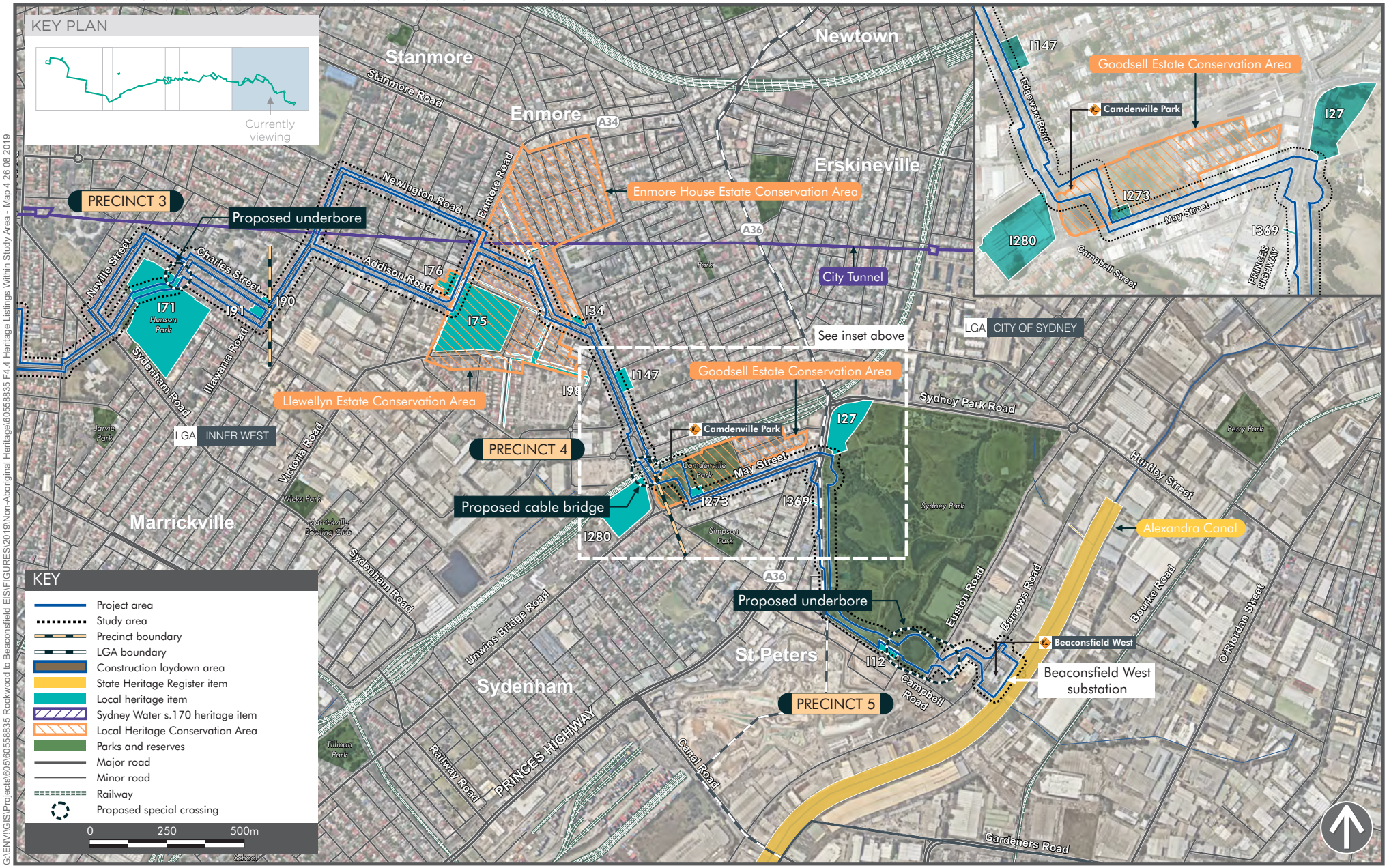
Powering Sydney's Future

Potts Hill to Alexandria Transmission Cable Project

Note: The project area is confined to the roadway reserve with the exception of parks and existing substations

Source: Department of Finance, Services and Innovation - Spatial Services (2018), Nearmap (2018)

FIGURE 4-3



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HERITAGE LISTINGS WITHIN STUDY AREA - MAP 4

Powering Sydney's Future
Potts Hill to Alexandria Transmission Cable Project

Note: The project area is confined to the roadway reserve with the exception of parks and existing substations
Source: Department of Finance, Services and Innovation - Spatial Services (2018), Nearmap (2018)

FIGURE 4-4

4.2 Historical context

A comprehensive history of each suburb and road within the project area is not included in this assessment as the transmission cable route is predominately within the road reserve. Historical context is instead provided here specifically in relation to those listed heritage items (identified through register searches) that would be directly intersected by the project area, or are items listed on the SHR that are immediately adjacent to the project area. Included in **Table 4-3** are the historical backgrounds from each item's heritage register listing. Historical contexts have not been prepared for the 37 heritage items that are adjacent to the project area.

Table 4-3 SHR, SHI and LEP histories pertaining to listed items in the project area and SHR listed items adjacent to the project area

Potts Hill Reservoirs 1 and 2 and Site (SHR 01333) (NSW Heritage Division, 2005)
"Yagoona: This residential suburb just north of Bankstown was known as Irishtown, at least as early as 1833. Two other suburbs in the area (Bass Hill and North Bankstown) were at one time also called that name. Like Bankstown, Irishtown, or Yagoona as it became known in 1927, was classified as a rural area. The name 'Yagoona' is Aboriginal for 'now' or 'today'. The present suburb was created by changing the boundaries in the area, when Bankstown began to expand. In 1831 a number of grants of 30 to 50 acres were made north of Liverpool Road. Early landowners included Thomas Walford, Martin Short, Thomas Kennedy, Samuel Terry, Patrick Whalan and Joseph Eldridge (who received 100 acres that year). In 1839 Samuel Thornton received 100 acres at Irishtown, east of the present Saltash Street and south of Liverpool Road. One of the earliest churches in the suburb was the Methodist Church on Dutton's Hill, in use at the end of 1859. The first police station was built in Yagoona in the 1950s when the suburb began to develop and new houses were being built. A post office had operated since 1941" (Pollen & Healy, 1988, 277). Upper Nepean Scheme - Prospect Reservoir: In 1867, the Governor of NSW appointed a Commission to recommend a scheme for Sydney's water supply, and by 1869 it was recommended that construction commence on the Upper Nepean Scheme. This consisted of two diversion weirs, located at Pheasant's Nest and Broughton's Pass, in the Upper Nepean River catchment, with water feeding into a series of tunnels, canals and aqueducts known as the Upper Canal. It was intended that water be fed by gravity from the catchment into a reservoir at Prospect. This scheme was to be Sydney's fourth water supply system, following the Tank Stream, Busby's Bore and the Botany (Lachlan) Swamps. "Designed and constructed by the Public Works Department of NSW, Prospect Reservoir was built during the 1880s and completed in 1888. Credit for the Upper Nepean Scheme is largely given to Edward Orpen Moriarty, the Engineer in Chief of the Harbours and Rivers Branch of the Public Works Department from 1858-88" (B Cubed Sustainability, 2005, 7). "Potts Hill Reservoirs: There are two reservoirs at Potts Hill; Potts Hill Reservoir, which was built as an important component of the initial Upper Nepean Scheme which was commissioned in 1888. The second, Potts Hill Reservoir 2, has almost twice the capacity of the former, and was built in 1923 to supplement the first. It is also regarded as a component of the Upper Nepean scheme. When the Upper Nepean scheme was commissioned, Prospect was the major storage reservoir, and Potts Hill no1 was the key service reservoir to cope with daily fluctuations in demand. They currently operate as key service reservoirs for a large part of the south western metropolitan area. Likewise, Prospect Reservoir is now only a service reservoir rather than a storage reservoir" (NSW Heritage Division, 2005).
Alexandra Canal (SHR 01621) (NSW Heritage Division, 2014)
"Sheas Creek is a tributary of the Cooks River which begins in the once sandy hills of the present Surry Hills, east of Redfern. Dredging commenced in 1887 to adapt Sheas Creek to a canal, with the intention of creating manufacturing and industrial opportunities in the area by offering shipping as a means of transporting cargo. The canal was intended to be the 'Birmingham of Australia' and was constructed under an unemployed work relief scheme. "The canal was originally lined with a fascine dyke as were sections of the Cooks River. The original canal started to the south-west of the existing Sydenham to Botany railway bridge and extended to the Canal Road Bridge. In 1894 the canal was to be extended to Buckland Street, Redfern, however only part of this section was ever constructed, the limit of the canal was to the south of Huntley Street, Alexandria". "During this period scientists were called in to record the finding of dugong bones displaying

butchery marks and stone axes, which were the subject of an academic paper. As sections of the canal were completed, wharves were constructed along the canal to encourage its use".
"The canal, as originally planned, was substantially completed in 1900. Major changes to the canal occurred when the airport was expanded over three phases from 1947 to 1970. These changes included altering the course of the canal near its junction with the Cooks River. The canal was never considered a success, its use limited by the shallow draught of the vessels that could use it, constant silting, tidal factors and the advent of commercial road transport in the 1930s. This change became permanent when the two lifting span bridges that crossed the Canal were altered to become fixed in the 1930s. By the early 1940s the navigational use of the canal declined to such an extent that is was decided not to maintain the wharves and they were demolished" (NSW Heritage Division, 2014).

City Tunnel (SHI 4574202) (NSW Heritage Division, 2000)

"With the Pressure Tunnel running to full capacity it became necessary for a second tunnel from Potts Hill to the city. In 1943 the Board gave priority to the construction of a second tunnel and approved the construction of this tunnel in 1946. In that same year excavation began on shaft 5. By 1949 all the shafts except for shaft 13 were excavated. In 1952 work on the tunnel was suspended due to lack of funds but recommenced in 1953. Lining of the tunnel began in 1954. Two years later the tunnel was completed and the first section between Potts Hill and Ashfield (shaft 7) was commissioned in 1957. The safety of the workers was of utmost importance. A safety committee was set up and met monthly. Constant examination of the tunnel was employed to ensure worker safety" (NSW Heritage Division, 2000).

Service Avenue Heritage Conservation Area (Ashfield LEP 2013 – Item C18) (Inner West Council, 2018b)

"This area was once part of a 100-acre grant made to the Rev Richard Johnson in 1796. Later it became part of Robert Campbell's large holding called Canterbury Park Estate. The Campbell family began breaking up the estate and selling the land after his death, streets being created to serve the resulting allotments. By about 1880 the Harland Estate subdivision had been made and the land to its south was designated Section 5 of the Canterbury Park Estate. Bounded by Canterbury Road (which became Queen Street), Ashfield Street (which became Victoria Street) and Hanks Street, this portion was divided into four holdings: two retained for a time by the Campbell family, one bought by Frederick Clissold and one by James Bartlett, the latter two being among the earliest developers of Ashfield".
"These four large blocks were subdivided around the turn of the 19th century. One of the three subdivisions was named Jeffrey's Estate, one Woolford Estate and the other Smith's Subdivision. Wilson Street, which was a cul-de-sac formed earlier to serve the Harland Estate, was extended southwards to Hanks Street and called Woolford Street, to serve their resulting residential allotments. These two names were abolished and the street was renamed Service Avenue. To the south a new subdivision, named Beechwood, was created in 1903. The ten properties in this area on the south side of Hanks Street are part of the 1903 Beechwood subdivision" (Inner West Council, 2018b).

Inter War Street Trees (Fifth avenue Campsie) (Canterbury – LEP 2012 Item C55) (NSW Office of Environment and Heritage, 2013)

There is no history associated with the planting of the street trees along Fifth Avenue, Campsie. The heritage listing is reflective of the 20th Century concept for street design (NSW Office of Environment and Heritage, 2013).

Ashbury Heritage Conservation Area (Canterbury LEP 2012 – Item HCA1) (City of Canterbury, 2007)

"Ashbury is a predominantly residential area that was largely developed between 1912 and 1940, with most development occurring during the Inter-War period and particularly during the building boom of the 1920s. Ashbury developed as part of the overall suburban expansion of Sydney that occurred along train lines and major roads."
"The area has a consistent subdivision pattern, building form and streetscape; largely because its development occurred over a relatively short period of time. A high standard of design and residential amenity was also achieved, and housing in this area has become increasingly sought after."
"Ashbury is experiencing significant development pressures, particularly by residents seeking to expand and/or adapt older houses to meet modern living requirements, or to build replacement

houses. Some developments have been out of place with the special character of this area. At the same time there has also been a demonstrable move towards adapting and restoring existing houses in a sympathetic manner" (City of Canterbury, 2007).

Henson Park (Marrickville LEP 2011 – Item 71) (NSW Office of Environment and Heritage, 2012)

"Henson Park is located on the site of Thomas Daley's Standsure Brick Company (1886-1917). It was one of the largest brickworks in Sydney, employed about 60 people and occupied 3.6 hectares. After the brickworks closed in 1917, the pits filled with stormwater and groundwater (up to 24 metres deep in parts) and became known as 'The Blue Hole'. The site became a favourite swimming spot and an illegal dumping ground. It was dangerous as a swimming hole and there were at least four known drownings."

"1930 - Filling operations commence to convert the former Daley's brick pit into Henson Park."

"In 1932, a grant of 5,000 pounds through the Unemployed Relief Works Program was received to level the ground and fill in the waterholes. Council matched that funding with 5,000 pounds of its own and the oval and bicycle track were constructed."

"1933 - Official opening of Henson Park was marked by a cricket match between a representative Marrickville Eleven team and the North Sydney District team, which included Don Bradman. The Mayor of Marrickville, Alderman Frederick Rushton, bowled the first ball."

"When Henson Park was opened in 1933 it consisted of an oval surrounded by an illuminated cycling track surrounded by a natural amphitheatre for 40,000 spectators."

"March 1933 - A Gypsy Moth aeroplane made a forced landing. Both pilot and passenger escaped injury. The pilot, Sidney Cheesewright, proprietor of the Stanmore Garage, Stanmore Road, commented that the Gypsy Moth had stalled at 1,500 feet above Newington College and he chose Henson Park for an emergency landing. Mr Cheesewright, who was accompanied by John Makinen of Holmesdale Street, said that he circled around into the wind and decided to make a stall landing in the park. The airplane was severely damaged."

"1935 - Embankment completed."

"1936 - Woodland Street gates completed."

"1936 - Newtown Rugby League Club transfers their games to Henson Park."

"1937 - Grandstand completed. Plaque on grandstand commemorates its opening."

"1938 - British Empire Games held in Sydney. The cycling events and the closing ceremony of the Games are held at Henson Park. Marrickville Council purchased the disused brickpit in 1923. Drainage and filling operations began in 1926."

"Henson Park is named after William Henson and his son, William Thomas Henson. William Henson was a local and state politician (MLA for Canterbury from 1880-2 and 1885-9). His son was a local politician and a man of independent means."

"William Henson, senior (1826 - 1903) was born in Sydney on 1 August 1826. He was educated at St Phillips School, Church Hill and later managed an extensive sheep station at Obley. He married on 9 January 1855 at Sydney and had 4 daughters and 2 sons. He was successful on the gold fields at Ophir and Bendigo and settled at Ashfield. He was elected to the NSW Legislative Assembly on 22 November 1880 and he served as Member for Canterbury between 1880-1882, and 1885-1889. He was also a prominent Wesleyan Methodist and member of the Sons of Temperance, the Local Option League, the Orange Lodge, and Honorary Secretary of Benevolent Society. He died in his home at Ashfield on 19 March 1903."

"William Thomas Henson was an alderman on Marrickville Municipal Council from 1897-1917 and was elected Mayor on four occasions (1902, 1906, 1907 and 1908). He died in 1926 at his residence at 152 Livingstone Road, Marrickville. His son, Alfred Arthur Henson was also an alderman of Marrickville Council. Alfred Arthur Henson served from 1922 to 1931. William F C Henson, also a son of William Thomas Henson, was the captain of the Marrickville Cricket Club in the 1920s."

"Historic photographs held in the Council's Local History Collection show the site when it was Daley's Brickpit, when it was a waterhole, and during the construction and formation of Henson Park. The brick wall along the northern boundary, backing onto the row of properties in Horton Street was constructed between 1933 and 1936. One photo dated 1936 shows the original brick entrance gates at Woodland Street, built at the same time as the brick wall. The current entrance gates at Woodland Street were re-built sometime shortly after, in c1936. There is a possibility that the bricks used to construct the wall and entrance gates at Woodland Street were supplied by the Daley family."

"The King George V Memorial Grandstand was an expression of Imperial sentiment that was rife when it was built. It was opened on 19 August 1937."
"October 1944 - Speedway held, using the cycling track. It was a benefit for Marrickville Hospital. In the last race, Dinny Pattison was nearly killed when his car went into a slide on a bend and turned over. The speed car careered down the track for 5 metres with Dinny hanging upside down in the cockpit. His injuries put him in Marrickville Hospital for six weeks."
"1945 - The words Henson Park are painted on the brick wall at the instigation of Alderman Richardson."
"1974 - Newtown Rugby League Club and Marrickville Council agree to erect new lighting towers, equipped with high powered flood lights."
"The size of the oval was reduced in 1975 when a fence was built around the inside of the cycling track. Part of the sandstone retaining wall around the oval was constructed in c1976 as part of the Federal Government's Red Scheme."
"June 1976 - Marrickville Council received $198,000 from the Federal Government under the RED scheme (employment project) to upgrade Henson Park. As part of the work the boundary fence was moved 12 metres inward placing it inside of the cycling track, which was removed. This increased spectator seating capacity. The scoreboard was replaced. A new press block and toilet block built. The playing service of the ground was raised by 45 centimetres. Concrete seating installed around the ground. Lighting towers erected but it was to be another four years until funds obtained for them to be operative."
"October 1976 - Rock concert held with guest stars including Bo Diddley, the Silver Studs and Jeff St John. The concert was staged by Newtown Rugby League Club to raise funds to turn on the lights at Henson Park. It was estimated that over $200,000 was required to install suitable lighting for colour television coverage of events. The concert generated 5,000 noise complaints to Marrickville Council. Newtown Rugby League Club only managed to cover their costs with the rock concert."
"October 1979 - NSW Government granted $30,000 through the Department of Sport & Recreation for floodlighting. Marrickville Council provided an additional $39,000."
"23 February 1980 - The lights are officially turned on by the Deputy Mayor of Marrickville, Alderman John Gander."
"1988 - Plaque placed on Centennial Street entrance gates to record the site of Daley's brickpit."
"1996 - Telstra tower built."
"6 December 2001- Charlie Meader Memorial Gates and plaque in Centennial Street unveiled by Mayor of Marrickville, Councillor Barry Cotter." (NSW Office of Environment and Heritage, 2012)

Brick Paving (Marrickville LEP 2011 – Item 98) (NSW Heritage Division, 2012a)

"The brick paving forming the footpaths along Enmore Road, Juliett Street in Enmore were created as part of the 1930s depression relief schemes. This scheme created demand for bricks from the local brickworks and utilised local unemployed people. The Central Brick and Tile Co. of St. Peters supplied the bulk of brick pavers for the Municipality of Marrickville." (NSW Heritage Division, 2012a)

The Abergeldie Estate Heritage Conservation Area (Marrickville LEP 2011 – Item C1) (NSW Heritage Division, 2012d)

"Abergeldie Estate was purchased by Dr Edwin Chisholm from Dr Renwick in 1879 at which time he built an imposing Italianate two storey mansion."
"The property was later purchased by Sir Hugh Dixson in 1885 who had inherited a fortune from tobacco manufacturing. Abergeldie House became the family home until he died in 1926. The house was set in 22.5 acres of fine gardens containing exotic botanical species, conservatory, a small piggery, dairy and garages so large that it was proposed in 1926 they could form the basis of a local fever hospital."
"In 1926 when Sir Hugh Dixson died, the property and spectacular collection of object d'art, furniture and collectables were left to his children. They proposed to demolish the building, subdivide the land and eventually auction the house contents."
"There was an outcry among local representatives of the community who formed the Abergeldie Garden Campaign Committee. Together with the local Municipal Councils of Marrickville, Petersham, Ashfield and Canterbury, leaders of the local church and Federal and State members of parliament, a presentation was made to the then Premier R.S. Lang, requesting the government to resume the property as a national park."

"The Premier refused and on October 20th and 27th, 1928 Richardson and Wrench offered 127 lots of land for auction. Over the next ten years, with the exception of two properties, the lots were purchased and double brick residences constructed."

Llewellyn Estate Heritage Conservation Area (Marrickville LEP 2011 – Item C14) (NSW Heritage Division, 2012c)

"The area was first granted to John Wells in 1794. It was bought and sold several times over the years and Marrickville Park (now known as Enmore Park), the focal point of the area, was the first Park to be proclaimed in Marrickville (in 1886) soon after the introduction of a steam tram service. The surrounding land was first offered for sale in the mid-1890s as the 'Llewellin Estate' but sales were slow due to the depressed economic climate and it took until 1905 for most blocks to be developed.

"This area demonstrates the transition between the late 19th-century principles of inner urban development and the early 20th Century ideals of the suburban landscape. The lots are significantly larger than those of the adjoining Enmore House Heritage Conservation Area, and although urban density remains high when compared against areas further to the west, the Llewellyn Estate Conservation Area is characterised by a feeling of spaciousness. This character is enhanced by the relatively flat topography and the width of the road reservations, generous footpaths and the increasing setback to the front facade of the house, which has allowed some of the houses in this area to plant a small garden which helps to soften the streetscape further.

"The quality of the public domain is high. Enmore Park provides a generous amount of open space and provides an effective focal point for the local area. It is a traditional, formal Park laid out according to the axial principles of late 19th Century parks. It also contains some archetypal mid-late 20th Century municipal infrastructure such as the 'rocket' playground equipment and a public swimming pool (now enclosed). Other notable elements of the public domain include the high quality brick paving to the footpaths throughout the area and the use of Brush Box street trees which have introduced an avenue quality into the most modest streetscapes. Their planting within the road reservation rather than the footpath has enhanced their ability to create an enclosing streetscape and although showing signs of having been pollarded in the past have now mostly been allowed to reach an impressive height and scale. Some young saplings were also found to have been planted recently and will over time contribute to the quality of the streetscapes in this area. The planting along the alignment of Victoria Road culminates at the mature Brush Box and Fig group at the street closure of the southern end of Juliett Street and creates a streetscape of unusually high aesthetic value, which complements the substantially intact roofscape of the Federation bungalows and cottages situated opposite. This is particularly notable when its context adjacent to the Marrickville Metro, a contemporary shopping centre, is taken into account.

The brick paved footpaths found in Marrickville were laid in the Depression as an employment relief scheme and continue to provide a high-quality textural detail to the streetscapes in the area. Unless disturbed by the laying of services, the paving has been well maintained by Council and has remained sound. Repair work has generally been done neatly, although in places rougher patching is evident."

"The character of the domestic built environment is eclectic, a quality emphasised by the triangular street grid which has led to interesting adaptations to the standard residential patterns and created many opportunities for the viewer to appreciate the minor elevations of properties just as easily as their 'main' façade. This has led to some interesting and unusual built forms and a unique streetscape quality."

"The area contains many interesting and high-quality variations on the late Victorian and Edwardian/Federation styles of domestic design, including the pairs of semi-detached cottages with flamboyant Flemish roofs and detailing in Juliett Street; fine examples of Federation Filigree, and the semi- and triple- attached cottages at the northern end of the precinct. The houses on the western side of Juliett Street in particular demonstrate the remarkable diversity of design choice available at the turn of the 20th century."

"The southernmost part of Juliett Street demonstrates high streetscape values due to its consistent planting of Brush Box on the eastern side and groups of attached and semi-detached dwellings. These establish a strong rhythm to the streetscape due to their protruding gable form with squared bay windows to the front elevation and recess to front doors set under a small porch. The eastern side of the streetscape is formed by a modest, single storey terrace arranged in pairs. Most have retained their original iron palisade fences set in a low plinth with low brick walls dividing the setback space to each property, further enhancing the cohesive character of the group. Although altered,

this streetscape demonstrates a high level of consistency of built form and strong and aesthetically pleasing streetscape through its rhythms and patterns."
"Although Enmore Road is a busy thoroughfare it contains fine examples of late Victorian/early Federation (Federation Filigree) detached cottages, groups, pairs and terraces and an imposing two storey Victorian Terrace as well as a good block of Inter-War flats. Good groups of single storey cottages with interesting variations in their detailing and street presentation characterise Llewellyn Street overlooking the park. The iron palisade fences are prominent elements in the streetscape. Victoria Road also contains excellent streetscape groups, including the simple Federation bungalows to the west of Bethesda Nursing Home/Stead House; and the Federation corner store (with open upstairs verandah space), the symmetrical Federation cottage group with intact roofscape of tall, slender chimneys, and the good-quality individual examples of cottages and houses found near Marrickville Metro. The Metro is a prominent element in the area and reinforces its suburban status."
"Its visual impact on the surrounding area has been lessened by the retention of the original high face brick wall that surrounded the former Vicars Knitting Mill on the site and original street tree planting which includes mature Figs. The group of houses on the northern side of Victoria Road form a strong streetscape group with consistent façade compositions, fences and roofscapes.
The consistency of scale and form of buildings in the area is interrupted by the 1960s red textured brick residential flat building on the corner of Victoria Road and Black Street. The area also contains many examples of cultural layering - most of these alterations have been limited to non-structural alterations such as rendering and the replacement of windows. Few layers have significantly altered the underlying integrity of form to the extent where the significance of the area as a whole is compromised. More recent examples of the gentrification layer can also be seen."
"Much of the Llewellyn Estate is situated on relatively level land and opportunities for views out of the area are limited. The view to the east from Llewellyn Street terminates at the chimneys to the former brickworks at St Peters. Minor views are available from the northern end of Juliett Street over the local district. Views towards the area are dominated by the open character of the streetscapes rather than towards a particular point or subject." (NSW Heritage Division, 2012c).

Goodsell Estate Heritage Conservation Area (Marrickville LEP 2011 – Item C16) (NSW Heritage Division, 2012b)

"The Goodsell Heritage Conservation Area is named after the prominent Sydney brick maker Frederick Goodsell who owned and operated a major steam-operated brickworks on the site. This is thought to be Sydney's first steam operated brickworks and the source of the first shale 'plastic' bricks in the 1870s. The main brick pit was on the part of the site now occupied by Camdenville Park."
"Much of the area is now occupied by Camdenville Park and Oval which were constructed on part of the former brick pit and manufacturing site. The formal entrance to the park is located at the end of Goodsell Street and terminates the local view along the street. A small shop located at the southeastern corner of the park was demolished. The terrace of eight dwellings stand alone on this edge of the park as they once did on the edge of the clay pit for the brickworks."
"Small terraces were built around the edge of the pit and in Goodsell Street and John Street (now known as Council Street). Only the group of eight (already identified as heritage items) that survive in May Street at the southern end of the park were intended as housing for brick makers, the terraces in Goodsell and John/Council Streets appeared to have been erected by a range of speculative builders. The northern side of the street at that time was occupied by a timber yard, but was subdivided for development between 1902 and 1910."
"The two-storey terrace overlooking the park at the southern end of Council Street is a good example of one of the most modest two-storey terrace forms that was usually intended for basic workers housing. Built to the street alignment with a veranda cantilevered over the footpath, the group forms a strongly expressed and rhythmic streetscape and roofscape, enlivened by the prominent chimneys rising above the main roof form and their slight stepping to accommodate the fall of the land. The view over the rear elevation of the terraces (from Goodsell Street) is also a good one and highly contributory to the aesthetic value of the area as a three-dimensional urban space.
The streetscape of Goodsell Street is a tight and cohesive one comprised of single and two-storey terraces from the late Victorian/Federation period, including some modest single storey parapeted terraces and freestanding cottages. The streetscape demonstrates some subtle differences from other areas of terrace development in this part of the Marrickville area: the facades are set well back from the street alignment, providing for an unusually generous amount of soft landscaping; yet the

individual terrace houses are very narrow. The reason for this configuration is not known.
Some front fences are the original iron palisade but many have been replaced by newer metal panels, aluminium or timber picket or low brick walls. A substantial pair of Victorian terrace shops with cantilevered balconies is situated at the eastern end of Goodsell Street. The street plantings are a notable element of this conservation area, with mature shade trees in an almost unbroken line on the southern side of Goodsell Street and more widely spaced on the northern side. Species include Brush Box, the range of Australian natives common in the Marrickville area and a paired planting of Port Jackson Figs towards the eastern end which dominate views into the streetscape from the east. The quality of the views within the precinct are enhanced by their termination at the park's entrance, marked by a formal set of gates."
"A small original shop at the corner of the park was demolished. Few other properties in this area demonstrated evidence of significant structural alterations or additions, although the painting and rendering of original face brickwork was found. The major intrusions into the area are the recently constructed residential flat building at the northern corner of the area and the warehouse at 8-14 Goodsell Street, both of which introduce scale, bulk and detailing that does not respect that found in the remainder of the heritage conservation area. Kerbing and in places guttering is representative of that found throughout the Marrickville area, being mainly constructed from large sandstone blocks" (Inner West Council, 2018a).

4.3 Physical description

A brief description of each of the HCAs and heritage items located within the project area, and the two SHR listed items that are partially located within the study area but are outside the project area is provided in this section. These are based on background research and inspections undertaken by AECOM senior heritage specialist Chris Lewczak.

4.3.1 Potts Hill Reservoirs 1 and 2 and Site (SHR 01333)

The two reservoirs at Potts Hill are part of Sydney Water's supply system, having previously been part of the Upper Nepean Water Supply Scheme. They have industrial design, built features and both natural and exotic plantings. Various components that contribute to the listing include the Carrier Canal, the telescopic valve tower, a Pressure Tunnel Inlet, a Pressure Tunnel Access Shaft Building, a Suction Well, Surge Tank and Reflux Valve as well as various Landscape Elements. The State heritage listed item is partially located within the study area but are outside the project area.

4.3.2 Alexandra Canal (SHR 01621)

Alexandra Canal is an artificial waterway that runs from the Cooks River in the south to around Huntley Street, Alexandria in the north. It replaced the natural alignment of Sheas Creek with a channel formed by banks with sloping dry sandstone and sandstone capping. The canal is at the easternmost extent of the project area in Precinct 5.

4.3.3 City Tunnel (SHI 4574202)

The City Tunnel consists of access chambers, supporting structures, a tunnel, vertical shafts and buildings attached to the shafts. It operates as water supply infrastructure and can be closed in sections for maintenance. The item is located between 15 and 67 metres below ground (tunnel depth). There would be no direct or indirect impacts from construction activities to this item.

4.3.4 Service Avenue Heritage Conservation Area (Canterbury LEP 2012 Item C18)

The Service Avenue Heritage Conservation Area was once a large land grant that was subsequently subdivided near the end of the 19th century and start of the 20th Century. The HCA consists of various pre and interwar houses, on allotments fronting wide streets. Plantings are present on either side of the road that include trees, particularly along Hanks Road where the transmission cable route would be located, that form the streetscape that contribute to the aesthetics associated with the heritage conservation area.

4.3.5 Inter War Street Trees (Fifth Avenue Campsie) (Canterbury LEP 2012 Item 55)

The Item 'Inter War Street Trees' comprises palm trees that have been planted on both sides of Fifth Avenue. The plantings relate to the beautification of streets that was undertaken by councils in the 20th Century. The transmission cable route would cross Fifth Avenue as it proceeds along Seventh Avenue, Campsie (refer to **Plate 4-1**). The project would be located within the existing road reserve in this area.

Plate 4-1 Inter War Street Trees near the intersection of Fifth Avenue and Seventh Avenue, Campsie (view to south)

4.3.6 Ashbury Heritage Conservation Area (Canterbury LEP 2012 Item HCA1)

Ashbury Heritage Conservation Area is a large area that includes several major suburban streets. This conservation area relates to the early 20th Century suburban expansion of Sydney. This area was developed between 1912 and 1940 and designed to have wide streets and street plantings. The trees form part of the HCA. The transmission cable route would be located within the road reserve in this area (refer to **Plate 4-2**). A construction laydown area is also proposed within Peace Park which is within the HCA.

Plate 4-2 View of Harmony Street that is included within the Ashbury Heritage Conservation Area (view to east)

4.3.7 Henson Park (Marrickville LEP 2011 Item 71)

Henson Park is a locally listed heritage item for its long association as a suburban oval within the Marrickville council area. The oval was formally a brick works that was converted into Henson Park in 1933 and is surrounded by houses backing onto the park along all four of its boundaries. The main entry to the oval is along Centennial Street that leads from the residential area into the oval behind the two main grandstands and the original brick decorative entrance gates. The two grandstands are located on the north-western side of the park, with the viewing areas around the oval consisting of raised grassed hills. One option for the transmission cable route in this area is to follow Centennial Street and cross behind the grandstands and oval across to Amy Street (refer to **Plate 4-3**). The project area through Henson Park is currently a level grassed covered area that is used by vehicles to access the areas around the main oval.

Plate 4-3 View across the grassed area where the underbore would be located through Henson Park (view to southwest)

4.3.8 Brick Paving (along Enmore and Juliett Streets – Marrickville LEP 2011 Item 98)

The brick paving that forms part of this heritage listing is located on various streets within Enmore. The transmission cable route would pass immediately adjacent to this heritage item along Enmore Road, where the paving is located on the eastern side, and along Juliett Street (refer to **Plate 4-4**). The paving is located within the footpath immediately adjacent to the road reserves and is laid in a 90 degree herringbone pattern. The paving is largely intact, with only small sections having been removed for modern driveways.

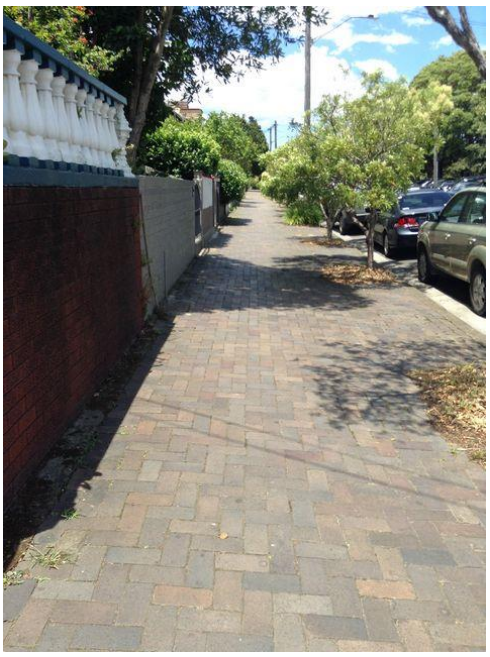

Plate 4-4 Brick paving that forms part of the heritage listed paving along Enmore Road and Juliett Street (view to southeast)

4.3.9 Abergeldie Estate Heritage Conservation Area (Marrickville LEP 2011 Item C1)

The transmission cable route within the Abergeldie Estate Heritage Conservation Area would be along Arlington Street. This street includes interwar period brick Californian Bungalows. Arlington Street itself is a wide street that includes street plantings on either side of the road within the footpaths. The trees form part of the HCA. The transmission cable route would be within the road corridor in this area.

Plate 4-5 View along Arlington Street, within the Abergeldie Estate Heritage Conservation Area (view to east)

4.3.10 Goodsell Estate Heritage Conservation Area (Marrickville LEP 2011 Item C16)

The Goodsell Estate Heritage Conservation Area has some historic association with the former brickworks that were present to the east of this area in Sydney Park and the associated brick pit that

was on the western side of the Goodsell Estate curtilage, within the current Camdenville Park. The heritage significance of this listing focuses on the development that occurred as a result of successive land releases that occurred in Marrickville. The trees form part of the HCA.

The Camdenville Park playing field was the area where the brick pit was located for the Goodsell brick maker. The western end of Camdenville Park is cut down to be lower than the surrounding streets. This section of the oval is covered in tall grass and trees and is closed off to the public. The visible evidence indicates that this area has been highly disturbed, likely from the landscaping works that occurred after the closure of the former brickworks and this associated brick pit.

The transmission cable route runs through the western side of this HCA, crossing through the existing Camdenville Park playing fields, that is within this HCA, before continuing outside of the HCA along May Street. A construction laydown area is also proposed to be located within Camdenville Park.

Plate 4-6 Camdenville Park playing fields (view to northeast)

4.3.11 Llewellyn Estate Heritage Conservation Area (Marrickville LEP 2011 Item C14)

The Llewellyn Estate listing is specific to the allotment layout and the design and styles of houses that have survived from 1894 onwards. The section of Enmore Road that is included in the Llewellyn Estate Heritage Conservation Area is mostly residential, with the exception of a set of shops located at the intersection of Addison Road. The shops include awnings that extend out over the footpath to the kerb of the road. Along Enmore Road and Llewellyn Street, the roads are both dual lane with parking on either side. Both roads are tree-lined along the footpath, but are more so along the boundary with Enmore Park. The trees form part of the HCA. There is sandstone kerbing along the western side of Enmore Park along Enmore Road only. The transmission cable route would be located within the road reserve in this area. The proposed activities in Llewellyn Estate (see **Plate 4-7**) include trenching along Enmore Road, Scouller Street, then south on Juliett Street and along part of Llewellyn Street (east of Juliett Street).

Plate 4-7 View to the northeast of the intersection of Addison Road and Enmore Road

4.4 Summary of archaeological potential

The project area would be largely contained within existing road reserves. These areas are expected to have been disturbed from the laying of other similar services. In addition, as the HCAs reflect the allotment and road layout of the original subdivisions, there is not expected to be historical archaeological potential present within the current road reserve areas located in the HCAs. However, portions of the project area extend outside road reserves, including sections of the transmission cable route crossing at the Cooks River Crossing, through Goodsell Estate (which contains Camdenville Park), Cooks River, Henson Park and Sydney Park.

The project area at the location of the proposed Cooks River crossing was first granted to William Pascoe Crook, a missionary who was granted land on his second coming to Sydney after 14 years away in the Cook Islands. Crook was a priest and teacher in Parramatta in the 1830s, however, there is no evidence he lived on the land by the Cooks River. After his death in 1846, his block of land still appears in his name and appears vacant until its eventual subdivision in c.1890. Streets were added in parallel but set back from the Cooks River. The area along the bank of the river remains vacant and unused. The nearby perpendicular roads that lead to the Cooks River in the area where the crossing is proposed were added in 1903, but the river bank area was retained for a transmission line easement. This resulted in no development along the foreshore area of the Cooks River where the transmission cable route would be constructed.

The project area through Goodsell Estate has been highly disturbed. This area was formerly part of the Goodsell brickworks, with the brick pit located at the western end of the property. The transmission cable route would pass through the former pit location that was later filled in and landscaped, forming Camdenville Park. As this is a brick pit and not a brickworks (located to the east in Sydney Park), there is a low likelihood that any intact subsurface historical archaeological deposits would be present within this area.

The project area through Henson park will pass through the location of the former Standsure Brick Company brickworks that commenced operating in 1886. The brickworks site ceased operation in 1917 and the brick pit was later filled in during 1932. These works also included the levelling of the entire site that allowed for the creation of Henson Park. The likelihood for intact historical archaeological remains present within the Henson Park transmission cable route related to the former brickworks is considered to be low.

The location of the project area within Sydney Park was the site of former brick and pottery working yards. These works began in 1892 and expanded rapidly to include steam powered brick making

facilities in 1912. The operations were sold to the Austral Brick Company in 1936, with works continuing on the site until the 1970s. The operation of the brick pit site included the use of former brick pits as waste depots from the 1940s until 1976. In 1982 plans were made to convert the area into a park and extensive landscaping and modifications to the park were made in creating what Sydney Park looks like today.

The former brick manufacturing facilities were located around the periphery of Sydney Park, with the pits located back behind the workshops. The project area bypasses the location of the former facilities associated with the former brickworks and continues mostly through the former brick pit areas which have since been converted into parkland and are highly disturbed. As such, the project is unlikely to impact on any relics or other archaeological deposits associated with the former brickworks that may be present within Sydney Park.

5.0 Assessment of potential impacts

5.1 Significance assessment

In order to understand how a development would impact on heritage or archaeological items, it is essential to understand why an item is significant. An assessment of significance is undertaken to explain why a particular item is important and to enable the appropriate site management and curtilage to be determined. The process of assessing heritage significance is outlined in the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001) which is part of the *NSW Heritage Manual* (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996). The *Assessing Heritage Significance* guidelines establish seven evaluation criteria which reflect four categories of significance and whether a place is rare or representative.

A heritage item can be identified as being significant at a local level (i.e. to the people living in the vicinity of the site), at a State level (i.e. to all people living within NSW) or to the country as a whole, being of National or Commonwealth significance. In accordance with the guideline *Assessing Heritage Significance*, an item would be considered to be of State significance if it meets two or more criteria at a State level, or of local heritage significance if it meets one or more of the criteria outlined in the NSW Heritage manual and provided in **Table 5-1**. The Heritage Council requires the summation of the significance assessment into a succinct paragraph, known as a Statement of Significance. The Statement of Significance is the foundation for future management and impact assessment.

Table 5-1 Significance assessment criteria from SHR, SHI and LEP listings

Criterion	Inclusions/exclusions
Criterion (a) – an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).	The site must show evidence of significant human activity or maintains or shows the continuity of historical process or activity. An item is excluded if it has been so altered that it can no longer provide evidence of association.
Criterion (b) – an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area).	The site must show evidence of significant human occupation. An item is excluded if it has been so altered that it can no longer provide evidence of association.
Criterion (c) – an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).	An item can be excluded on the grounds that it has lost its design or technical integrity, or its landmark qualities have been more than temporarily degraded.
Criterion (d) – an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.	This criterion does not cover importance for reasons of amenity or retention in preference to a proposed alternative.
Criterion (e) – an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). Significance under this criterion must have the potential to yield new or further substantial information.	Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.
Criterion (f) – an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).	An item is excluded if it is not rare or if it is numerous, but under threat. The item must demonstrate a process, custom or other human activity that is in danger of being lost, is the only example of its type or demonstrates designs or techniques of interest.

Criterion	Inclusions/exclusions
Criterion (g) – 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 • natural environments.	An item is excluded under this criterion if it is a poor example or has lost the range of characteristics of a type.

Source: NSW Heritage Manual

The statements of heritage significance for local and State heritage items with the potential to be directly impacted by the project, and for State heritage items listed on the SHR that are located immediately adjacent to the project area are provided in **Table 5-2**. These statements of heritage significance are taken from each item's heritage listing. Statements of heritage significance for 37 heritage items have been prepared and are presented in **Annexure A**.

Table 5-2 Statements of Heritage Significance and SHR Criteria

Potts Hill Reservoirs 1 and 2 and Site (SHR 01333) (NSW Heritage Division, 2005)	
SHR Criterion	**Statement**
SHR Criterion a)	"Potts Hill Reservoir site is important in the course, or pattern, of NSW's cultural or natural history because: -Reservoir No. 1 was the main component of the original Potts Hill site; -Reservoir No. 1 is a relic of an earlier technological period of Sydney water resource management; -it has essential links with the function and development of Sydney for over 100 years; -the site displays changes in usage through different periods of Sydney water resources management; -Reservoir No. 1 was a major engineering project of its time and a major public work; -it is an important component of the Upper Nepean Water Supply Scheme, one of the largest public works undertaken in Australia; -the walls of Reservoir No. 1 are lined using sandstone block construction, a method which is no longer practised in Australia; -the site still contains remnants of its former pumping station, an element which was essential to the early function of the site; -the position of the Reservoir No. 1 on the highest point in the region displays its original function as a gravity-fed water system; -the site still contains the original pipe head of the Pressure Tunnel, once the most important water pipeline in Sydney; -the site contains many penstocks displaying a range of valve designs which have now been superseded; -it contains an early employee residence which shows the standard of accommodation for water management staff in the early years of the site; -the changing economics and attitudes of the Water Board are represented in the different building styles and standards around the site; -the design of Reservoir No. 1, including its individual parts, demonstrates the attitudes towards water safety current at the time; -the layout of Reservoir No. 1, its surrounds and its security features display the early attitudes towards drinking water quality; -the former pumping station is an example of a functional industrial building of its period; and -Reservoir No. 1 contains the original intake to the Pressure Tunnel leading to Waterloo, which was and still is a major water supply line of Sydney. The site has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history because: -Reservoir No. 2 was the first substantial undertaking by the Metropolitan Board of Water Supply and Sewerage as an independent construction authority; and -Reservoir No. 1 and its associated original features are associated with Edward Orpen Moriarty, the Engineer-in-Chief for Harbours and Rivers responsible for the design and execution of the Upper Nepean Scheme, a person highly significant in the development of the state in terms of public works."
SHR Criterion c)	"Potts Hill Reservoir site is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement because: -Reservoir No. 1 and its parts demonstrate a past aesthetic style of public works; -through its materials and use of stylistic motifs in its structural features, Reservoir No. 1 links with other

Potts Hill Reservoirs 1 and 2 and Site (SHR 01333) (NSW Heritage Division, 2005)	
	elements of the site and helps to display the original functional arrangements and the changes made to that arrangement; -Reservoir No. 1 is a handsome, well-proportioned structure with landscaped surrounds which together create a very scenic space; -The site is well proportioned with a clearly evident relationship between function, aesthetics and historical layers; -there are several pine and palm tree line plantations which show the importance of landscaping design to the early designers of the site; and -the carrier canal is a well-proportioned feature which relates to palm tree plantings spaced evenly on its sides creating a space of high scenic quality."
SHR Criterion d)	"Potts Hill Reservoir Site has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons because: - it is considered important by the National Trust of Australia (NSW), which is evidenced by its listing on the National Trust Register; and - is held in high esteem by many generations of Water Board workers."
SHR Criterion e)	"Potts Hill Reservoir site has potential to yield information that will contribute to an understanding of NSW's cultural or natural history because: -the site has the potential to demonstrate the past technologies of water management and how these have evolved over time; and -Reservoir No. 1 is a good example of a clay core earth embankment stone faced reservoir."
SHR Criterion f)	"The Potts Hill Reservoirs site is a unique part of the Upper Nepean Scheme and was one of the original components of the Upper Nepean Water Supply Scheme. It contains unique features, including the remains of the steam pumping station, the termini of the Pressure Tunnel and City Tunnel and the former screening chamber."
SHR Criterion g)	"The Potts Hill Site is representative of the process of water supply for metropolitan Sydney and contains structures and equipment dating from various periods of the site's history which are themselves representative examples of the structures and equipment utilised for water supply throughout the system. The site has historical, functional and aesthetic correlations to water supply facilities at Prospect Reservoir and at Pipehead and the historical use and development of Potts Hill is representative of the overall growth and operation of the system over 120 years."

Statement of Significance

"The Potts Hill Water Supply Reservoirs were an integral part of the Upper Nepean Water Supply Scheme, which was crucial to the development and growth of Sydney from the late nineteenth century. The expansion of the complex, including the construction of Reservoir No. 2, demonstrates the growth of the City of Sydney and surrounding suburbs for more than a century. The construction of the Reservoirs was a major achievement in hydraulic technology and associated construction methods for the time and today, the site continues to feature substantial physical evidence of these achievements, including extensive areas of subsurface water reticulation. The complex includes the inlet for an early twentieth-century high pressure tunnel, which was an outstanding engineering feat and was the third largest water supply tunnel in the world for its time. The Reservoirs continue in an important functional role as a distribution centre for Sydney's water supply."

"The Potts Hill Reservoirs are situated within a distinctive and attractive cultural landscape, combining functional industrial design, typical turn-of-the-century built features and both natural and exotic plantings. The two reservoirs in combination are rare because of their size, method of construction and proximity. The Potts Hill Reservoirs are an important element in the history of Sydney Water and the site continues to be held in affection and esteem by many generations of Water Board workers. The components of the site which are the most important in terms of the heritage values of the site are: The Carrier Canal and Associated items; Reservoir No.1 and associated items; The telescopic valve tower on the 1200 millimetre Eastern Crossover; Pressure Tunnel Inlet; Pressure Tunnel Access Shaft Building; Suction Well; Surge Tank and Reflux Valve on No.1 Main; No.1 Supply Main Pipeline; No.2 Supply Main pipeline; the Pressure Tunnel; and Landscape Elements".

Alexandra Canal (SHR 01621) (NSW Heritage Division, 2014)	
SHR Criterion	**Statement**
SHR Criteria A	"Alexandra Canal was built during the 1890s depression using unemployed labour. It is one of two navigational canals built in NSW and is the only canal built to provide access for water transport for the delivery of cargo in NSW. The canal, the warehouses and factories around it, the bridges that cross it and the remains of the wharves are evidence of attempts by the government to encourage development in the area."
SHR Criteria c)	"Sections of the canal exhibit relatively intact sections of ashlar stonework which are excellent examples of late 19th century coastal engineering works that provide a pleasantly textured and coloured finish to the canal. The canal is a major visual landmark in the area and has strong landmark appeal, particularly as viewed from the Ricketty Street Bridge."
SHR Criteria e)	"The discovery of butchered Dugong bones, Aboriginal axes and the remains of an ancient forest in this area, all of which were found beneath the then low water mark during the excavation of the canal, were the subject of an academic paper. This paper contributed to the scientific understanding of the changing sea-levels along the eastern seaboard and the antiquity of the aboriginal presence in the area. The Canal exemplifies and is rare tangible evidence of government initiatives of canal transportation and implementation of pre 20th century unemployment relief schemes."
SHR Criteria f)	"Alexandra Canal is one of two extant navigational canals in NSW and one of the few built in Australia in the 19th and 20th century. It was the only purpose built canal constructed to provide navigational access in industrial areas in NSW."
SHR Criteria g)	"Alexandra Canal is a representative example of a late nineteenth century coastal navigational canal."
Statement of Significance "Alexandra Canal is of high historic, aesthetic and technical/research significance. Historically, it is a rare example of 19th century navigational canal construction in Australia, being one of only two purpose built canals in the State, with one other known example in Victoria. It has the ability to demonstrate the NSW Governments initiative to create water transport as a means of developing an industrial complex in the Alexandria and Botany areas and exploiting the use of unemployed labour to achieve its scheme." "It played a seminal role in the changing pattern and evolution of the occupation and industrial uses of the local area and nearby suburbs, which included filling large areas of low lying land for development." "Aesthetically, intact original sections of the canal, comprising pitched dry packed ashlar sandstone, provides a textured and coloured finish which is aesthetically valuable in the cultural landscape. It is a major landmark and dramatic component of the industrial landscape of the area, particularly as viewed from the Ricketty Street Bridge and along Airport Drive." "Scientifically, the excavation of the canal provided a valuable contribution to the understanding of the changing sea-levels along the eastern seaboard and the antiquity of the aboriginal presence in the area. Intact original sections of the fascine dyke sandstone construction are rare examples of late 19th century coastal engineering works." "The area has been assessed as having no potential to contain historical archaeological material associated with the development or occupation of the area, either prior to or since the construction of the canal. As a result, the study area would contain no material of historical significance, or material that could contribute to the significance of Alexandra Canal itself."	
City Tunnel (SHI 4574202) (Sydney Water Corporation, 2018)	
SHR	**Statement**

Criterion	
SHR Criterion a)	“This was one of Sydney Water's major post World War 2 projects. It utilised Returned Service personnel and recently arrived Migrants, especially from Europe.”
SHR Criterion c)	“Only the Access Shafts are visible from the surface. They are less decorative than the 1930's Pressure Tunnel structures.”
SHR Criterion d)	“The tunnel is socially significant as it provided great volumes of drinking water to the residents of the city suburbs and is likely to be held in high regard by the community for the functions it plays.”
SHR Criterion e)	“Despite post WW2 shortages, this was a copy book job. It made use of the relatively new process of "rockbolts" particularly in dealing with shale layers. It also allowed for future operation and maintenance of the System, whereby it can alternate with the Pressure Tunnel at times of low demand. With the tunnel being steel-lined conduit and fully welded it would be possible to boost supply in future years.”
SHR Criterion f)	“It is one of a handful of significant larger tunnels built as part of Sydney's water supply system. It was one of Sydney's major post-war projects.”
SHR Criterion g)	“Representative of a number of large pipelines built since WW 2. However, this was built by the "drill and blast" method. More recent tunnels involved Tunnel Boring Machines.”
Statement of Significance “The City Tunnel in its function largely is a duplicate of the Pressure Tunnel. It supplies water from Potts Hill to the City. The need for an additional pipeline was recognised in the early 1940's and it has been used in conjunction with the original Pressure Tunnel. The City Tunnel has made maintenance of the supply easier due to the SWC's ability to close sections of either tunnel for inspection and maintenance. It has increased the supply of water to the eastern and southern suburbs of Sydney. The City Tunnel has little cultural landscape value as it is located entirely below ground. The physical and operational curtilage is limited to the tunnel and any access chambers and supporting or associated structures from its original construction. The physical curtilage of the City Tunnel is to be taken as a distance of three metres around the existing infrastructure. The infrastructure associated with this item includes the tunnel, vertical shafts and the buildings attached to the shafts”.	
Service Avenue Heritage Conservation Area (Ashfield LEP 2013 Item C18) (NSW Office of Environment and Heritage, 2017)	
SHR Criterion	**Statement**
SHR Criterion a)	“The area is of historical significance as an area developed from a group of circa 1900 subdivisions with housing developed from circa 1900 into the inter-war period.”
SHR Criterion c)	“The area is of aesthetic significance for its consistent streetscapes of predominantly face brick, single storey Federation to Inter-war period detached housing.”
Statement of Significance “The Service Avenue conservation area is considered significant due to its intact pre-1943 street design and streetscapes, including the tree and grass verges that are recorded as part of its heritage listing. The style and design of houses that are present within the conservation area, including the brick Federation and inter-war period houses, has preserved the style of the suburban expansion of Sydney from the early 1900s onwards.”	
Inter War Street Trees (Fifth Avenue, Campsie) (Canterbury LEP 2012 – Item I55) (NSW Office of Environment and Heritage, 2013)	
SHR Criterion	**Statement**
	Not assessed under the standard criteria.
Statement of Significance “A notable streetscape in the Municipality. A mature form of early twentieth century concepts of	

street design".	
Ashbury Heritage Conservation Area (Canterbury LEP 2012 – Item HCA1) (City of Canterbury, 2007)	
SHR Criterion	**Statement**
SHR Criterion c)	"It contains a large number of buildings which retain their original intactness, or whose integrity could be reinstated by relatively minor works."
SHR Criterion g)	"Representative of buildings of styles that predominately including inter-war and California Bungalow designs."
Statement of Significance "Ashbury is a predominantly residential area that was largely developed between 1912 and 1940, with most development occurred during the Inter-War period and particularly during the building boom of the 1920's. Ashbury developed as part of the overall suburban expansion of Sydney that occurred along train lines and main roads. "The area has a consistent subdivision pattern, building form and streetscape, largely because its development occurred over a relatively short period of time. A high standard of design and residential amenity was also achieved, and housing in this area has become increasingly sought after"	
Henson Park (Marrickville LEP 2011 – Item I71) (NSW Office of Environment and Heritage, 2012)	
SHR Criterion	**Statement**
SHR Criterion b)	"Henson Park is named after William Henson and his son, William Thomas Henson. William Henson was a local and state politician (MLA for Canterbury from 1880-1882 and 1885-1889). His son was a local politician and a man of independent means." "William Henson, senior (1826 - 1903) was born in Sydney on 1 August 1826. He was educated at St Phillips School, Church Hill and later managed an extensive sheep station at Obley. He married on 9 January 1855 at Sydney and had 4 daughters and 2 sons. He was successful on the goldfields at Ophir and Bendigo and settled at Ashfield. He was elected to the NSW Legislative Assembly on 22 November 1880 and he served as Member for Canterbury between 1880-1882, and 1885-1889. He was also a prominent Wesleyan Methodist and member of the Sons of Temperance, the Local Option League, the Orange Lodge, and Honorary Secretary of Benevolent Society. He died in his home at Ashfield on 19 March 1903." "William Thomas Henson was an alderman on Marrickville Municipal Council from 1897-1917 and was elected Mayor on four occasions (1902, 1906, 1907 and 1908). He died in 1926 at his residence at 152 Livingstone Road, Marrickville. His son, Alfred Arthur Henson was also an alderman of Marrickville Council. Alfred Arthur Henson served from 1922 to 1931. William F C Henson, also a son of William Thomas Henson, was the captain of the Marrickville Cricket Club in the 1920s."
SHR Criterion d)	"Local. Home of the Newtown Jets. Henson Park has also been identified as a place of importance to the local Aboriginal community in relation to the use of the park for annual Aboriginal Rugby League Knockout Carnivals and as the home ground of the Koori United Rugby Team. Requires further assessment."
SHR Criterion e)	"Local. Given that the site was a brick pit for many years and was then infilled in the 1930s, the possibility of any surviving archaeological deposits is remote."
SHR Criterion g)	Local.
Statement of Significance "This is the only one of the many parks formed on the sites of former brickpits which has retained evidence of its former use in its shape. The shallow hollow is an attractive and historically significant feature of the site."	

Brick Paving (Marrickville LEP 2011 Item 98) (NSW Heritage Division, 2012a)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion g)	"Local"
Statement of Significance "Well preserved remnant of brick paving that was laid as part of a depression relief scheme of the 1930's. It forms an attractive streetscape and is complemented by the well maintained brick houses and well established tree planting in the area."	
The Abergeldie Estate Heritage Conservation Area (Marrickville LEP 2011 – Item C1) (NSW Heritage Division, 2012d)	
SHR Criterion	**Statement**
SHR Criterion a)	"The Abergeldie Estate Heritage Conservation Area is of historical significance as a subdivision of the former Abergeldie House, its 22.5 acres of exotic gardens and outbuildings, all subdivided and auctioned in 1928, and for its historical association with builders who purchased the majority of lots in the Estate, such as Thomas B. Lumb, Sydney H. Brightman, Oswald Addis and the Jones Brothers. The area is also of historical significance for the manner in which its development falls into 2 phases - 1928-1929 and 1933-1937 - illustrating the interruption resulting from the 1930s Depression. The street names in the area such as Dixson Avenue, Hugh Avenue, Elizabeth Avenue, commemorate the area's association with Sir Hugh Dixson and his wife Emma Elizabeth of Abergeldie House."
SHR Criterion c)	"Abergeldie Estate Heritage Conservation Area is of aesthetic significance as a fine example of a late 1920s-1930s suburban residential subdivision development containing housing from the period 1928-1937 which show the influences of Inter-war period architectural styles such as Art Deco, Georgian Revival, Functionalist and Old English styles. The character of the area derives from original single storey freestanding houses on medium sized allotments, which are collectively a fine example of suburban development from the period 1928-1937."
SHR Criterion g)	"A fine representative suburban subdivision of the period 1928-1937."
Statement of Significance "The Abergeldie Estate Heritage Conservation Area is of historical significance as a subdivision of the former Abergeldie House, its 22.5 acres of exotic gardens and outbuildings, all subdivided and auctioned in 1928, and for its historical association with builders who purchased the majority of lots in the Estate, such as Thomas B. Lumb, Sydney H. Brightman, Oswald Addis and the Jones Brothers. The area is also of historical significance for the manner in which its development falls into 2 phases - 1928-1929 and 1933-1937 - illustrating the interruption resulting from the 1930s Depression. The street names in the area such as Dixson Avenue, Hugh Avenue, Elizabeth Avenue, commemorate the area's association with Sir Hugh Dixson and his wife Emma Elizabeth of Abergeldie House." "Abergeldie Estate Heritage Conservation Area is of aesthetic significance as a fine example of a late 1920s-1930s suburban residential subdivision development containing housing from the period 1928-1937 which show the influences of Inter-war period architectural styles such as Art Deco, Georgian Revival, Functionalist and Old English styles. The character of the area derives from original single storey freestanding houses on medium sized allotments, which are collectively a fine example of suburban development from the period 1928-1937. A fine representative suburban subdivision of the period 1928-1937."	

Goodsell Estate Heritage Conservation Area (Marrickville LEP 2011 Item C16) (NSW Heritage Division, 2012b)	
SHR Criterion	**Statement**
SHR Criterion a)	"The Goodsell Estate Heritage Conservation Area is historically significant for demonstrating the principles and patterns of Marrickville's development from Colonial to contemporary eras. The Marrickville area contained many brick and pottery works. Frederick Goodsell's Steam Brick Factory and pit, located in the HCA, was, Sydney's first full steam-powered brickworks and the leading producer of its period (1869 onwards). The footprint of Camdenville Park overlays the site of the brickworks and the surviving terrace facing May Street was built by Goodsell and occupied by brickmakers. The area is historically significant for the pattern of the built forms in the area (that) has responded to the progressive release of land for development. The terrace groups in the area were built after successive land releases and demonstrate the patterns of subdivision and development in the Marrickville area."
SHR Criterion c)	"The area is aesthetically significant for its narrow and dense streetscape development that establishes a tightly described street wall which creates a sense of intimacy and privacy within the area. It also significant for its 19th and early 20th Century terraces, cottages and houses (detached and semi-detached) including several highly cohesive groups."
SHR Criterion g)	"The area is representative of the range of modest housing available to the Victorian worker and is significant for demonstrating the evolution of the terrace typology in Marrickville throughout the second half of the 19th Century to its final form before being superseded by the suburban cultural landscape."
Statement of Significance "The Goodsell Estate Heritage Conservation Area is historically significant for demonstrating the principles and patterns of Marrickville's development from Colonial to contemporary eras. The Marrickville area contained many brick and pottery works. Frederick Goodsell's Steam Brick Factory and pit, located in the HCA, was, Sydney's first full steam-powered brickworks and the leading producer of its period (1869 onwards). The footprint of Camdenville Park overlays the site of the brickworks and the surviving terrace facing May Street was built by Goodsell and occupied by brick makers. The area is historically significant for the pattern of the built forms in the area has responded to the progressive release of land for development. The terrace groups in the area were built after successive land releases and demonstrate the patterns of subdivision and development in the Marrickville area. The area is aesthetically significant for its narrow and dense streetscape development that establishes a tightly described street wall which creates a sense of intimacy and privacy within the area. It also significant for its 19th and early 20th Century terraces, cottages and houses (detached and semi-detached) including several highly cohesive groups. The area is representative of the range of modest housing available to the Victorian worker and is significant for demonstrating the evolution of the terrace typology in Marrickville throughout the second half of the 19th Century to its final form before being superseded by the suburban cultural landscape" (NSW Office of Environment & Heritage, 2019).	
Llewellyn Estate Heritage Conservation Area (Marrickville LEP 2011 Item C14) (NSW Heritage Division, 2012c)	
SHR Criterion	**Statement**
SHR Criterion a)	"The Llewellyn Estate Heritage Conservation Area is of historical significance as an area developed around the 1850s "Waterloo Villa" (later known as Frankfort Villa, Frankfort House, Bethesda and Stead House) as the 1894 "Llewellin Estate" subdivision. The area is of high historical significance as it retains the original (albeit altered) 1850s villa, which is heritage listed as an individual heritage item.

	The Area is of historical significance for demonstrating the pattern of development in the Council area from early land grants to suburban cultural landscape. The layers of occupation are demonstrated clearly through the street and subdivision pattern, the form of development and the more recent layers of occupation by migrants 1950-c2000; and gentrification (c1980-present). The area demonstrates the transition in built forms accompanying the decline of the densely developed terrace house model of urban development to the beginning of the low-density suburban patterns and social principles of 20th Century suburbia. The pattern of subdivision has responded to the patterns of smaller Colonial land grants made south of Enmore Road. The Area provides evidence of the maturing suburban form of development in the Council area. The pattern of development in the area provides evidence of the historical process of small-scale speculative development and the rise of housing choice for the middle classes."
SHR Criterion c)	"The Llewellyn Estate Heritage Conservation Area is of aesthetic significance for its substantially intact collections (built forms) of early 20th Century single-storey domestic design covering a range of typologies. It is significant for the area's response to the triangular street layout, resulting in an interesting adaptation of built forms to accommodate irregular lots near intersections. It allows a range of views over houses that are not normally available from the public domain. It is also significant for the many substantially intact individual examples of Federation period bungalow, including original timber joinery, window hoods and detailing to gables and verandas."
SHR Criterion g)	"The area represents the principal characteristics of the development of the Marrickville Council area from a rural Estate to residential area. The area provides valuable evidence of the range of building types and forms available to the middle class from the late 19th and early 20th Century, including the detached cottage, semi-detached pair and terrace house."

Statement of Significance

"The Llewellyn Estate Heritage Conservation Area is of historical significance as an area developed around the 1850s.'Waterloo Villa' (later known as Frankfort Villa, Frankfort House, Bethesda and Stead House) as the 1894 'Llewellin Estate' subdivision. The area is of high historical significance as it retains the original (albeit altered) 1850s villa, which is heritage listed as an individual heritage item. The Area is of historical significance for demonstrating the pattern of development in the Council area from early land grants to suburban cultural landscape. The pattern of subdivision has responded to the patterns of smaller Colonial land grants made south of Enmore Road. The layers of occupation are demonstrated clearly through the street and subdivision pattern, the form of development and the more recent layers of occupation by migrants 1950-c2000, and gentrification (c1980-present)."

"The pattern of development in the area provides evidence of the historical process of small-scale speculative development and the rise of housing choice for the middle classes. The area demonstrates the transition in built forms accompanying the decline of the densely developed terrace house model of urban development to the beginning of the low-density suburban patterns and social principles of 20th Century suburbia."

"The Llewellyn Estate Heritage Conservation Area is of aesthetic significance for its substantially intact collections (built forms) of early 20th Century single-storey domestic design covering a range of typologies. It is significant for the individual responses to the triangular street layout, resulting in an interesting adaptation of built forms to accommodate irregular lots near intersections which allows a range of views over houses that are not normally available from the public domain. It is also significant for the many substantially intact individual examples of Federation period bungalow, including original timber joinery, window hoods and detailing to gables and verandas."

"The conservation area represents the principal characteristics of the development of the Marrickville Council area from a rural Estate to residential area. The area provides valuable evidence of the range of building types and forms available to the middle class from the late 19th and early 20th Century, including the detached cottage, semi-detached pair and terrace house" (NSW Office of Environment & Heritage, 2019). Last updated 16 January 2012."

5.2 Overview of project impacts

This section provides an overview of potential project impacts on heritage values of the study area. Specific heritage impact assessment for items or HCAs identified as having potential for direct or indirect impacts are detailed in **Section 5.3**.

5.2.1 Construction impacts

Heritage impacts during construction of the project comprise:

- direct impacts associated with construction activities required for the project, such as physical disturbance, potential removal of trees, and/or changes to the visual setting within a HCA or of a heritage item; and
- indirect impacts associated with construction activities, such as potential vibration impacts.

5.2.1.1 Direct impacts

The project area primarily consists of road reserves, with the exception of private property and public open space areas (such as at the Cooks River in Croydon Park/Campsie, Henson Park, Peace Park, Camdenville Park and Sydney Park), where the transmission cable route extends outside of the road reserve.

Within the road reserves, direct impacts from trenching works to the HCAs and heritage items would be primarily limited to temporary visual impact caused by construction activity, plant and equipment and potential long-term visual impacts and potential reduction in heritage significance from tree removal.

No direct disturbance of buildings or structures within the HCAs is anticipated. The exception to this is tree removal, if required, which would have an impact on heritage significance in those areas where trees have been identified as contributory heritage elements.

With respect to visual impacts, once works are completed, the road surface would be restored, and temporary visual impacts would be reversed. Potential long-term changes to visual amenity within heritage conservation areas from tree removal are discussed further below.

Two construction laydown areas are located within existing HCAs, and one is located immediately adjacent to the curtilage associated with an item listed on the SHR – refer to **Table 5-3**.

Table 5-3 Proposed construction laydown areas inside HCAs or immediately adjacent to heritage curtilages

Construction laydown area	Heritage conservation area/Heritage item
Peace Park, Ashbury	Within the curtilage of the Ashbury Heritage Conservation Area (HCA1)
Camdenville Park, St Peters	Within the curtilage of the Goodsell Estate Heritage Conservation Area (C16)
Beaconsfield West substation, Alexandria	Adjacent to the Alexandra Canal (SHR 01621)

The use of construction laydown areas is not expected to have direct heritage impacts. Minimal ground disturbance may be required for temporary infrastructure (including for noise mitigation controls (such as hoardings) and driveways), at the construction laydown areas. At the completion of works, the construction laydown areas would be reinstated to their original condition, resulting in the reversal of any temporary visual impacts.

The ground disturbance is expected to have a minimal impact only. As such impacts to subsurface archaeological deposits associated with the conservation areas at Peace Park and Camdenville Park are considered unlikely.

There may be tree clearing at the entrance to the Peace Park construction laydown area. Peace Park is located within the Ashbury HCA, listed for its interwar period houses. Removal of trees within this HCA is not expected to have an impact to the heritage significance associated with this HCA listing.

The three substation sites have been highly disturbed by previous construction for the establishment of the substation sites. These substations are not located within any heritage listings or HCAs.

Beaconsfield West substation is located adjacent to the Alexandra Canal and the canal wall forms the boundary of the heritage curtilage. The canal wall would not be directly impacted during the project. As such, there would be no impacts to heritage items and no archaeological potential present at these sites.

Direct impacts relating to specific items are summarised in **Table 5-4**.

Table 5-4 Summary of potential direct construction impacts of the project on heritage items and HCAs

Heritage item/HCA	Direct impacts
Potts Hill Reservoirs 1 and 2 and Site (SHR 01333)	There would be no impact to this State significant heritage item. The State heritage listed item is partially located within the study area but are outside the project area, and no impacts to the item are expected.
Alexandra Canal (SHR 01621)	The project would not have a direct impact on the State heritage listed canal. The canal wall, which forms the boundary of the heritage curtilage, would not be directly impacted by the project.
City Tunnel (SHI 4574202)	There would be no direct impact from construction activities to this item. The item is located between 15 and 67 metres below ground level (i.e. the tunnel depth) which provides adequate separation from the transmission cable circuit.
Service Avenue Heritage Conservation Area (Ashfield LEP 2013 Item C18)	Construction activities, including trenching, would occur along Hanks Street within this HCA. While construction would not have a direct impact on any houses, there is the potential for street trees that are included in the heritage listing to be removed, which would be a direct impact to this HCA. This impact, however, would not degrade the heritage significance associated with the HCA.
Inter War Street Trees (Fifth Avenue) (Canterbury LEP 2012 Item I55)	Construction activities, including trenching, would occur within the road reserve at the intersection of Seventh Avenue and Fifth Avenue. There is the potential that trees located at the intersection would be removed depending on the final alignment of the transmission cable route. The removal of street trees would result in a direct impact to this heritage listing.
Ashbury Heritage Conservation Area (Canterbury LEP 2012 Item HCA1)	Construction activities, including trenching, would occur within the road reserve along Dunstan Street, Hay Street, Harmony Street, Malleny Street and Cheviot Street within this HCA. While construction would not have a direct impact on any houses, there is the potential for street trees that are included in the heritage listing to be removed, which would be a direct impact on the HCA. Construction activities within this HCA also include the Peace Park construction laydown area. No excavation is proposed within the park. The construction laydown area would not have a direct impact to any houses listed as part of the HCA. There is the potential for trees to be removed as part of the establishment of the construction laydown area and this would result in a direct impact to this HCA. This impact, however, would not degrade the heritage significance associated with the HCA,
Henson Park (Marrickville LEP 2011 – Item 71	The possible construction of the transmission cable circuit through this park would be located behind the two grandstands and away from the oval itself. The transmission cable route would be through a current grassed area and is not expected to impact on any structures or other trees that are present within the Henson Park heritage listed area.
Brick Paving (Marrickville LEP 2011 – Item 98)	Construction activities within the road corridor including trenching, would occur in proximity to this item. The brick paving also extends to the kerb and includes the kerbing in some areas. Potential impacts to this item would be determined during the detailed design stage. However, as this item is located outside (but adjacent to) the road reserve, it is expected that impacts should be avoided.

Heritage item/HCA	Direct impacts
The Abergeldie Estate Heritage Conservation Area (Marrickville LEP 2011 – Item C1)	Construction activities, including trenching, would occur along Arlington Street within this HCA. While construction would not have a direct impact on any listed houses, there is the potential for street trees that are included in the heritage listing to be removed, which would be a direct impact to this HCA.
Goodsell Estate Heritage Conservation Area (Marrickville LEP 2011 Item C16)	Construction activities, including trenching and establishment of a construction laydown area, would occur within this HCA. The project area within this HCA has been assessed as having no archaeological potential relating to the historical steam driven brick pit operations. While construction would not have a direct impact on any houses listed as part of the HCA, there is the potential for street trees to be removed. The removal of street trees would result in a direct impact to this HCA.
Llewellyn Estate Heritage Conservation Area (Marrickville LEP 2011 Item C14)	Construction activities, including trenching, would occur within the road reserve. While construction would not have a direct impact on any houses listed as part of the HCA, there is the potential for street trees to be removed. The removal of street trees would result in a direct impact to this HCA.

5.2.1.2 Indirect/vibration impacts

A separate vibration assessment has been undertaken as part of the Construction Noise and Vibration Impact Assessment for the project (refer to **Appendix E** of the EIS). The vibration assessment undertook additional assessment of minimum working distances to the 37 heritage items that are present within the study area and adjacent to the project area, so as not to cause cosmetic damage. The equipment assessed included specific hydraulic and manual hammer equipment of varying classes, with estimates provided for the minimum working distances equipment should be kept away from heritage items, including houses and other buildings located within HCAs. If these minimum working distances are complied with no adverse impacts from vibration intensive works are likely in terms of cosmetic damage. The minimum working distances are shown in **Table 5-5**.

Table 5-5 Minimum working distances of vibration intensive equipment to be used during the project

Plant	Rating/description	Minimum working distances to not cause cosmetic damage[1] to heritage items (metres)
Jack hammer	Hand-held	1 (nominal)
Hydraulic hammer (Rock breaker)	300 kilograms - 5 to 12 tonne excavator	4
	900 kilograms – 12 to 18 tonne excavator	12
	1,600 kilograms – 18 to 34 tonne excavator	34
Piling rig	Hammer – 12 tonne down force	24

Note: Cosmetic damage refers to minor damage which is not structural.

Based on the recommended minimum work distances and distances of built heritage items adjacent to the project area, vibration impacts to the heritage items are considered unlikely where jack hammers or hydraulic hammers up to 300 kilograms are used for these works. The use of hydraulic hammers of a 900 kilogram size or greater is considered likely to have the potential for cosmetic or structural impacts if used within road reserves. This is because items are not likely to be greater than 12 metres from construction works.

5.2.2 Operational impacts

There are not expected to be any impacts, including direct or indirect, to the known HCAs or other heritage items during the operation of the project. Construction laydown areas would be returned to their original state and have no ongoing operational impact. Operational impacts are not considered likely to affect any of the known heritage listed sites.

There are three permanent cable bridges that would be the only visible infrastructure after the project has been completed. These three bridges are not located within any HCAs or adjacent to any SHR listed items. As such, there are not expected to be any visual impacts of above ground infrastructure associated with the project on any HCAs.

5.3 Detailed heritage impact assessment

5.3.1 Heritage items

The following sections detail the heritage impact assessments for locally listed items within the project area, as well as, the two heritage items listed on the SHR that are located immediately adjacent to the project area. Responses to the heritage impact assessment questions, as suggested by the *Assessing Heritage Significance* guideline, have been included for items identified as having potential direct impacts.

The HCAs are assessed in a separate section following this.

5.3.1.1 Potts Hill Reservoirs 1 and 2 and Site (SHR 01333)

The project would not have a direct impact on the SHR listed Potts Hill Reservoir 1 and 2 and Site. The curtilage marginally intersects with the project area at its western-most extent, but no impacts to

the item are proposed. There would also be no impacts from indirect (vibration) impacts due to the separation distances from the proposed works to the item.

5.3.1.2 Alexandra Canal (SHR 01621)

The project would not have a direct impact on the SHR listed Alexandra Canal. Excavation works associated with the trenching and works within the substation are proposed, however no works would occur on the wall itself. There is the potential for indirect impacts from vibration to occur. An assessment of the potential impacts to the Alexandra Canal is undertaken below to assess impacts immediately adjacent to the item. Responses to the heritage impact assessment questions for the Alexandra Canal are provided in **Table 5-6**.

Table 5-6 Heritage Impacts assessment questions: Alexandra Canal (SHR 01621)

How is the impact of the new development on the heritage significance of the item or area to be minimised?
TransGrid would undertake excavation works within an existing substation boundary, an area that has previously been highly disturbed during its construction. Excavation works would not occur directly against the rear of the canal walls, and therefore would not have a direct impact on the canal. If rock breaking is required, indirect impacts from vibration works would also be minimised by restricting the size of the hammer used based on the distance the works are from the canal wall. Mitigation measures include restricting the use of vibration intensive plant to within minimum working distances for example: works between one and four metres from the canal would be undertaken by a jack hammer, works that are greater than four metres from the canal can use a 300 kilogram hydraulic hammer, works that are located greater than 12 metres from the canal can use a 900 kilogram hydraulic hammer and works that are located greater than 34 metres from the canal can use a 1,600 kilogram hydraulic hammer.
Why is the new development required to be adjacent to a heritage item?
The transmission cable route would be connecting to existing infrastructure at the substation.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?
The heritage curtilage associated with the Alexandra Canal is defined by the boundary immediately behind the canal wall on both sides. This curtilage area has been defined to include the physical extents of the canal and canal walls on both sides. The canal, and the areas immediately behind the wall have been assessed as having no potential to contain historical archaeological material associated with the development or occupation of the area (NSW Heritage Division, 2014).
How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?
The proposed works would not impact on the existing views to, and from, the Alexandra Canal. The existing substation already impedes views to the canal from Burrows Road. The works would be undertaken within the existing substation area and would not contribute additional impacts to the view to and from the canal.
Is the development sited on any known, or potentially significant archaeological deposit?
There are no known historical or potential archaeological deposits within the existing substation area. The area has been highly disturbed during the construction of the substation. There are also no historical archaeological deposits associated with the Alexandra Canal located behind the canal walls (NSW Heritage Division, 2014).

5.3.1.3 Inter War Street Trees (Fifth Avenue, Campsie. Canterbury LEP 2012 – Item 55)

Responses to the heritage impact assessment questions for the Inter War Street Trees are provided in **Table 5-7**.

Table 5-7 Heritage Impacts assessment questions: Inter War Street Trees (Canterbury LEP Item 55)

How has the impact of the new services on the heritage significance of the item been minimised?
The detailed design for the project will consider impacts to trees and would avoid removal of trees and impacts to tree roots where possible. Should trees be identified during detailed design for removal, appropriate replanting will be considered within the vicinity of the removed tree's location. If replanting is to occur, the Canterbury Bankstown Tree Management Manual (Canterbury Bankstown Council, 2015) outlines the proposed street tree planting principles and practices to be followed and identifies the proposed future street tree species to be used throughout the former boundary of the Canterbury Bankstown Council area. This document would be used as a guide to the types of trees that should be considered for replanting.
Are any known or potential archaeological deposits (underground and under floor) affected by the proposed new services?
There are not expected to be any historical archaeological deposits associated with this heritage item.
Are any of the existing services of heritage significance? In what way? Are they affected by the new work?
There are no other existing services within the vicinity of this listing.
Has the advice of a conservation consultant been sought? Has the consultant's advice been implemented?
Recommendations have been made in **Section 6.0** of this report. It is expected that these recommendations would be followed in the next stage of works.

5.3.1.4 Henson Park (Marrickville LEP Item 71)

Responses to the heritage impact assessment questions for Henson Park are provided in **Table 5-8**.

Table 5-8 Heritage Impacts assessment questions: Henson Park (Marrickville LEP Item 71)

How has the impact of the new services on the heritage significance of the item been minimised?
The detailed design for the project would consider that the transmission cable route would not be placed near any of the significant elements associated with the park, such as the grandstands, brick entrances or the oval area itself. Option 5a for the transmission cable route would involve an underbore through part of Henson Park, in the vicinity of the Amy Street playground. The transmission cable route is not expected however to have any impact to the heritage significance associated with Henson Park.
Are any known or potential archaeological deposits (underground and under floor) affected by the proposed new services?
There are not expected to be any historical archaeological deposits associated with this heritage item.
Are any of the existing services of heritage significance? In what way? Are they affected by the new work?
There are no other existing services within the vicinity of this listing.
Has the advice of a conservation consultant been sought? Has the consultant's advice been implemented?
Recommendations have been made in **Section 6.0** of this report. It is expected that these recommendations would be followed in the next stage of works.

5.3.1.5 Brick Paving (Marrickville LEP 2011 Item 98)

Construction activities within the current road corridor, including trenching, would occur in proximity to this item. Potential impacts to this item would be determined during the detailed design stage. However, as this item is located outside (but adjacent to) the road reserve, it is expected that impacts can be avoided and therefore no heritage impact assessment is required.

Indirect impacts such as vibration may also occur during construction activities within the vicinity of this item. Mitigation measures include restricting the use of vibration intensive plant to within minimum working distances.

5.3.2 Heritage conservation areas

The assessed heritage conservation areas comprised:

- Service Avenue Heritage Conservation Area (Ashfield LEP 2013 Item C18);
- Ashbury Heritage Conservation Area (Canterbury LEP 2012 Item HCA1);
- Abergeldie Estate Heritage Conservation Area (Marrickville LEP 2011 Item C1);
- Goodsell Estate Heritage Conservation Area (Marrickville LEP 2011 Item C16); and
- Llewellyn Estate Heritage Conservation Area (Marrickville LEP 2011 Item C14).

There are not expected to be any permanent impacts to the significance of any of the known HCAs located within the project area, with the exception of possible tree removal (discussed further below). Impacts would be contained within the current road reserve for most of the HCAs. Where the proposed route passes through the HCAs, potential impacts to trees would be minimised through the detailed design process, and there are not expected to be any impacts to any known or potential archaeological deposits or relics (**Section 5.3.3**).

The potential for vibration impacts would be mitigated by ensuring handheld and hydraulic hammers are operated using safe distances, as recommended in the noise and vibration assessment report. These are:

- hand-held jack hammers are to be used if needed at least one metre away from the location of a heritage item;
- hydraulic hammers up to 300 kilograms can only be used if greater than four metres away from the location of a heritage item;
- hydraulic hammers up to 900 kilograms can only be used if greater than 12 meters away from the location of a heritage item; and
- hydraulic hammers up to 1,600 kilograms can only be used if greater than 34 meters away from the location of a heritage item.

It is recommended that detailed design for this project should aim to avoid tree removal where possible, within the known HCAs. If removal of trees cannot be avoided, consideration should be made to replace the removed tree, where possible, with one that meets the criteria for the specific council's tree master plan policy (where available), to minimise visual impacts.

The HCAs identified within the project area do not include any historical archaeological potential as part of their listings. Excavation within the road reserve of HCAs has been assessed in **Section 4.3.11** as not likely to impact on any areas of historical archaeological potential. The archaeological potential for areas outside of the road reserve, both within and outside of HCAs has been assessed separately in **Section 5.3.3**.

There would be temporary visual and aesthetic impacts during construction works resulting from the trenches, machinery, work personnel, traffic controls and barriers. This impact however, would not result in any long term or permanent impacts to any of the HCAs as the road would be returned to its original state at the conclusion of the works.

Responses to the heritage impact assessment questions for the HCAs are provided in **Table 5-9**.

Table 5-9 Heritage Impacts assessment questions: Heritage Conservation Areas

How has the impact of the new services on the heritage significance of the item been minimised?
The proposed works would be within the existing road reserve or through open park areas within the HCAs. The impacts would only be temporary as the works would be placed below ground and the area restored once the construction works have been completed. The works would not require any demolition or removal of any heritage buildings. Tree removal may occur within HCAs. Detailed design for this project would avoid tree removal where possible. Where tree removal cannot be avoided appropriate replanting, as per the relevant councils' tree conservation guide, should be considered as a possible mitigation to the resulting visual change. Vibration impacts from rock breaking works would be mitigated by restricting the size of the hammer used based on the distance the works are to houses within the heritage conservation areas. Mitigation measures would include that works one metre from the item should be undertaken by a jack hammer. Works that are greater than four metres from any house within a HCA can use a 300 kilogram hydraulic hammer, while works that are located greater than 12 metres from an item can use a 900 kilogram hydraulic hammer. Works that are located greater than 34 metres from a heritage item can use a 1,600 kilogram hydraulic hammer.
Are any known or potential archaeological deposits (underground and under floor) affected by the proposed new services?
It is not expected that there would be any known historical archaeological deposits within the road reserve or through open park areas associated with any of these HCAs.
Are any of the existing services of heritage significance? In what way? Are they affected by the new work?
There are no existing services of heritage significance within the road reserve or through open park areas.
Has the advice of a conservation consultant been sought? Has the consultant's advice been implemented?
There are recommendations that have been made in **Section 6.0** of this report. It is expected that these recommendations would be followed in the next stage of works.

5.3.3 Indirect visual and vibration impacts

The transmission cable and associated works would be located within road reserves. Excavation works would occur adjacent to 37 additional heritage items that are listed on the relevant LEPs and S170 register. Indirect impacts through vibration impacts could occur during the excavation of the trench, in particular, during any rock breaking that may be required.

The potential for vibration impacts would be mitigated by ensuring handheld and hydraulic hammers are operated using safe distances, as recommended in the noise and vibration assessment report. These are:

- hand-held jack hammers are to be used if needed at least one metre away from the location of a heritage item;
- hydraulic hammers up to 300 kilograms can only be used if greater than four metres away from the location of a heritage item;
- hydraulic hammers up to 900 kilograms can only be used if greater than 12 meters away from the location of a heritage item; and
- hydraulic hammers up to 1,600 kilograms can only be used if greater than 34 meters away from the location of a heritage item.

There would also be temporary visual and aesthetic impacts during construction works resulting from the trenches, machinery, work personnel, traffic controls and barriers adjacent to the 37 locally listed heritage items. This impact however, would not result in any long term or permanent impacts to any of the locally listed heritage items as the road would be returned to its original state at the conclusion of the works.

Responses to the heritage impact assessment questions for the HCAs are provided in Table 5-10.

Table 5-10 Heritage Impacts assessment questions: indirect impacts to the 37 locally listed heritage items

How is the impact of the new development on the heritage significance of the item or area to be minimised??
The proposed works would be within the existing road reserve or through open park areas adjacent to the 37 identified locally listed heritage items. Vibration impacts that would be caused from rock breaking would be mitigated by restricting the size of the hammer used based on the distance the works are to houses within the heritage conservation areas. Mitigation measures would include that works one metre from the item should be undertaken by a jack hammer. Works that are greater than four metres from any house within a HCA can use a 300 kilogram hydraulic hammer, while works that are located greater than 12 metres from an item can use a 900 kilogram hydraulic hammer. Works that are located greater than 34 metres from a heritage item can use a 1,600 kilogram hydraulic hammer. Visual impacts would only be temporary as the works would be placed below ground and the area restored once the construction works have been completed. The works would not require any demolition or removal of any heritage buildings.
Why is the new development required to be adjacent to a heritage item?
The route of the transmission cable has been designed to be placed within existing road reserves or through open park areas. This route would minimise direct impacts to heritage items by keeping to the known road reserves where possible.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?
The heritage curtilages associated with the 37 locally listed heritage items located within the study area, but adjacent to the project area, are associated with the lot boundaries of the individual buildings, or collective grouping of houses and street scapes associated with adjacent HCAs.
How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects??
The new development would not affect views to and from each of the 37 locally listed heritage items. There would be temporary impacts from the trenching works, however, once the works are completed, the road reserves would be returned to their original state.
Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?
There are not expected to be any known historical archaeological deposits within the road reserves immediately adjacent to the 37 locally listed heritage items. Archaeological impacts are also outlined below in **Section 5.3.4**.
Will the additions visually dominate the heritage item? How has this been minimised?
The transmission cable route would be place underground and in the vicinity of the 37 locally listed heritage items and would not be a permanent visual impact.
Will the public, and users of the item, still be able to view and appreciate its significance?
Yes. Each of the 37 heritage items would not be affected from the proposed work. The majority of the 37 locally listed heritage items are private houses and buildings, and access to each of the buildings would not change.

5.3.4 Archaeological impacts

The transmission cable route is primarily located within road reserves, with the exception of several separate locations where it would cross private property and public open space such as at the Cooks River at Croydon Park/Campsie, Henson Park, Camdenville Park and Sydney Park. The potential for the project to impact on potential archaeology within road reserves is considered to be negligible given the levels of previous disturbance and has not been considered further. Where the project crosses areas of open space, further consideration of archaeological potential has been undertaken.

Camdenville Park was formerly a brick pit, and the remodelling of this area into the current oval space would have disturbed most of the surrounding area. It is unlikely that any historical archaeological relics would be present within this HCA associated with the former brickworks.

The area for the proposed crossing of the Cooks River was first granted to William Pascoe Crook and does not appear to have been used. After the land was subdivided in the 1890s the area for the proposed crossing route was taken as a transmission line easement in 1903. As such, there was no development along the foreshore of Cooks River where the transmission cable route would be constructed, and therefore there is no potential for archaeological material.

Sydney Park also contains the area where the former brick pits were located, being associated with the former Sydney Park brickworks. The transmission cable route would be along the western side of the park, along Barwon Park Road. The landscaping works that have been undertaken for Sydney Park are likely to have removed any potential historical archaeological remains that may have been present within the project area at this location. The infrastructure associated with the former brick pits along the southern boundary of Sydney Park included a former pit only, and the Terrace Houses that are still present today (but are outside the project area). The transmission route through Sydney Park would include an underbore of the wetland area adjacent to the Terrance Houses. It is unlikely that the project, including the underbore works would disturb any intact in situ subsurface historical archaeological deposits or relics that may be associated with the former brickworks area as they are likely to have been disturbed or removed during previous landscaping works.

There would not be impacts to potential historical archaeological deposits located within each of the construction laydown areas. There would be minimal ground disturbance required but may include impacts to trees located in the laydown areas.

Responses to the heritage impact assessment questions for archaeological impacts are provided in **Table 5-11**.

Table 5-11 Heritage Impacts assessment questions: Archaeological Impacts

How has the impact of the new services on the heritage significance of the item been minimised?
There are no known areas of archaeological potential associated with the construction works. Excavation would be through highly disturbed areas. The potential for impacts has been assessed as unlikely.
Are any known or potential archaeological deposits (underground and under floor) affected by the proposed new services?
There are not expected to be any known historical archaeological deposits within the road reserve associated with any of the HCAs. The transmission cable route would be placed within the existing road reserve, where the road is likely to be disturbed, and is not likely to contain any additional historical archaeological potential. There are three areas where the transmission cable route would traverse parks or open space areas. These are at the Cooks River at Croydon Park/Campsie, Henson Park, Camdenville Park and Sydney Park. The transmission cable route would pass through highly disturbed areas associated with the brick pits at Camdenville Park and Sydney Park. Both of these areas have also been highly disturbed through landscaping works and are not expected to contain extant areas of intact in situ historical archaeological deposits. There was no known historical use of the riverbank along the Cooks River before or after the original land grant was subdivided. The bank area along the river was taken as an electricity easement in 1903 and currently contains a range of existing utilities (e.g. high pressure gas, sewer) that have resulted in previous ground disturbance.
Are any of the existing services of heritage significance? In what way? Are they affected by the new work?
There are no existing services of heritage significance within the project area.
Has the advice of a conservation consultant been sought? Has the consultant's advice been implemented?
There are recommendations that have been made in **Section 6.0** of this report. It is expected that these recommendations would be followed in the next stage of works.

5.4 Summary of impacts

5.4.1 Direct impacts

Direct construction impacts as a result of the installation of the transmission cable conduits are expected including direct impacts within HCAs. However, construction works are temporary, as they are not expected to introduce permanent above ground structures within the curtilage of these items. Once excavation works have been completed, the excavated areas would be restored to as close as possible to their original condition, or as otherwise agreed with the relevant authority.

Direct impacts also have the potential to occur through tree removal in some areas where trees are listed as contributory elements of the listed heritage item. At this stage of the project the detailed design is not available, and the exact vegetation potentially required for removal is not known. The impact to trees is dependent on the final alignment of the transmission cable route and would potentially impact on trees on one side of the road only. Removal of trees is dependent on tree and root location, condition of the tree and the type of tree. Within HCAs where tree removal may occur, this would have an impact to the significance associated with the HCA.

The project would have no impact on either of the two SHR listed items whose curtilage are immediately adjacent to the transition cable route (i.e. Potts Hill Reservoirs 1 and 2 and Site (SHR 01333) and Alexandra Canal (SHR 01621)). Works would be located adjacent to both of these items.

There is not expected to be any potential for archaeological relics to be present within the areas of proposed ground disturbance due to the majority of these areas being road reserves, and other areas (construction laydown areas) having undergone significant past disturbance, removing this potential. Excavation outside of road reserves would occur at the Cooks River at Croydon Park/Campsie, Henson Park, Camdenville Park and Sydney Park. These are all areas that have been highly disturbed in the past from historic uses such as brickwork sites and/or recent demolition and landscaping works.

5.4.2 Indirect impacts

Indirect impacts would be limited to temporary visual impacts associated with the construction works and potential vibration impacts to heritage items in the study area. However, these works are temporary, and the impacts are largely reversible once construction is complete.

6.0 Environmental management and mitigation measures

Based on the historical research, site inspection and understanding of the project, potential impacts to heritage items would be limited to direct incursion into the curtilage of historic items (but not direct impacts to the physical items), trenching, tree removal, temporary visual impacts during works and potential impacts caused by vibration during construction. The following management and mitigation measures have been identified to minimise the potential for direct physical impacts and indirect vibration impacts.

6.1 Management objectives

Objectives for the management of project impacts would continue to be investigated throughout the development of the project to identity further opportunities to minimise any adverse impacts generated by the project.

Management objectives for heritage impacts include:

- avoiding or minimising direct impacts on heritage listed items or HCAs;
- avoid street trees and plantings wherever feasible and reasonable;
- maintaining the heritage values of HCAs;
- avoiding cosmetic damage to heritage buildings or structures; and
- managing unexpected historic finds.

6.2 Environmental management and mitigation measures

Table 6-1 presents the proposed management and mitigation measures for heritage impacts including the timing of their implementation.

Table 6-1 Environmental management and mitigation measures – heritage

No.	Impact/issue	Environmental management and mitigation measures	Timing
NAH1	Impact on Alexandra Canal and Potts Hill Reservoirs 1 and 2	Works in the vicinity of Alexandra Canal within the Beaconsfield West substation and the Potts Hill Reservoirs 1 and 2 will be managed by the Cultural Heritage Management Plan (CHMP) (refer to NAH6) to ensure that there are no direct impacts on the canal walls or the reservoirs.	Construction
NAH2	Removal of street trees/plantings at the intersection of Seventh Avenue and Fifth Avenue (Canterbury LEP 2012 Item 55)	The project will avoid impacts to heritage listed street plantings on Fifth Avenue wherever feasible and reasonable. During construction, manual excavation and monitoring by an arborist, with exclusion fencing used to protect trees from indirect impacts if there are works in their immediate vicinity, will be considered. If tree removal cannot be avoided, a tree replanting strategy will be discussed and agreed with the relevant local council, with consideration of the Canterbury Bankstown Tree Management Manual (Canterbury Bankstown Council, 2015).	Detailed design and construction
NAH3	Impacts on the Brick Paving (Marrickville LEP 2011 Item 98)	The design of the final transmission cable route will avoid the footpath that includes the brick paving that is immediately adjacent to the transmission cable route.	Detailed design and construction
NAH4	Impact on heritage values of	Removal of street trees identified as providing contributory heritage values within HCAs will be	Construction

No.	Impact/issue	Environmental management and mitigation measures	Timing
	the HCAs from tree removal	avoided where possible. If tree removal cannot be avoided, a tree replanting strategy will be developed in consultation with the relevant local authority.	
NAH5	Damage to heritage structures from vibration	Minimum working distances will be enforced when working in proximity to heritage structures. This includes: • hand-held jack hammers will be used, if needed, at least one metre away from the location of a heritage item; • hydraulic hammers up to 300 kilograms will only be used if greater than four metres away from the location of a heritage item; • hydraulic hammers up to 900 kilograms will only be used if greater than 12 metres away from the location of a heritage item; and • hydraulic hammers up to 1,600 kilograms will only be used if greater than 34 metres away from the location of a heritage item. If minimum working distances cannot be maintained during construction, a CHMP will be developed that includes building condition surveys and/or vibration monitoring as per the environmental management measure NV14 (refer to **Chapter 8 Noise and vibration** of the EIS).	Construction
NAH6	General construction impacts	A CHMP will be produced for the project as part of the Construction Environmental Management Plan (CEMP) to manage impacts on identified heritage items. The CHMP will: • guide appropriate responses to identified heritage constraints during construction; • define limits to machinery use and construction activity in proximity to heritage structures to avoid vibration impacts; • detail where and when monitoring will be undertaken to ensure no vibration or other indirect impacts on identified heritage items; • define any protectionary fencing required to delineate safe working areas and/or no-go areas in relation to heritage protection; and • include maps showing the location and curtilage of heritage items. A toolbox presentation or project induction will be held with all staff and contractors prior to the commencement of works to make them aware of their responsibilities with regard to avoiding heritage impacts. Once the final design is known, the relevant local councils within the project area will be informed of any anticipated impacts to heritage items.	Detailed design and construction
NAH7	Unexpected finds	In the event that unexpected historic finds are identified during construction, all works will immediately cease at that area. Unexpected finds may	Construction

No.	Impact/issue	Environmental management and mitigation measures	Timing
		include artefact scatters (including glass, animal bone, ceramic, brick and metal), building foundations and earthworks of unknown origin. The following procedure guides the management of unexpected and previously unidentified finds during the course of project works: • all work in the area will cease immediately; • alert the Environmental Specialist to the find; • if necessary, protect the area with fencing; • engage a suitably qualified archaeologist to undertake an assessment of the find/s; • if it is determined the relic is likely to be significant, a Section 146 notification form will be sent with a short letter report to the Heritage Council notifying them of the discovery; • an assessment will be undertaken using the guidelines Assessing Significance for Historical Archaeological Sites and 'Relics' (NSW Heritage Branch, 2009); • on the advice of the archaeologist, if necessary, prepare an Impact Assessment with Research Design and Methodology to submit to the Heritage Division along with a Section 140 excavation permit to undertake archaeological works; • undertake the archaeological mitigation in accordance with the prepared documents and any permit/exception issued by the Heritage Division; and • once the site has been mitigated to the satisfaction of the archaeologist and the Heritage Division, works may resume in the area.	

7.0 Conclusion

This historical heritage impact assessment has concluded that the project would have indirect and direct impacts to heritage items located within the project area.

Proposed impacts within HCAs are predominately within the road reserve and would not have direct impacts on associated listed houses. Indirect vibration impacts would also be avoided by applying minimum working distances as detailed in the recommendations of this report. There is the potential for trees, including some street tree plantings that are heritage listed, to be removed from within the project area. Opportunities to avoid tree removal and retain trees would be investigated during detailed design. Where trees are removed, replacement of trees would be considered, where feasible, in consultation with the local council and other relevant stakeholders.

A CHMP will be produced as part of the CEMP for the project to provide guidance and management provisions to any impacts identified to heritage items during the detailed design and construction phase. The CHMP would include:

- specific management measures (e.g. exclusion zones) to reduce the impact on the known heritage items and HCAs, including:
    - Alexandra Canal and the Potts Hill Water Reservoirs No. 1 and No. 2;
    - potential removal of street trees/plantings on Fifth Avenue, Campsie as part of the Inter War Street Trees heritage listing);
    - potential impacts on the brick paving on Juliett Street and Enmore Road
- measures, such as minimum working distances, for the management of potential damage to heritage structures from vibration; and
- measures in the event that unexpected historic finds are identified during construction.

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Annexure A

Statements of Heritage Significance – 37 locally-listed items

Appendix A: Heritage items located adjacent to the project area within the study area for the transmission cable project.

House (10 Hanks Street, Ashbury, NSW 2131) (NSW Heritage Division, 2013i)	
SHR Criterion	**Statement**
SHR Criterion a)	"This property is in the Beechwood Estate, an area taken out of Robert Campbell's historic Canterbury Park Estate at about the turn of the 19th century."
SHR Criterion c)	"One of Ashfield s most authentic and attractive Federation-period Queen Anne houses. It is in immaculate and original condition, along with its immediate context, an ensemble comprising garden, architectural detailing, fence and gate, as well as an early rear-sited garage. "
Statement of Significance "One of Ashfield s most authentic and attractive Federation-period Queen Anne houses. It is in immaculate and original condition, along with its immediate context, an ensemble comprising garden, architectural detailing, fence and gate, as well as an early rear-sited garage. It was erected by a very competent builder, who with his family lived there for many years. The property demonstrates quite remarkably the qualities appropriate to an important phase of the municipality s history."	

House (38 Hanks Street, Ashbury, NSW 2131) (NSW Heritage Division, 2013k)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion c)	"Local"
Statement of Significance "No heritage listing information or statement of heritage significance has been prepared by Ashfield Council for this listing."	

Canterbury Boys' High School (220-252 Holden Street, Ashbury, NSW 2131) (NSW Heritage Division, 2013l)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion c)	"Local"
Statement of Significance "No heritage listing information or statement of heritage significance has been prepared by Ashfield Council for this listing."	

Yeo Park (public reserve, Victoria Street, Ashfield, NSW 2131) (NSW Heritage Division, 2013o)	
SHR Criterion	**Statement**
SHR Criterion a)	"Yeo Park was officially opened in September 1925. It was part of the former Hurlstone Agricultural College, which was later bought by Trinity Grammar School in an exchange with the Department of Education. It is part of the first land grant in the Municipality,

Yeo Park (public reserve, Victoria Street, Ashfield, NSW 2131) (NSW Heritage Division, 2013o)	
	made in 1793 to Richard Johnson and was named after former Mayor John Yeo (1917-1918).” (Inner West Council, 2018)
SHR Criterion c)	“The park retains historical pathways and flower beds as originally designed. The bandstand building located in the centre of the park was constructed in 1929, and is a significant building to the site.” (Inner West Council, 2018)
Statement of Significance “No heritage listing information or statement of heritage significance has been prepared by Ashfield Council for this listing.”	

Former Baby Health Centre (296D Old Canterbury Road, Corner of Victoria Street, Summer Hill, NSW 2130) (NSW Heritage Division, 2017a)	
SHR Criterion	**Statement**
SHR Criterion a)	“Site of the former Training College and which at that time contained John Kinlock's Hurlstone College in 1883. The Health Department took ownership of the property in 1947 for the purposes of the Baby Health Centre.”
SHR Criterion c)	“A small single-storeyed brick, timber and concrete structure, the planning of which marks it as a state-of-the-art sample of this building type.”
Statement of Significance “This is a very good example, indeed one of the earliest, of professionally- designed post-World-War II International-style architecture in Ashfield. It was designed by a respected firm of architects, still extant, which has also worked with other Sydney councils. It is an unusual built example of a corroboration between three municipalities and the NSW Health Department. As well, it is an excellent and early example of a purpose-built Baby Health Centre. The building and its setting also form an attractive component of an Ashfield site that has intense historical significance, demonstrating the interactions of private ownership, development, education and municipal and State interests.”	

House (296 Old Canterbury Road, Summer Hill, NSW 2130) (NSW Heritage Division, 2013j)	
SHR Criterion	**Statement**
SHR Criterion a)	“Local”
Local	“Local”
SHR Criterion c)	“Local”
SHR Criterion g)	“Local”
Statement of Significance “No heritage listing information or statement of heritage significance has been prepared by Ashfield Council for this listing.”	

School - headmaster's house and chapel (119 Prospect Road, Summer Hill, NSW 2130) (NSW Heritage Division, 2013m) **Federation House**	
SHR Criterion	**Statement**
SHR Criterion a)	“Local”

School - headmaster's house and chapel (119 Prospect Road, Summer Hill, NSW 2130) (NSW Heritage Division, 2013m) **Federation House**	
SHR Criterion c)	"Local"
SHR Criterion g)	"Local"
Statement of Significance "No heritage listing information or statement of heritage significance has been prepared by Ashfield Council for this listing."	

Federation Houses (5, 7, 9, 11, 13, and 15 Second Avenue, Ashbury, NSW, 2193) (NSW Heritage Division, 2013e, 2013f, 2013g, 2013b, 2013c, 2013d)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion c)	"Local"
SHR Criterion g)	"Local"
Statement of Significance "No heritage listing information or statement of heritage significance has been prepared by Ashfield Council for this listing."	

Canterbury Park Racecourse (98 King Street, Canterbury, NSW 2193) (NSW Heritage Division, 2002a)	
SHR Criterion	**Statement**
SHR Criterion a)	"Horse racing began in Canterbury 1852. The present site was leased from Jeffrey's Estate in 1884 by a company. Acquired by Sydney turf club which its first meeting in January 1945."
SHR Criterion c)	"Large racecourse with considerable areas of turf. Most of fixtures, such as rails, grandstands and stables are recently built but physical evidence of earlier building remains."
Statement of Significance "An important landscape feature, long associated with Canterbury which services the whole metropolitan area."	

Federation weatherboard house (123 Yangoora Road, Lakemba, NSW 2195) (NSW Heritage Division, 2002b)	
SHR Criterion	**Statement**
SHR Criterion a)	"Built in the early 1910s on the Boorea Park Estate which was subdivided in this form in 1911. Believed to be the first house built in the Estate."
SHR Criterion c)	"Weatherboard tunnel cottage with galvanised iron gabled roof. Curved iron on front verandah. Original doors and casement windows coloured panes are intact."
Statement of Significance "Intact worker's cottage, one of the first in the area and one of the most intact remaining examples."	

Holy Trinity Church of England – including interiors (7 Herbert Street, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2011b)	
SHR Criterion	**Statement**
SHR Criterion a)	"In 1886 a church building was dedicated on this site and a new church was later built opposite. Increasing congregation led to the construction of the present building in 1915."
SHR Criterion c)	"Large brick church with moulded brick and sandstone detailing. Heavy square brick pilasters and butressing. Rusticated sandstone walling to Herbert and Seaview Streets."
Statement of Significance	
"The contrast between this and the earlier, small brick church erected opposite is a graphic illustration of the growth of the suburban population in the period around the turn of the century. This forms part of a large church and school precinct with the adjoining Dulwich Hill High School."	

The Rectory (including interiors) (11 Herbert Street, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2011d)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion c)	"Local"
SHR Criterion g)	"Local"
Statement of Significance	
"This building is one of two along Herbert Street which were erected in the late 19th century (17 - 19 Herbert Street). It has been well preserved and is reminiscent of the large villas which dotted the surrounding landscape during the second half of the 19th century."	

Victorian Filigree Style Villa - Fairview, including interiors (17 - 19 Herbert Street, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2011e)	
SHR Criterion	**Statement**
SHR Criterion a)	"Fairview demonstrates early development (1885) of the 1881 "Seaview Estate" subdivision of Dulwich Hill, , being an example of a freestanding villa on a large allotment (formed of 3 lots of the Seaview Estate). "Fairview" has historical association with William Clark, Secretary of the Waratah Coal Company,- one of the major Newcastle coal companies of the late 19th century - and his family, for whom the house was built in 1885, and who occupied it until 1895. The history of the house illustrates the impact of the 1890s depression, as the house was resumed by the Bank of New Zealand in 1896 (presumably due a failure of Clark's fortune)."
SHR Criterion c)	"Fairview is significant as a substantially intact example of a Victorian freestanding two-storey villa in the Victorian Filligree style. It comprises a pair of such villas in Herbert Street (with 11-13 Herbert Street)." "It makes a significant contribution to the streetscape and character of Herbert Street."
SHR Criterion d)	"Fairview is locally significant for the high regard with which it is held by the local Marrickville community. This high regard is demonstrated by the campaign to save it from demolition in the 1970s and its subsequent listing on the Register of the National Trust and the Interim Conservation Order. Ongoing high regard is also demonstrated by its being awarded a 1997 Marrickville Medal commendation for the quality of its restoration."
SHR Criterion e)	"Fairview is not considered to have any special research potential in relation to nineteenth century building styles and techniques. Some potential exists for archaeological deposits in

Victorian Filigree Style Villa - Fairview, including interiors (17 - 19 Herbert Street, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2011e)	
	relation to former land uses and nineteenth century life and activities, given the age of the building and the size of the surrounding allotment, though this potential is considered to be slight."
SHR Criterion f)	"Fairview is locally significant as an example of an intact, two-storey Victorian villa in its garden setting. Such villas were once common in the area and are now relatively rare in Dulwich Hill and the Marrickville LGA. It forms a pair with 11-13 Herbert Street."
SHR Criterion g)	"Fairview is locally significant as a good representative example of a freestanding Victorian villa in the Victorian Fiilligree style."
Statement of Significance "Fairview" is of local historical significance as it demonstrates early development (1885) of the 1881 "Seaview Estate" subdivision of Dulwich Hill, , being an example of a freestanding villa on a large allotment (formed of 3 lots of the Seaview Estate). "Fairview" has historical association with William Clark, Secretary of the Waratah Coal Company,- one of the major Newcastle coal companies of the late 19th century - and his family, for whom the house was built in 1885, and who occupied it until 1895. The history of the house also illustrates the impact of the 1890s depression, as the house was resumed by the Bank of New Zealand in 1896 (presumably due a failure of Clark's fortune).Fairview is of aesthetic significance as a substantially intact example of a Victorian freestanding two-storey villa in the Victorian Filligree style. It comprises a pair of such villas in Herbert Street (with 11-13 Herbert Street)."	

Waratah Flour Mills, including interiors (10-14 Terry Road, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2013n)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local. Waratah Flour Mill is part of the historical development of NSW and is one of a series of mills constructed throughout Sydney and NSW during the 1920's. The mill is evidence of the tendency towards centralisation of milling in Sydney and the decline of rural infrastructure during the 1920's. The buildings demonstrate the changes in production and requirements that flour milling has undergone during the twentieth century. It is not the oldest in the area with Crago and Mungo Scott being older. There has been an association with the Great Western Milling Co and Goodman Fielders who have been important companies in the history and development of flour milling in NSW. Great Western Milling Co was an important and well known milling company at the time but not the largest. The company also had factories at Canowindra and Granville. The initial designers Thomas Robinson and Sons have long been associated with Flour Milling in NSW."
SHR Criterion c)	"The buildings are typical of Flour Mills and Factories of the period and are pleasantly designed without showing any high degree of creative achievement. The complex forms a visual landmark in Dulwich Hill. The trees that have been incorporated into the site as a result of adjacent house acquisitions in the 1960's provide a pleasant setting from the Terry Road side. The timber bins have some etchnical significance although quite common in flour mills over the first half of the century. The concrete silos are an early example in flour mills but reinforced concrete was first used in 1910 (Kingston Melbourne) became the normal material for multi-storey construction in the 1920's."
SHR Criterion d)	"Local"
SHR Criterion e)	"Local. The Waratah Flour Mill is part of the history of Flour Mills in Sydney and NSW but does contribute more information about other mills and because of its decommissioning probably contributes less than the mills that continue to operate."
SHR Criterion f)	"Local"

Waratah Flour Mills, including interiors (10-14 Terry Road, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2013n)	
SHR Criterion g)	"Local. The Waratah Flour Mill is a typical flour mill of the 1920's although this is only evidenced by the buildings and not the equipment as what remains is relatively new."
Statement of Significance "This is one of two large flour mills in the Municipality and is also one of two along this section of the goods line. It illustrates the industrialisation of this area in the early 1900's following the containment of Long Cove Creek as a channel and the construction of the railway line. "The Waratah Flour Mill is considered to be of local significance as it is one of a number of flour mills constructed throughout Sydney and NSW during the 1920's. It is representative of the industry of the time illustrating the centralised infrastructure in Sydney and typical construction of Flour Mills. The mill has been a prominent visual landmark and maintains a pleasing design and layout on the site. There is minor significance with the association with Great Western Milling Co, Goodman Fielder and Thomas Robinson the original designers and equipment suppliers and with the technical aspects of the timber silo construction is of some interest."	

Golden Barley Hotel, including interiors (165 Edgeware Road, Enmore, NSW 2042) (NSW Heritage Division, 2011a)	
SHR Criterion	**Statement**
SHR Criterion a)	"The Golden Barley Hotel is of historical significance as evidence of the increasing ownership of hotels by major breweries in the early 20th century. Tooths and other major breweries built new hotels or refurbished Victorian period hotels, particularly in the inter-war period. The Golden Barley is relatively unusual in Marrickville in having been designed from new in 1938 for Tooths (rather than being a refurbishment of an older hotel). The design of the hotel is of historical significance as it was centered on the importance of the Public Bar function and the dominance of what became known as the 'six o'clock swill' that took place when large numbers of manual workers clocked off for the day and went straight to the pub, conveniently and deliberately, located near their work place. The Golden Barley Hotel has a strong historical association with its designers, the architectural partnership of Joy and Pollitt who were accomplished architects and specialist hotel designers of several important Inter War hotels. The hotel has a strong historical association with Tooth's Brewery who were major players in the hotel and beer and liquor supply industry in New South Wales in the inter-war period."
SHR Criterion c)	"Of aesthetic significance as a fine example of the work of well-known hotel designers, Joy and Pollitt Architects who did much work for Tooth and Co in the 1930s and 1940s. Other Joy and Pollitt hotels include Robert Burns Hotel, Bathurst St, 1940 (demolished); Tarcutta Hotel, 1941; Freemason's Hotel, Broken Hill,1941; Bridge Hotel, Rozelle, 1942; Unicorn Hotel, Paddington, 1942. Of aesthetic singificance as a landmark building on a prominent street corner. The design of the Golden Barley Hotel is an accomplished blend of the Inter War Functionalist and Inter war Art Deco styles. The hotel includes technically difficult curved walls, sections of curved ribbon glazing and glass bricks that were state of the art at the time."
SHR Criterion d)	"The hotel is of social significance for the past and current community as a community recreational venue since 1939."
SHR Criterion f)	"The Golden Barley is unusual is being designed from new in 1938 (rather than being a refurbishment of an earlier hotel)."
SHR Criterion g)	"The Golden Barley Hotel is a high quality representative example of a blend of the Inter-war Functionalist and Inter war Art Deco styles."

Golden Barley Hotel, including interiors (165 Edgeware Road, Enmore, NSW 2042) (NSW Heritage Division, 2011a)

Statement of Significance

"The Golden Barley Hotel is of historical significance as evidence of the increasing ownership of hotels by major breweries in the early 20th century. Tooths and other major breweries built new hotels or refurbished Victorian period hotels, particularly in the inter-war period. The Golden Barley is relatively unusual in Marrickville in having been designed from new in 1938 for Tooths (rather than being a refurbishment of an older hotel).
The design of the hotel is of historical significance as it was centered on the importance of the Public Bar function and the dominance of what became known as the 'six o'clock swill' that took place when large numbers of manual workers clocked off for the day and went straight to the pub, conveniently and deliberately, located near their work place.
The Golden Barley Hotel has a strong historical association with its designers, the architectural partnership of Joy and Pollitt who were accomplished architects and specialist hotel designers of several important Inter War hotels.
The hotel has a strong historical association with Tooth's Brewery who were major players in the hotel and beer and liquor supply industry in New South Wales in the inter-war period.
The Golden Barley Hotel is of aesthetic significance as a fine and accomplished blend of the Inter-war Functionalist and Inter war Art Deco styles, the work of well-known hotel designers, Joy and Pollitt Architects, and as a landmark building on a prominent street corner.
The hotel is of social significance for the past and current community as a community recreational venue since 1939.
The Golden Barley is unusual is being designed from new in 1938 (rather than being a refurbishment of an earlier hotel). The Golden Barley Hotel is a high quality representative example of a blend of the Inter-war Functionalist and Inter war Art Deco styles."

Enmore Park and Entry Gates and Port Jackson Fig Trees (Enmore Road, Marrickville, NSW 2204) (NSW Heritage Division, 2013a)

SHR Criterion	**Statement**
SHR Criterion a)	"Enmore Park is locally significant as the first municipal park to be declared within Marrickville local government area. It demonstrates an important stage of Marrickville's growth; and period of subdivision and change in social status between the 1870s and the turn of the century. It is also important because of its historical association with local events and people."
SHR Criterion c)	"Enmore Park is locally significant for its surviving nineteenth-century layout with its distinctive radial pathways, garden beds and plantings. It also contains significant elements from park improvements in the 1920s and 1930s."
SHR Criterion d)	"Enmore Park is locally significant as a municipal park and valued for its passive recreation opportunities and public amenity."
SHR Criterion g)	"Local"

Statement of Significance

"Enmore Park is of high local significance as the first public park established within Marrickville Municipality and helps demonstrates the historical development of Marrickville LGA and the surrounding pattern of residential subdivision. The park still provides the same area of municipal open space as it did when dedicated in the 1880s, and is of social significance for its use as a recreational facility.
It is associated with local alderman, D V Cochrane, after whom it was named for a brief time.
The park was established to provide and continues to provide public amenities and opportunities for passive recreation. The surviving nineteenth century and early twentieth century features of the park demonstrat the continuing municipal concern with public amenity and a regular program of municipal works. In its current form the park retains and evidences its historic layout and structure.

Enmore Park and Entry Gates and Port Jackson Fig Trees (Enmore Road, Marrickville, NSW 2204) (NSW Heritage Division, 2013a)
The park includes a small number of individual plantings, structures and monuments, which have particular landscape significance or social value to sections of the community."

Terrace Housing, including interiors (341 - 371 Enmore Road, Marrickville, NSW 2204) (NSW Heritage Division, 2012f)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion g)	"Local"
Statement of Significance "An attractive group of terraces which represent both Victorian and Federation period residential development. They contribute to the scale and character of the residential streetscapes framing Enmore Park."	

Victorian Italianate Corner Shop and Adjacent Pair of Victorian Terrace Houses (40, 42 and 44 Illawarra Road, Marrickville, NSW 2204) (NSW Heritage Division, 2017c)	
SHR Criterion	**Statement**
SHR Criterion a)	"Evan's shop (44 Illawarra Road) built 1894 by Thomas R. Evans (probably a builder of Smith Street, Summer Hill), and the pair of terraces "Roslyn" (40 Illawarra Road) and "Rosalia" (42 Illawarra Road), built on vacant land adjacent to the shop, again by Thomas R. Evans, in 1911, are of historical significance as evidence of incremental development over time in the late 19th and early 20th century by a single builder (whose family retained ownership of the group till at least 1921). The terraces are extremely old-fashioned for their period of construction, presumably as they were built to match the design of the earlier corner shop. In this regard the form of the buildings reflects their historical development. The group of corner shop and terraces is evocative of past retailing practices and lifestyles."
SHR Criterion c)	"The corner shop and pair of terraces are of aesthetic significance as a Victorian Italianate style corner shop with Victorian Filigree style terraces with unified cornice and pediment detailing, reflecting their construction by the same owner/builder, (despite a time gap between the construction of the shop and the terraces)."
SHR Criterion f)	"Nos. 42-44 are locally rare as very late examples of the Victorian Filigree style."
SHR Criterion g)	"The corner shop and terraces are representative of the Victorian Italianate and Victorian Filigree styles of architecture."
Statement of Significance "Victorian italianate corner shop and adjacent pair of Victorian terrace houses, including interiors. Evan's shop (44 Illawarra Road) built 1894 by Thomas R. Evans (probably a builder of Smith Street, Summer Hill), and the pair of terraces "Roslyn" (40 Illawarra Road) and "Rosalia" (42 Illawarra Road), built on vacant land adjacent to the shop, again by Thomas R. Evans, in 1911, are of historical significance as evidence of incremental development over time in the late 19th and early 20th century by a single builder (whose family retained ownership of the group till at least 1921). The terraces are extremely old-fashioned for their period of construction, presumably as they were built to match the design of the earlier corner shop. In this regard the form of the buildings reflects their historical development. The group of corner shop and terraces is evocative of past retailing practices and lifestyles.The corner shop and pair of terraces are of	

Victorian Italianate Corner Shop and Adjacent Pair of Victorian Terrace Houses (40, 42 and 44 Illawarra Road, Marrickville, NSW 2204) (NSW Heritage Division, 2017c)
aesthetic significance as a Victorian Italianate style corner shop with Victorian Filigree style terraces with unified cornice and pediment detailing, reflecting their construction by the same owner/builder, (despite a time gap between the construction of the shop and the terraces). Nos. 42-44 are locally rare as very late examples of the Victorian Filigree style. The corner shop and terraces are representative of the Victorian Italianate and Victorian Filigree styles of architecture."

Tunneyfall Terrace -Victorian Italianate Corner Shops & Victorian Style Terraces (46-60 Illawarra Road, Marrickville, NSW 2204) (NSW Heritage Division, 2017b)	
SHR Criterion	**Statement**
SHR Criterion a)	"Tunneyfall terrace, an 1885 a terrace of six houses, with shops at either end, is of historical significance as evidence of a 19th joint venture to develop the Illawarra Road frontage of this block, and as evidence of a late 19th century mixed corner shop/retail and terrace houisng development, evidence of former retailing and lifestyle patterns. In the late 19th century, the corner shops operated as grocery stores."
SHR Criterion c)	"Tunneyfall terrace is of aesthetic significance as a fine Victorian Italianate/Victorian Filigree style composition of terrace of housing and corner shops, taking up a whole block fronting Illawarra Road. The terrace contributes to the streetscape."
SHR Criterion f)	"Tunneryfall Terrace is an unusually fine composition of terrace housing and corner shops, with more elaborate detailing than is typical for the area."
SHR Criterion g)	"Tunneyfall Terrace is a fine representative example of a mix between the Victorian Italianate and the Victorian Filigree styles."
Statement of Significance Tunneyfall Terrace - Victorian italianate corner shops and Victorian style terrace houses, including interiors. Tunneyfall terrace, an 1885 a terrace of six houses, with shops at either end, is of historical significance as evidence of a 19th joint venture to develop the Illawarra Road frontage of this block, and as evidence of a late 19th century mixed corner shop/retail and terrace houisng development, evidence of former retailing and lifestyle patterns. Tunneyfall terrace is of aesthetic significance as a fine Victorian Italianate/Victorian Filigree style composition of terrace of housing and corner shops, taking up a whole block fronting Illawarra Road. The terrace contributes to the streetscape. Tunneryfall Terrace is locally rare as an unusually fine composition of terrace housing and corner shops, with more elaborate detailing than is typical for the area. Tunneyfall Terrace is a fine representative example of a mix between the Victorian Italianate and the Victorian Filigree styles.	

Electricity substation No. 1458 (208 Denison Road, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2007a)	
SHR Criterion	**Statement**
SHR Criterion a)	"Historically significant as evidence of the expansion of the electricity network into Sydney's suburbs."
SHR Criterion c)	"Substation no 1458 is a purpose built electricity distribution substation which is a well designed example of a small scale industrial building."
SHR Criterion g)	"Typical in scale, function and technical arrangement to other small scale electricity distribution substations."
Statement of Significance "Substation no 1458 is a purpose built electricity distribution substation built by the private Electric Light and Power Supply Corporation. It is a well designed example of a small scale industrial building."	

Lewisham Estate Heritage Conservation Area (Lewisham, NSW 2049) (NSW Heritage Division, 2012c)	
SHR Criterion	**Statement**
SHR Criterion a)	"Lewisham Estate Heritage Conservation Area is of historical significance as an area developed from a series of subdivisions from the early 1880s to 1898, beginning with the "Lewisham Estate" subdivision prior to 1882."
SHR Criterion c)	"The Lewisham Estate Heritage Conservation Area is of aesthetic significance for containing a wide range of housing typologies (late 19th - early 20th Century). Including a range of finely crafted Victorian Italianate, Rustic Gothic, Filigree and Regency houses, terraces and villas and later Federation examples of the same typologies, including good examples of Federation cottages, terraces and substantial Queen Anne houses, including in Hunter Street at the northern end of the precinct and Toothill Street. Several good examples of houses and residential flat buildings from the Inter-War period can also be found."
SHR Criterion d)	The Lewisham Estate Conservation Area is socially significant for providing physical evidence of the late 19th Century community demonstrated through the prominent location of community facilities at the northern end of the area close to Enmore Road including the Baptist Church (The Boulevarde) and Memorial Scout Hall (The Boulevarde - South end)
SHR Criterion g)	The Area is representative of the range of building types and forms available to the community in the late 19th to early20th Centuries, including the detached villa, mansion and cottage, semi-detached and terrace house.
Statement of Significance "The Lewisham Estate Heritage Conservation Area is of historical significance as an area developed from a series of subdivisions from the early 1880s to 1898, beginning with the "Lewisham Estate" subdivision prior to 1882. The Lewisham Estate Heritage Conservation Area is of aesthetic significance because it contains a wide range of housing typologies (late 19th - early 20th Century) including a range of finely crafted Victorian Italianate, Rustic Gothic, Filigree and Regency houses, terraces and villas and later Federation examples of the same typologies, including good examples of Federation cottages, terraces and substantial Queen Anne houses in Hunter Street at the northern end of the precinct and Toothill Street. Several good examples of houses and residential flat buildings from the Inter-War period can also be found. The Lewisham Estate Conservation Area is socially significant for providing physical evidence of the late 19th Century community demonstrated through the prominent location of community facilities at the northern end of the area close to New Canterbury Road including the Baptist Church (The Boulevarde) and Memorial Scout Hall (The Boulevarde - South end) and 20th Century Great Depression Relief Work Programs (the stone wall to Old Canterbury Road). The Area is representative of the range of building types and forms available to the community in the late 19th to early20th Centuries, including the detached villa, mansion and cottage, semi-detached and terrace house."	

Dulwich Hill Commercial Precinct Heritage Conservation Area (Marrickville Road, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2012a)	
SHR Criterion	**Statement**
SHR Criterion a)	"Dulwich Hill Shops Heritage Conservation Area is of historical significance as a generally intact retailing area developed from c. 1890 through to 1938, associated with the extension of the tramline from Marrickville to Dulwich Hill along Marrickville Road in 1889, later tramline extension in 1913 and the opening of the Dulwich Hill Railway Station in 1895."
SHR Criterion c)	"Dulwich Shops Heritage Conservation Area is of aesthetic significance as a largely intact retailing precinct of the period 1890-1938 which retains parapeted roof forms, recessed shopfronts, and generally intact first floor shop facades, and inter-war residential flat buildings."

Dulwich Hill Commercial Precinct Heritage Conservation Area (Marrickville Road, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2012a)	
SHR Criterion d)	"The area is considered to have potential to demonstrate social significance, however social significance has not been specifically researched through community consultation."
SHR Criterion g)	"Representative late 19th-early 20th century strip retail area."

Statement of Significance

"The Dulwich Hill Commercial Precinct Heritage Conservation Area is significant because it demonstrates the development of a major suburban shopping precinct over a period of more than 50 years (c1890-1940) following the extension of the tramline from Marrickville to Dulwich Hill along Marrickville Road in 1889, later tramline extension in 1913 and the opening of the Dulwich Hill Railway Station in 1895..

Shops and buildings from each major period of retailing have survived and continue to contribute to the aesthetic, historic, and social values of Dulwich Hill and the Marrickville local government area.

The streetscapes of the area are of aesthetic significance because they encompass a substantially intact mid to late 19th Century retail precinct. The aesthetic value of the area is enhanced by the undulating alignment of New Canterbury Road, which provides a fine series of evolving views and vistas and by the intersection of New Canterbury and Marrickville Roads which allows multiple viewpoints over the streetscape.

The commercial and retail buildings within the area demonstrate the principal characteristics of the traditional suburban shopping area with narrow shopfronts and clearly defined structural bays providing physical evidence of the regularity of the underlying subdivision pattern. Although evidence of most original shopfronts has been lost, the streetscape at pedestrian level remains a cohesive one due to the regular spacing of the original shopfronts and the 1920s hanging ball lights under the awnings which creates a distinctive aesthetic quality to the streetscape and accentuates the curvature of the façade as it follows the alignment of New Canterbury Road.

The group demonstrates strong aesthetic qualities also through the consistency of the parapeted and enclosing street wall, with its finely worked detailing creating a high quality and strongly defined skyline view from the opposing footpath and when travelling through the area.

The Dulwich Hill Commercial Precinct Heritage Conservation Area is of aesthetic significance as a largely intact retailing precinct of the period 1890-1938 which retains original parapeted roof forms, recessed shopfronts, and generally intact first floor shop facades. It also includes some representative examples of Inter-War residential flat buildings."

Hoskins Park and Environs (Dulwich Hill) Heritage Conservation Area (Piggot Street, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2013h)	
SHR Criterion	**Statement**
SHR Criterion a)	"Hoskins Park has historical significance as one of a number of contemporary parks that came under the control of Petersham Municipality during the second decade of the twentieth century and subsequently came under the control of Marrickville Municipality in 1949. Hoskins Park and its setting provide evidence of early twentieth century urban consolidation in Dulwich Hill, both with the provision of parks and development on the land to the east of the Park (which was formerly on the same title) and along the western side of Pigott Street. The Park was one of the first in the Municipality of Petersham to be named after a mayor, a practice that subsequently became common in both Petersham and Marrickville municipalities."
SHR Criterion c)	"Although it has been subject to some modification, Hoskins Park is still clearly identifiable as an interwar era park and shares features in common with other parks under the control of Petersham Municipality, such as pergolas, configuration of paths, names in paving and stone edged planter beds. The Park maintains an important visual relationship with late nineteenth and early twentieth century residential development along Pigott and Davis Streets and enhances their setting. The physical character of the Park is attractive, deriving from a combination of site configuration and topography, mature trees and landscaping."
SHR Criterion g)	"Hoskins Park is representative of the parks that were formerly under the jurisdiction of Petersham Council. It shares several features from the interwar period in common with

Hoskins Park and Environs (Dulwich Hill) Heritage Conservation Area (Piggot Street, Dulwich Hill, NSW 2203) (NSW Heritage Division, 2013h)	
	these parks. It is this important within the context of this group of parks and demonstrates the consistent approach that a local government instrumentality took to the design of facilities to improve residential amenity of suburbs in the first half of the twentieth century."

Statement of Significance

"Hoskins Park has heritage significance for a number of reasons.
It was one of several parks under the control of Petersham Municipality (and subsequently came under the controls of the Marrickville Municipality in 1949). It is representative of these parks, sharing several features from the interwar period with them, and demonstrates the consistent approach that a particular local government instrumentality took to the design of residential amenity in the first half of the twentieth century. Its naming, after a mayor, reflects what may be a relatively common local government practice during the first half of the twentieth century.
Hoskins Park and its setting provide evidence of early twentieth century urban consolidation in Dulwich Hill, both by the provision of parks and by the consistent residential development on Davis and Pigott Streets. The character of the park derives from a combination of several features including site configuration and topography, mature trees and landscaping, and smaller detail elements, along with its important visual relationship with late nineteenth and early twentieth century housing along Davis and Pigott Streets."

St Pius Church, Church Hall and Presbytery, including interiors (290 Edgeware Road, Newtown, NSW 2042) (NSW Heritage Division, 2012d)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion c)	"Local"
SHR Criterion d)	"Local"
SHR Criterion g)	"Local"

Statement of Significance

"This group is part of a small precinct which illustrates the development of churches and of private and public schools in the district in the period around the turn of the century. The Church and presbytery are relatively intact and form a good example of a Church from this period."

Terrace Housing, including interiors (105-119 May Street (odd numbers only), St Peters, NSW 2044) (NSW Heritage Division, 2011c)	
SHR Criterion	**Statement**
SHR Criterion a)	"Local"
SHR Criterion c)	"Local"

Statement of Significance

"Not Provided"

Electricity Substation No. 549 (Princes Highway, St Peters, NSW 2044) (NSW Heritage Division, 2007b)	
SHR Criterion	**Statement**
SHR Criterion a)	"Historically significant as evidence of the expansion of the electricity network into Sydney's suburbs."
SHR Criterion c)	"The Barwon Park Road substation is an externally intact example of an Interwar purpose designed and built substation which features Art Deco decorative motifs."
SHR Criterion g)	"Typical in scale, function and technical arrangement to other distribution substations."
Statement of Significance	
"The Barwon Park Road substation is an externally intact example of an Interwar purpose designed and built substation which features Art Deco decorative motifs. It is an example of the substations constructed by the Sydney County Council as a part of the continued expansion of the electricity network into the suburbs."	

Enmore House Estate Heritage Conservation Area (Enmore, NSW 2358) (NSW Heritage Division, 2012b)	
SHR Criterion	**Statement**
SHR Criterion a)	"The Enmore House Estate Heritage Conservation Area is of historical significance as the development of the 1883 subdivison of the last remaining grounds and former site of Enmore House, which was demolished at that time."
SHR Criterion c)	"The strong aesthetic values of the Enmore House Estate Heritage Coservation Area are derived from the strict discipline of the terrace house form and the regularity of the streetscapes it creates and reinforces by the street pattern."
SHR Criterion g)	"It is representative of the principal characteristics of the development of the Marrickville Council area from an early Estate to a suburban cultural landscape and contains high quality streetscapes and public domain elements representative of civic management and improvement programs. The Area also provides valuable evidence of the range of building types and forms available to the Victorian worker, including the detached cottage, semi-detached pair and terrace house."
Statement of Significance	
"The Enmore House Estate Heritage Conservation Area is of historical significance as the development of the 1883 subdivision of the last remaining grounds and former site of Enmore House, which was demolished at that time. The strong aesthetic values of the Enmore House Estate Heritage Conservation Area are derived from the strict discipline of the terrace house form and the regularity of the streetscapes it creates and reinforces by the street pattern. It is representative of the principal characteristics of the development of the Marrickville Council area from an early Estate to a suburban cultural landscape and contains high quality streetscapes and public domain elements representative of civic management and improvement programs. The Area also provides valuable evidence of the range of building types and forms available to the Victorian worker, including the detached cottage, semi-detached pair and terrace house."	

Terrace Group Including Interiors (2 - 34 Campbell Road, Alexandria, NSW 2015) (NSW Heritage Division, 2012e)	
SHR Criterion	**Statement**
SHR Criterion a)	"The housing represents early c1886 housing associated with the brick making and pottery works in the local area."
SHR Criterion b)	"The terraces are associated with the adjacent brickpits."
SHR Criterion c)	"The terraces are a good example of mid Victorian workers housing which date from the early period of development for the Alexandria area."

Terrace Group Including Interiors (2 - 34 Campbell Road, Alexandria, NSW 2015) (NSW Heritage Division, 2012e)	
SHR Criterion d)	"The terraces demonstrate the type of housing developed to accommodate workers in the nearby area."
SHR Criterion e)	"There is potential for further research on the social history of residents of the terraces and where they worked."
SHR Criterion f)	"The houses are located on the hill away from the swarmy areas that covered a large proportion of the area. They are rare in terms of its location and context."
SHR Criterion g)	"The terraces are representative examples of working class mid Victorian terrace housing."
Statement of Significance "The terrace group are historically significant as they represent early housing associated with the nearby brick making and potting works. They are located on the hill away from the former swampy areas in Waterloo and Alexandria area. Prior to the 1890s group housing is rare within the southern industrial suburbs in the City of Sydney."	

Former brickworks group (2 Princes Highway, Alexandria, NSW 2015) (NSW Heritage Division, 2007c)	
SHR Criterion	**Statement**
SHR Criterion a)	"The Brickworks site is a significant component of one of Sydney's oldest and most important industries. It retains sufficient material and occupies an appropriate site to present clear evidence of the operation of the site as a brickworks. The Brickworks provided vital employment in the St Peters district for several generations and contributed largely to the construction of the district itself."
SHR Criterion b)	'The site has general past association with the industrial development of St Peters and South Sydney and with the local working community. Present association with the local community who are users of Sydney Park."
SHR Criterion c)	"The site and its structures, particularly the former Brickworks chimneys, are landmarks which can be viewed from a number of locations and contribute to the Princes Highway and Sydney Park Road streetscapes. The site constitutes an architectonic feature of Sydney Park that reinforces its visually distinctive urban man-made character. The robust materials contribute to the interpretation of the history and former uses of the site and park, and generally to the interpretation of the industrial context. The Brickworks, in its Sydney Park setting, reveals the relationship between several types of industrial activity and between the structures and the urban open space."
SHR Criterion d)	"Socially significant due to association with Bedford Brickworks and with the Austral Brick Company who employed an important specialised labour force."
SHR Criterion e)	"The entire site constitutes a good example of a local brickworks built taking advantage of the adjacent clay pits, railway facilities and major transport routes, and industrial practises common at the time of the Brickworks' operation. Its layout and arrangment of buildings and items contribute to the interpretation of the various brick making processes. Its associated industrial items and artefacts contribute to the interpretation of former uses and technologies at the site. These include but are not limited to: industrial items, original signage, industrial artefacts (shale crushing mill, boiler, other machinery parts from the processing plant building (currently located at the site of Down Draught Kiln No. 2). Significant archaeological remains may be assumed to exist underground."
SHR Criterion g)	"Of brickworks operating in southern sydney from the late 19th century."
Statement of Significance "The Bedford Brickworks site is a significant component of one of Sydney's oldest and most important industries. It retains sufficient material, and occupies an appropriate site to present a clear indication of the	

Former brickworks group (2 Princes Highway, Alexandria, NSW 2015) (NSW Heritage Division, 2007c)

working of the site. The Brickworks formed a vital component of the labour force of the St Peters district for several generations and contributed largely to the construction of the district itself. The Brickworks, in its Sydney Park setting, reveals the relationship between several types of industrial activity and between the structure and urban open space.

The entire site constitutes a landmark that contributes to the stark industrial character of the streetscape. Significant views and vistas that contribute to enhance the significance of the site include the views and vistas along the Princes Highway; along Sydney Park Road; to the site from Sydney Park hills; and from Sydney Park Road to the city to the north and to Sydney Airport to the south."