# 7.0 MARTIN PLACE STATION

## 7.1 Site Location

Martin Place is a major urban public open space within the heart of the Sydney Central Business District, and it provides an important pedestrian connection between George Street and Macquarie Street. Two areas form the proposed Martin Place Station construction sites (Figure 7-1). The northern site comprises land bounded by Castlereagh, Hunter and Elizabeth Streets. The southern site is located on the southern side of Martin Place in land between Castlereagh and Elizabeth Streets.

An underground pedestrian connection to 33 Bligh Street is also proposed (O'Connell Street entry). This would involve mined construction below Hunter Street and spoil extraction via 12 O'Connell Street which has two basement levels (no archaeological potential). As there are no archaeological implications, this part of the Martin Place Station site is not discussed further in this section.

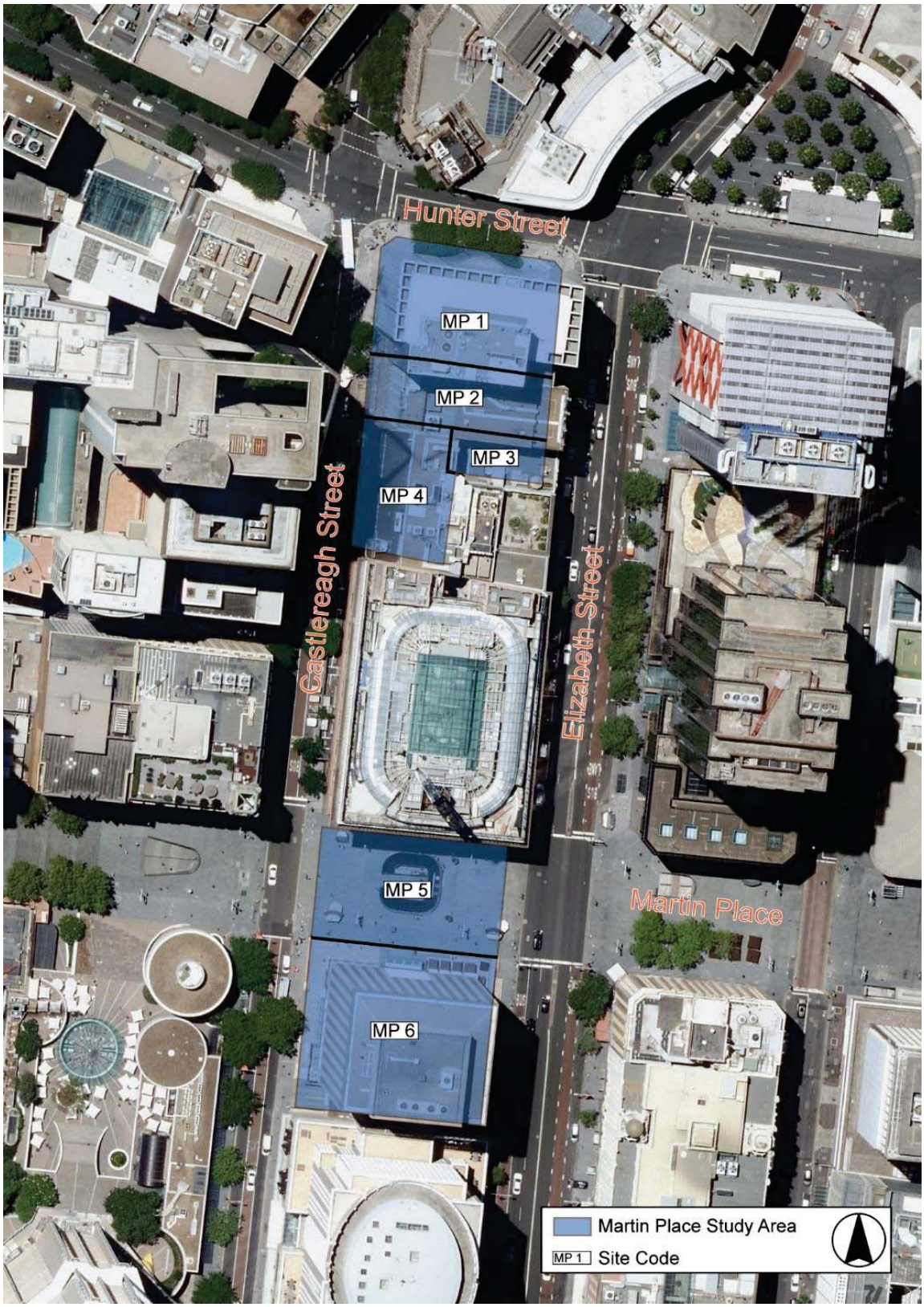
### 7.1.1 Land Parcels

The land parcels and existing structures associated with the Martin Place Station construction area are presented in Table 7-1 and Figure 7-1.

**Table 7-1: Land parcels and contemporary land use in the Martin Place Station site**

| Site Code | Address | Lot | Existing Structures |
|---|---|---|---|
| **MP 1** | 55 Hunter Street, Sydney | Lot 1 DP222356 and Lot 1 DP185691 | 17-storey office building, with below-ground basement car parking levels. |
| **MP 2** | 5 Elizabeth Street, Sydney | Lot 2 DP548142 and Lot 1 DP173027 | 13-storey office building, with basement levels and below-ground retail and dining area (Chifley Arcade). |
| **MP 3** | 7 Elizabeth Street, Sydney | SP 13171 | 10-storey mixed commercial offices and residential apartment building. Constructed in 1938. |
| **MP 4** | 8A-12 Castlereagh Street, Sydney | Lots 1 and 2 DP929277 | 14-storey office building constructed in the 1970s; below-ground basement car parks. |
| **MP 5** | 1/2003 Martin Place, Sydney | Lot 1 DP260232 and part of Lot 5 DP984182 | Martin Place Pedestrian Mall and access stairways to below ground Martin Place station. |
| **MP 6** | 37-51 Martin Place, Sydney | Lots 1 and 2 DP1103195 | Colonial Building, 22-storeys above ground, below ground basement car park and arcade; constructed in 1972. |

**Figure 7-1: Martin Place Station site showing existing modern development and site codes**



## 7.2 Historical Analysis

### 7.2.1 Early Land grants

Sydney Cove was first settled with the arrival of the First Fleet in 1788. The development of the new colony was formed around the freshwater source of the Tank Stream, which was an integral source of fresh water for the early occupants of Sydney. It ran to the west of the study area between George and Pitt Street, beginning as a proper channel as it rose near King Street.[96] The stream dictated the land development and alignment of roads, with property near the stream in high demand.

An early map of Sydney dating to 1802 indicates that the land around the station site was likely used for agricultural purposes, potentially with associated structures. A 1797 drawing of a location near the station site confirms this (Figure 7-2). The area was then subdivided into lots with buildings and yards by 1823, with the layout of the town extending further south as it grew. By this time Castlereagh Street, Elizabeth Street, Hunter Street, and King Street had been defined (Figure 7-4).

By 1833 land grants had been formalised in the area, with land grants given to Charles Roberts, Thomas Roberts, Alexander Aiken Richard Driver, Patrick Dacy, and Jason Forster. Various structures were located on each plot, possibly for residential and small-scale commercial uses (Figure 7-5).

**Figure 7-2: Sketch of huts near the Martin Place Station site (Pitt, Castlereagh and Elizabeth Streets) [97]**

[96] Aird 1961
[97] Dayes, Edward & Watling, Thomas. 1797, [A south east view in Sydney, extending from the old to new barracks including Church, Pitt and Spring Rows], viewed 6 June 2016 http://nla.gov.au/nla.obj-134426418

**Figure 7-3: de Lesueur's sketch of the colony of Sydney, 1802. Indicative Station site location marked in red.[98]**

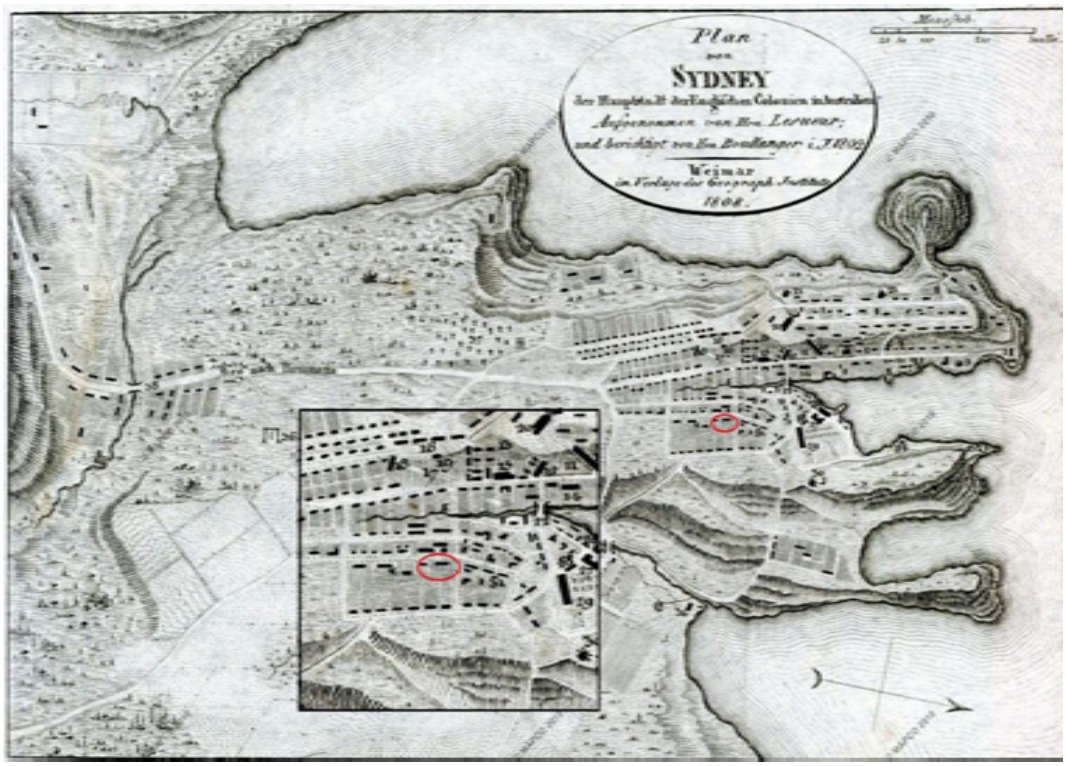
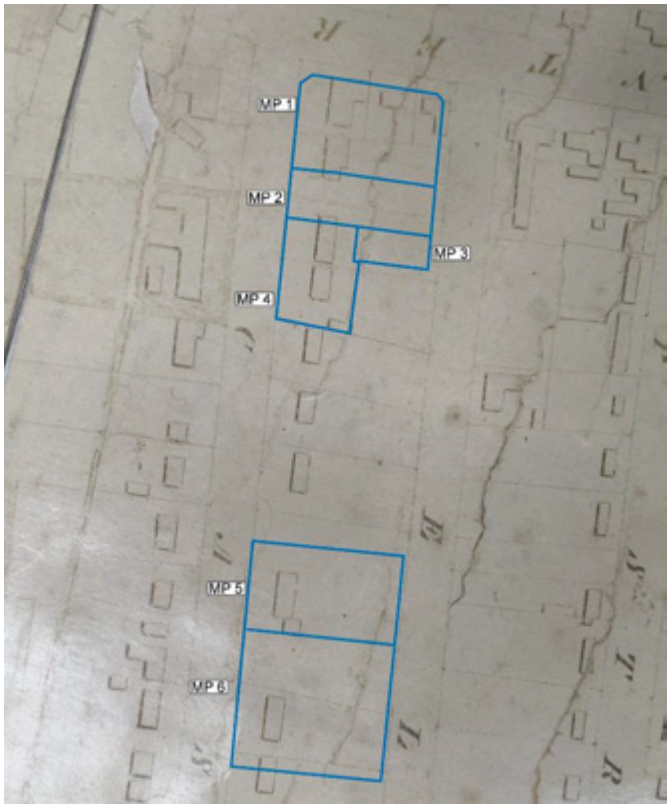
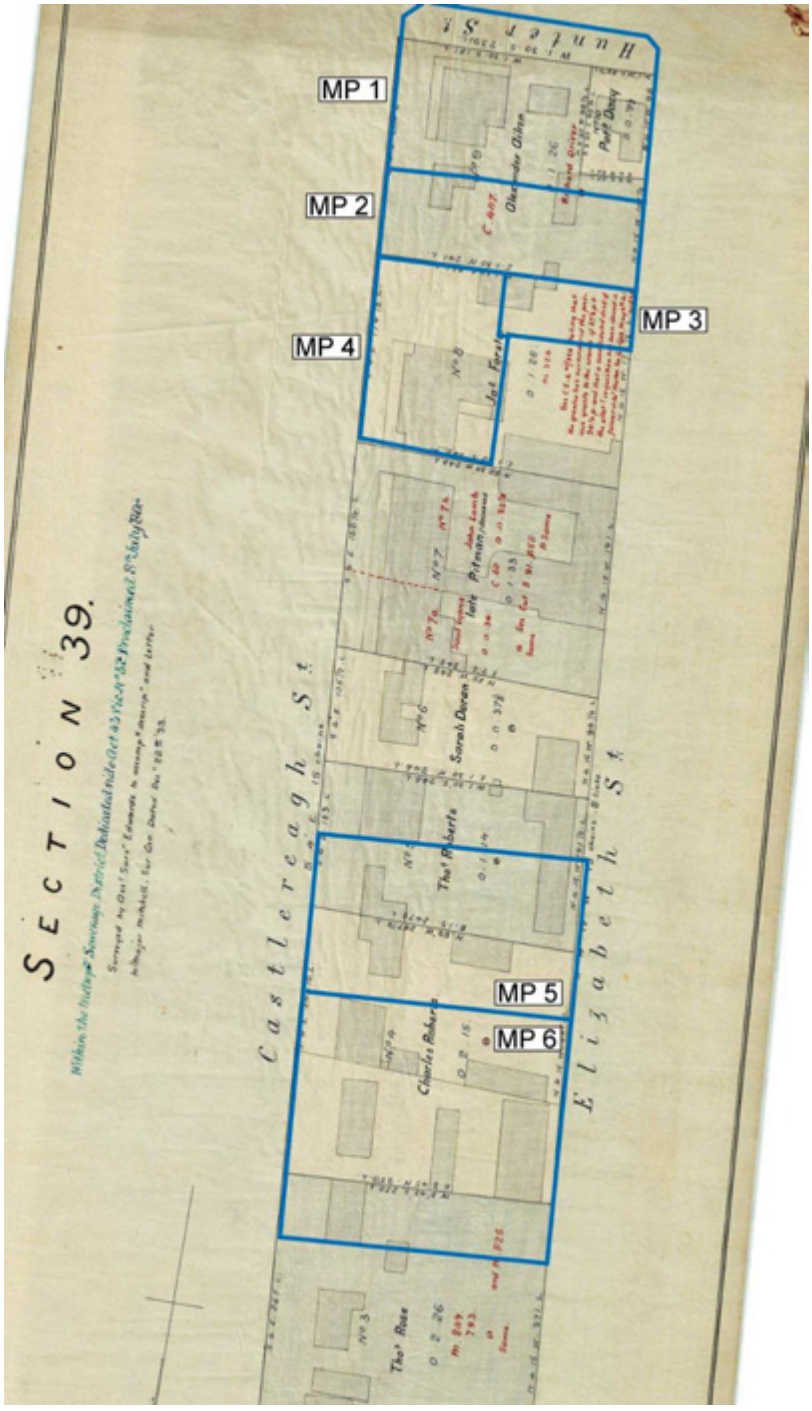



**Figure 7-4: 1823 (Harper) plan showing the Martin Place Station site**




[98] http://mapco.net/sydney1802/sydney.htm viewed 16 June 2016

**Figure 7-5: 1833 map with Martin Place Station site shown in blue (Source:1833 City Survey Section 39 Plan-Historical Atlas of Sydney)**



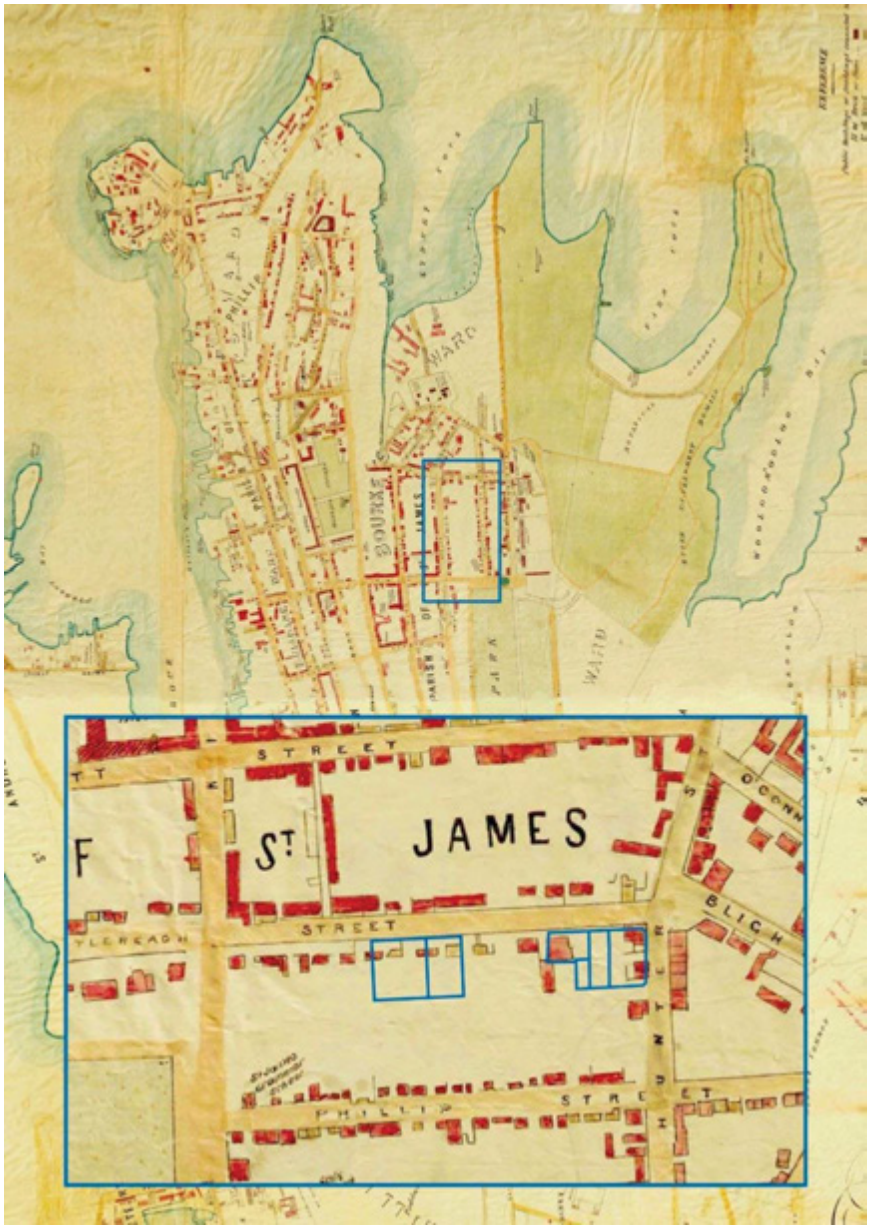

### 7.2.2 Commercial Development

Following the development of Sydney, Governor Gipps declared Sydney to be a city in 1842. The first phase of urban planning that would form Martin Place was the construction of the General Post Office on George Street between 1870 and 1880. The frontage was planned in what is now Martin Place, and the 1880s Doves Map indicates a post office reserve was allocated with a government store located in the centre of the reserve. Moore Street (formerly Foxlow Place) was also in place by this time, to the east between Pitt Street and Castlereagh Street. These two open areas would be the foundations of Martin Place.

The 1880s Doves map identifies the various commercial buildings, workshops, hotels, and yards, with toilets located in the rear of the yards within the study area. Businesses included solicitors, builders, timber yards, plumbers, dressmakers, tobacconist, and billiard saloons. The Bennelong drain had been implemented in 1857, most likely taking off much of the waste from the study area.[99] This contrasts to the area between George Street and Castlereagh Street, where yards and outdoor toilets aren't as frequent and the area is more built up, possibly indicating a mix of commercial and residential use of land in the study area.

The frontage of Moore Street was widened after fire broke out in October 1890 between Pitt Street and Castlereagh Street. This brought with it the opportunity to extend what would become Martin Place further east toward the study area.

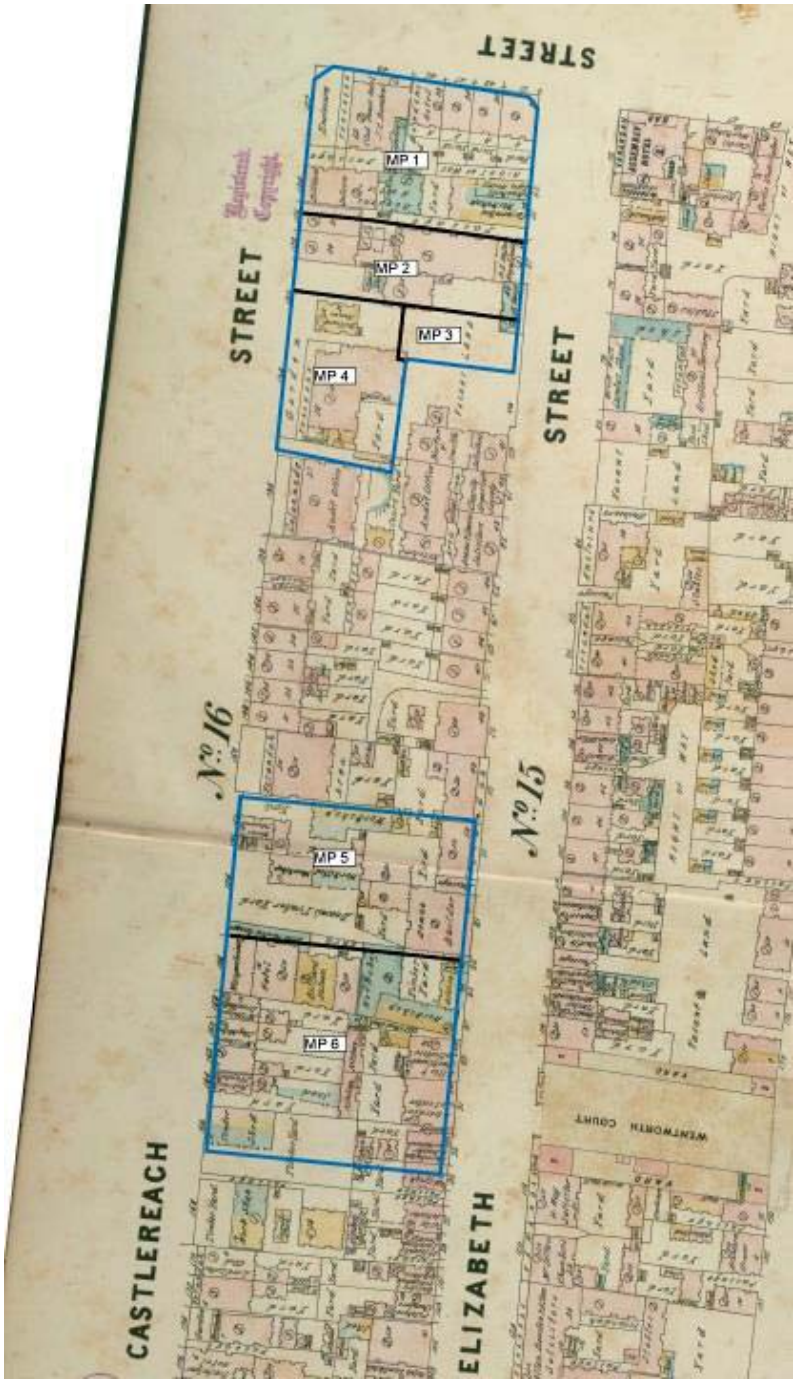
**Figure 7-6: Shield's 1844 plan of Sydney, Martin Place Station site location shown in blue is indicative**




[99] http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4570854

**Figure 7-7: 1865 Trigonometric Survey of Sydney, Martin Place Station site in blue**

**Figure 7-8: 1880s Doves Map with Martin Place Station site shown in blue (Source: Block 14, 15, 16 of Doves 1880 plan of Sydney – Historical Atlas of Sydney)**




### 7.2.3 Twentieth Century Development and Martin Place

In the twentieth century many of the smaller city allotments were amalgamated and redeveloped (Figure 7-9). Former buildings and businesses in the study area included Hotel Alexandria, Castlereagh House, hotels, and various chambers. Martin Place had not extended through the study area at this time, with small businesses occupying the station site, with Moore Street located to the west.

Moore Street was renamed Martin Place in 1921 after the Chief Justice, Sir James Martin, a former New South Wales Attorney-General and Premier.[100] The Sydney Municipal Council sought to extend Martin Place further east, but this was opposed by local land owners until 1935 when it was extended towards Macquarie Street.[101]

The Prince Edward Theatre opened on the 5th December 1924, and became an important entertainment venue. The area around Martin Place was sought after by major financial and insurance businesses, resulting in high-rise development.[102] The first Prudential Building was constructed in 1939, adding to the architectural character of Martin Place. Other buildings in the study area noted on the 1956 City Building Surveyor's Detail Sheets indicate the Castlereagh House, Blashki Building, Durban Club Hotel, Elizabeth House, Intercolonial House, and the Mendes and Castlereagh Chambers occupied the north part of the station site.

### 7.2.4 Post-War Commercial Development

Martin Place became a pedestrian concourse between 1968 and 1978.[103] Stage 1 of Martin Plaza was opened in September 1971, and it was later extended to Macquarie Street with the opening of Martin Place Railway Station in 1979 (Figure 7-10). Martin Place Railway Station was part of the Eastern Suburbs line that had been in planning since the 1920s.[104] The construction of the Martin Place station required an open-cut excavation.

The first Prudential Building was demolished in 1960 and the Prince Edward Theatre was demolished in 1966 to make way for the current Colonial Building which was completed by 1972. The continued construction of high-rise office buildings throughout the 1970s and 1980s successively transformed the Martin Place area into a commercial and financial area in Sydney. The majority of the buildings constructed during this later period involved substantial below ground excavation in order to construct car parks and basements.

[100] http://dictionaryofsydney.org/entry/martin_place
[101] http://dictionaryofsydney.org/entry/martin_place
[102] http://dictionaryofsydney.org/entry/martin_place
[103] http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2431104
[104] http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2431104

**Figure 7-9: 1956 plan with Martin Place Station site shown in blue**

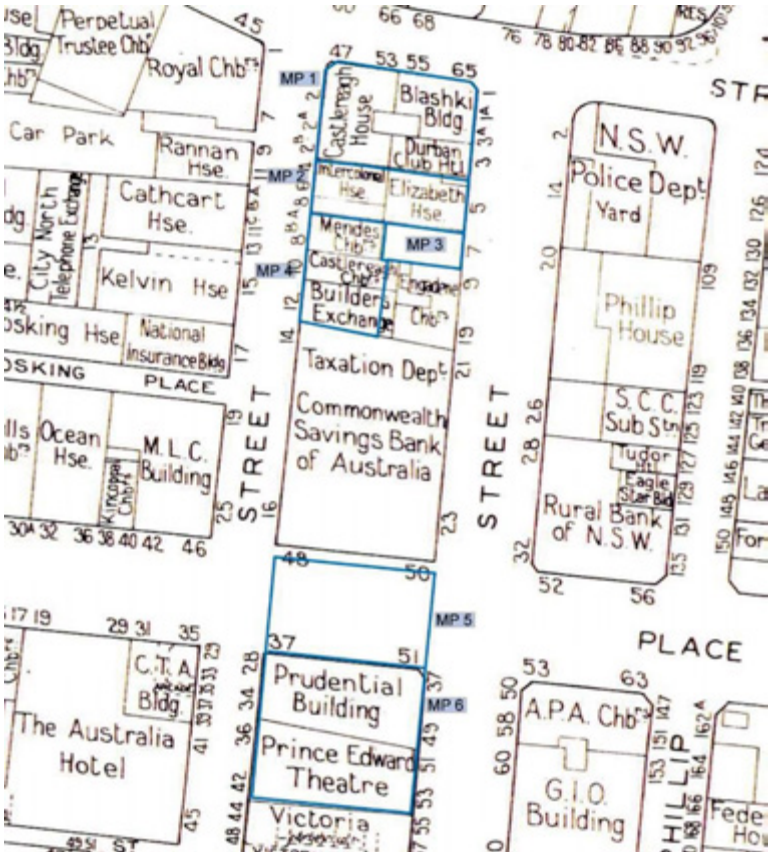
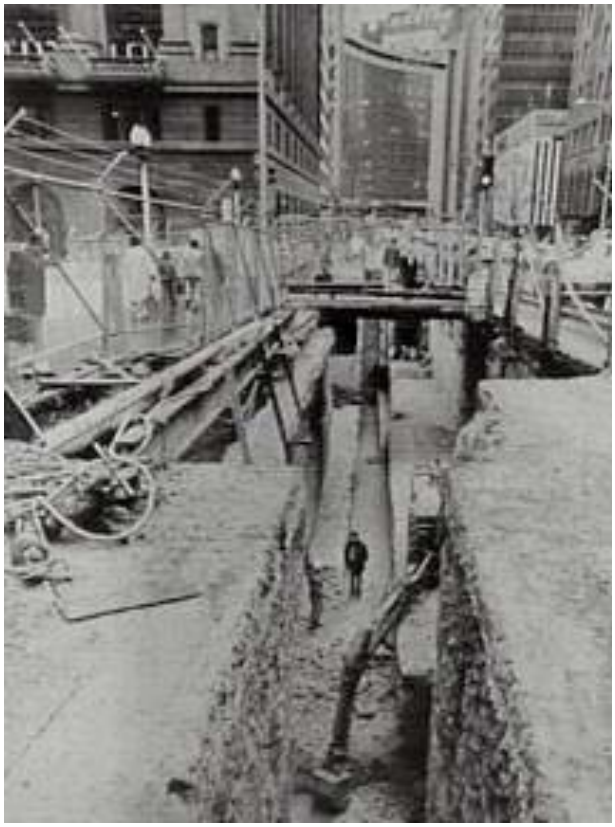



**Figure 7-10: Construction of Martin Place Station using open-cut excavation (Source: City of Sydney Archives)**



## 7.3 Archaeological Potential

### 7.3.1 Previous Archaeological Studies

The Archaeological Zoning Plan (AZP) was prepared in 1992 and comprised a desktop analysis of the CBDs archaeological potential to inform development planning within the city. Results of development-related detailed archaeological assessments have demonstrated that the AZP is in general accurate in its high-level assessment. The AZP of Sydney identifies 7 Elizabeth Street (Site MP 3) as an Area of Archaeological Potential for deeper sub-surface features only. This property is within the station site.

Martin Place is listed in the City of Sydney LEP as having archaeological potential. However, this archaeological potential is limited to the areas surrounding the Tank Stream, located between George Street and Pitt Street in Martin Place (approximately 150 metres west of the Martin Place Station site).[105]

Archaeological investigations in Angel Place between Pitt and George Streets undertaken by Godden Mackay (now GML Heritage) in 2007 revealed evidence of early colonial activity. Archaeological remains associated with the early colonial environment, a c.1810 sandstock brick built barrel drain and a well cut were identified. This site also contained archaeological evidence of subsequent nineteenth century development including a sandstone retaining wall and building footings.

### 7.3.2 Land Use Summary

European occupation of the Martin Place Station site can be divided into four distinct phases of historical activity.

- Phase 1 (1788 – 1840s) early land grants and initial development. Land clearance, agricultural activity, early colonial occupation, likely both residential and commercial. May be two phases of structural development.
- Phase 2 (1840s – 1900s) subdivision and commercial development. Intensification of subdivision into smaller lots and redevelopment for both residential and commercial occupation by the 1860s which remain largely unchanged in the 1880s.
- Phase 3 (1900s – 1950s) amalgamations and urban redevelopment. Redevelopment of Martin Place (from the 1890s) into a grand boulevard with buildings for major financial institutions and other professional services.
- Phase 4 (1950s – Present) redevelopment of most areas from the 1960s/1970s.

### 7.3.3 Previous Impacts

The current buildings in the Martin Place Station site are mostly modern, high-rise office buildings constructed after 1970 (Table 7-2 and Figure 7-12). Though comprehensive basement data is not available, buildings constructed in the latter half of the twentieth century generally include basements. The construction of these buildings would likely have removed any archaeological remains within their footprint. There may be pockets within the lots where deep subsurface basement levels and services

[105] State Heritage Inventory “Martin Place”, http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2424652 viewed 10 June 2016.

do not exist, however this could only be confirmed once full basement and existing services data is available.

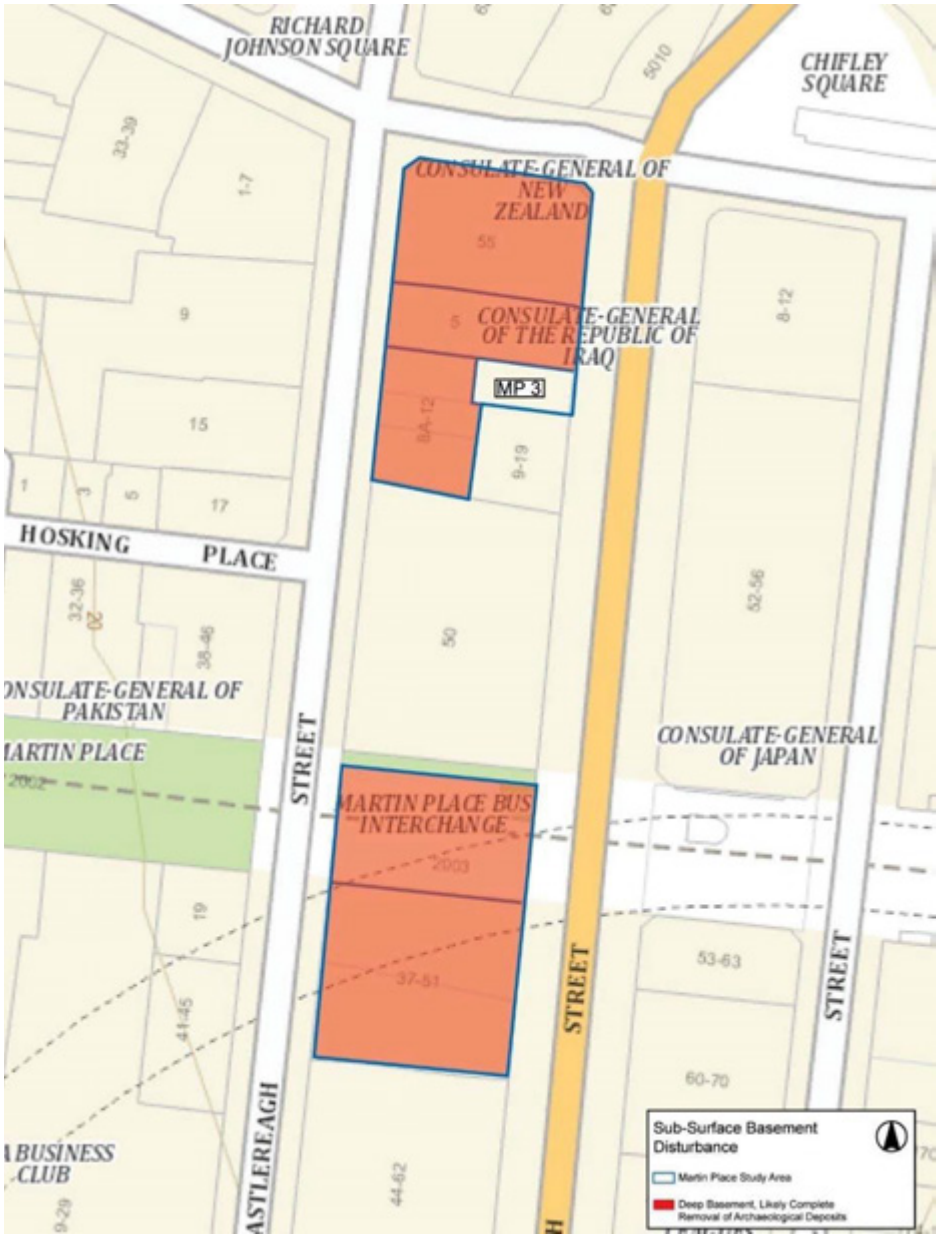
Martin Place was developed as a pedestrian concourse in successive stages from 1968 to 1978. The part of Martin Place which coincides with the study area was the location of an open-cut excavation in 1979 in order to build the Martin Place railway station. The below-street concourse of Martin Place station was linked with the basement concourses of adjacent buildings. This total excavation of the ground surface has resulted in the removal of any archaeological deposits in the area.

There is one land parcel within the northern construction area which may not have been as substantially impacted. Site MP 3 (7 Elizabeth Street) contains a 10-storey apartment building constructed in the 1930s. Such buildings are unlikely to have full basements. However, strip footings or pad foundations and building services areas are likely to have resulted in a moderate level of subsurface impacts.

**Table 7-2: Known sub-surface excavation and construction work in the Martin Place Station site**

| Site Code | Address | Basement information | Impacts to archaeology |
|---|---|---|---|
| **MP 1** | 55 Hunter Street, Sydney | Site inspection shows entrance to below-ground car park on western, lower elevation of building. Topography and car park location implies deep basement levels. | Likely total removal of all previous archaeological deposits. |
| **MP 2** | 5 Elizabeth Street, Sydney | Lower ground level on Castlereagh Street side; below-ground entrance-way and plaza for Chifley Arcade. | Likely total removal of all previous archaeological deposits. |
| **MP 3** | 7 Elizabeth Street, Sydney | Building constructed in the 1930s and has a basement level, though may not be the entire footprint. | Moderate level of sub-surface impact to construct existing building. Has a basement level (extent is unknown). Some potential for archaeology in particular deep sub-surface features deposits. |
| **MP 4** | 8A-12 Castlereagh Street, Sydney | Below-ground car park entered from Castlereagh Street. | Likely total removal of all previous archaeological deposits. |
| **MP 5** | 1/2003 Martin Place, Sydney | Martin Place station was constructed via an open-cut excavation. Based on the size of the Martin Place station concourse, this excavation would have covered most of the pedestrian concourse above it between Castlereagh and Elizabeth Streets to a significant depth. | Likely total removal of all previous archaeological deposits. |
| **MP 6** | 37-51 Martin Place, Sydney | Multi-storey below ground car park with lift shafts. Depth of excavation between 8.22m and 9.57m below ground. | Likely total removal of all previous archaeological deposits. |

**Figure 7-11: Areas in the Martin Place Station site with known prior extensive below-ground excavation**




### 7.3.4 Potential Archaeological Remains

The majority of the Martin Place Station site has been previously impacted by construction of basements. Due to these sub-surface impacts, the potential for the study area to contain archaeological remains is substantially reduced.

Site MP 3 (7 Elizabeth Street) has some archaeological potential as the basement level is not thought to exist across the entire footprint. In addition, as there is only one basement level there is potential for deeper subsurface features. There are potentially discrete areas of low disturbance between basements and to the north and south of Martin Place directly adjacent the fronting buildings (full basement data was not available for this report). The following discussion is mainly related to site MP 3, but applies to the potential pockets not impacted by modern construction.

***Phase 1: 1788 – 1840s***

The earliest European activity in the study area consisted of land clearing and timber getting for the colony. Land clearing activities are typically archaeologically ephemeral, as are informal uses of partially cleared land for the grazing of livestock.

The main grid street system in the CBD was formed early and land granted to emancipated convicts and free settlers by the 1800s. The area located near the intersection of Martin Place and Castlereagh Street was the site of early development of reasonably orderly rows of convict, settler and soldiers' private huts by the late 1790s (Figure 7-2). The 1802 plan (Figure 7-3) indicates that Castlereagh and Hunter Streets had been laid out and the land granted with some development but mostly under cultivation.

By the 1820s the study area contained a number of allotments with structures. These were likely timber and wattle-and-daub huts with fenced-in yards and garden plots located on them (Figure 7-4). By the 1830s, larger buildings started to be constructed in the city blocks (Figure 7-5).

The sites with contemporary commercial buildings are likely to contain basements which would have removed all archaeological remains within their footprint. There is potential for remains of this early activity in MP 3, though development in the mid-nineteenth century, and 1930s for the current building, would have resulted in a high level of impact.

***Phase 2: 1840s – 1900s***

Phases of urban redevelopment began after the 1840s as the commercial centre of the town expanded further south from Sydney Cove and the population and economy of the colony grew. By 1865 the study area had been subdivided and developed to contain a number of brick and sandstone structures, including outbuildings and sheds (Figure 7-7). Public hotels were also opened during this time. Plans from 1880 show that the majority of the properties were associated with service industries (in particular, solicitors' offices due to the proximity to the law courts near Hyde Park), with a small number of trade workshops (carpenters, coach-houses). For the most part these urban occupation patterns remained until amalgamations and redevelopment in the early twentieth century (Figure 7-8).

The sites with contemporary commercial buildings are likely to contain basements which would have removed all archaeological remains within their footprint. From the historic map overlays, Site MP 3 appears to have been vacant during the latter half of the nineteenth century. It should be noted that there is level of inaccuracy with historic maps and some structures from adjoining lots appear within the boundary of Site MP 3.

***Phase 3: 1900s – 1950s.***

During the 1920s and 1930s a number of multi-storey brick office and entertainment buildings were constructed in the Martin Place Station site. Due to the sloping ground between Castlereagh and Elizabeth Streets, levelling of the ground surface was undertaken during construction of new buildings. A number of nineteenth century residences remained extant into the early twentieth century, particularly in the north of the station site.

Of the buildings constructed at this time, only one (Site MP 3 - 7 Elizabeth Street, Sydney) remains today. Remains of any other buildings in the study area that were constructed during this phase are likely to have been impacted by deep basement excavations after 1970.

***Phase 4: 1950s – Present***

With the increase in use of the motor car following World War II, and increasing conversion of pre-existing city buildings into high-storied offices, buildings constructed during this time in the Martin Place Station site have significant below-ground basement levels.

### 7.3.5 Summary of Archaeological Potential

A summary of the archaeological potential of the Martin Place Station site is presented in Table 7-3.

**Table 7-3: Summary of potential archaeological remains at the Martin Place Station site**

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| **MP 1** | | Construction of 17-storey office building, with below-ground basement car parking levels. | Nil |
| **MP 2** | | Construction of 13-storey office building, including basement levels and below-retail and dining area (Chifley Arcade). | Nil |
| **MP 3** | **1 (1788 – 1840)** | Land clearance and pastoral grazing; potential for tree boles, field drains, isolated artefact scatters. Location of horticultural garden and/or site of early informal industries. James Forster grants in 1833 and potential structures in northeast of site. Potential for postholes, garden soils and localised artefact deposits. Likely impacted by basement level. | Low |
| | **2 (1840 – 1900)** | No recorded structures and land identified as vacant. Potential for surfacing, informal uses and rubbish dumping. Likely impacted by basement level. | Low |
| | **3 (1900 – 1950)** | Construction of nine-storey residential apartment block in 1938, including below-ground basement level. Potential for former services. | Low |
| | **4 (1950 – Present)** | Conversion of some of the residential apartments into commercial offices. | Nil |
| **MP 4** | | 14-storey office building constructed on site in the 1970s, including the excavation of basement car parks and lift shaft housings. | Nil |
| **MP 5** | | Martin Place station constructed by open-cut excavation in centre of Martin Place in 1979. Open-cut excavation removed any prior archaeological features and deposits. | Nil |
| **MP 6** | | Construction of Colonial Building in 1972 resulted in deep subsurface impacts from basement level car parking. Extension of underground arcade to connect to Martin Place station in 1979. | Nil |

## 7.4 Archaeological Significance

### 7.4.1 Assessment of Archaeological Significance

Site MP 3 is the only area within the Martin Place Station construction site with some archaeological potential. It is anticipated that these remains would be truncated and impacted by construction in the 1930s and the basement level. The site appears to have been vacant in the second half of the nineteenth century. The potential archaeological remains may relate to the earliest phase of European settlement, with potential for evidence of kitchen gardens and other remains associated with adjacent occupation / construction prior to 1833.

***Research Potential (Criterion E)***

Ecological and environmental information derived from pollen analysis of soils dating from the early convict era were analysed for the Angel Place excavation. This analysis provided information which was useful in characterising the environmental landscape at the time of European settlement. Pollen and other paleo-environmental data sets can also be useful for understanding successive changes in

biome composition, land clearance and grazing and agricultural patterns. As the Martin Place Station site resides in the catchment area for the Tank Stream, the way in which this landscape was utilised during the short period that the Tank Stream was still considered potable would be a valuable resource that could not be obtained from other archival or archaeological sources.

Recovering intact archaeological deposits that provides clear, contextually associated environmental data is unlikely however. Archaeological resources relating to vegetation clearance and early land use, if present and recognisable, are not likely to be in a good state of preservation. While these archaeological deposits would be considered State significant, this significance would be contingent on the relative intactness and legibility of these deposits.

The allotment of land grants by the colonial government did not formally occur within the boundaries of the township of Sydney before the late 1820s, however the division and use of land for private purposes preceded these allotments. Drawings from 1798 show a reasonably orderly layout of timber residences in the colony, particularly along the northern extent of Pitt Row (now Pitt Street). Plans from 1822 and 1830 illustrate houses with yards within the northern study area, which are replaced by the 1840s and 1850s with larger brick dwellings.

These early timber buildings represented emancipated convicts, free settlers and soldiers providing dwellings for themselves. Archival sources mention that these small cottages and early private buildings engaged in horticultural and minor trade pursuits, particularly in the early 1800s. Archaeological evidence of early colonial life in Sydney would be a highly valuable resource for research. Evidence of these type of early occupants between 1788 and the 1830s is not well represented in archaeological record. Archaeological investigation results could provide evidence of daily life and conditions, economy and cottage industry, building techniques and adaption to the local environment.

Archaeological remains associated with the 1788 to 1830s occupation of the site would have high research potential and be of state significance. Evidence of later phases of activity is not expected to be extensive (as no recorded structures within the lot) and would have limited research potential.

***Association with Individuals, Events or Groups of Historical Importance (Criteria A, B and D)***

The potential archaeological remains in the MP 3 site are associated with the early colonists and advent of the city of Sydney. The founding of the penal colony and Sydney's change from one dominated by soldiers and convicts to one of free settlers and international trading post is an important part of NSW historical development. Emancipated convicts and free settlers are distinct groups of people in the historical and archaeological record. The potential archaeological remains are of state significance for these associations.

***Aesthetic or Technical Significance (Criteria C)***

Intact archaeological remains are not expected in the MP 3 site. However, the site possesses potential for deeper sub-surface features such as wells or cesspits which often contain artefacts as part of backfill deposits. Such artefacts have potential for aesthetic significance in their ability to connect a wider audience to the daily life of the early colonists. The potential archaeological remains may also provide evidence of agricultural and construction adaption to the native environment.

***Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F and G)***

The MP 3 site is not expected to contain intact and extensive archaeological remains. However, artefact rich backfills common in deep features such as wells and cesspits could provide a legible and tangible connection to this period of Sydney's history. Early 1800s archaeological remains would be rare.

### 7.4.2 Statement of Archaeological Significance

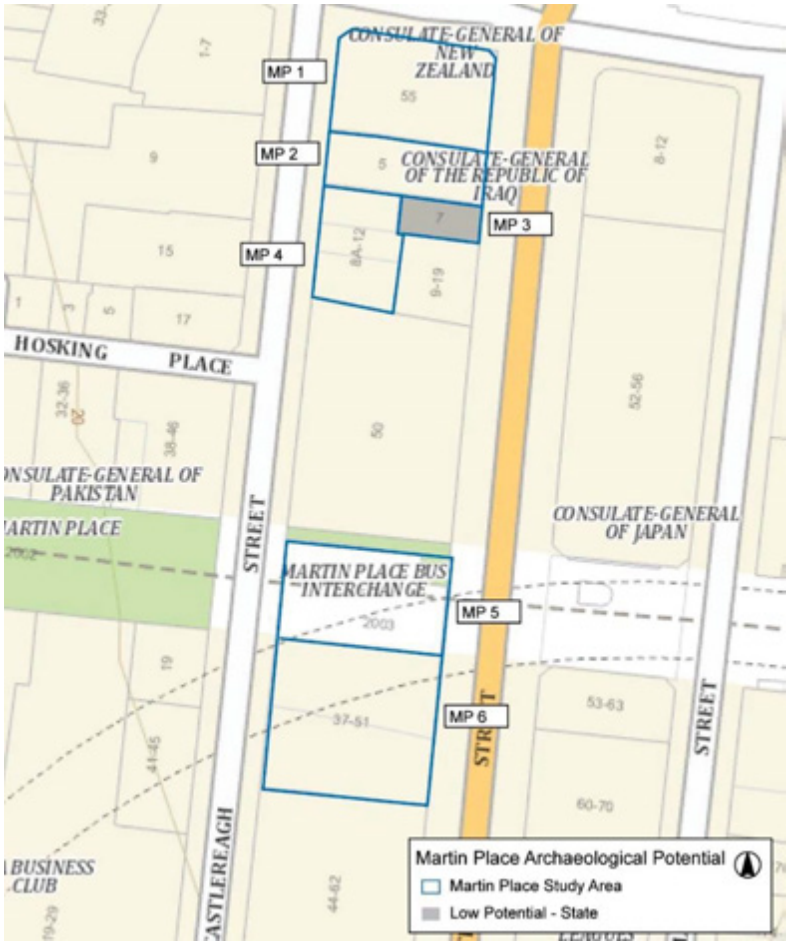
For most of the Martin Place Station site there is nil potential for significant archaeological remains. Site MP 3 (7 Elizabeth Street) has low potential for archaeological remains associated with early environment and colonial landscape, and informal use/activity. Table 7-4 and Figure 7-12 show the areas of archaeological potential in Martin Place study area.

Archaeological evidence of environmental change following 1788 and early urbanisation of Sydney are rare resources with high research potential. Legible pre 1840 archaeological remains in Site MP 3 would be of state significance under criteria A, E and F. Potential post 1840s archaeological remains are unlikely to reach local significance.

**Table 7-4: Summary of areas with potential for significant archaeology at the Martin Place Station site**

| Site Code | Phase | Potential | Archaeological resource | Significance |
|---|---|---|---|---|
| **MP 3<br>7 Elizabeth Street** | **1<br>(1788 – 1840)** | Low | Potential archaeological resources relating to environment, early colonial landscape and informal activities. Limited potential for unrecorded timber features such as fence or shed postholes, agricultural furrows, garden soils, rubbish dumps and artefacts | State |

**Figure 7-12: Archaeological potential of Martin Place Station site**



## 7.5 Archaeological Impacts

### 7.5.1 Proposed Works

For both sites, the shaft excavations would comprise the majority of the site, requiring the installation of temporary street level working platforms. The working platforms would house support services including offices, amenities. The proposed construction of the southern shaft/cavern/adits entails the following:

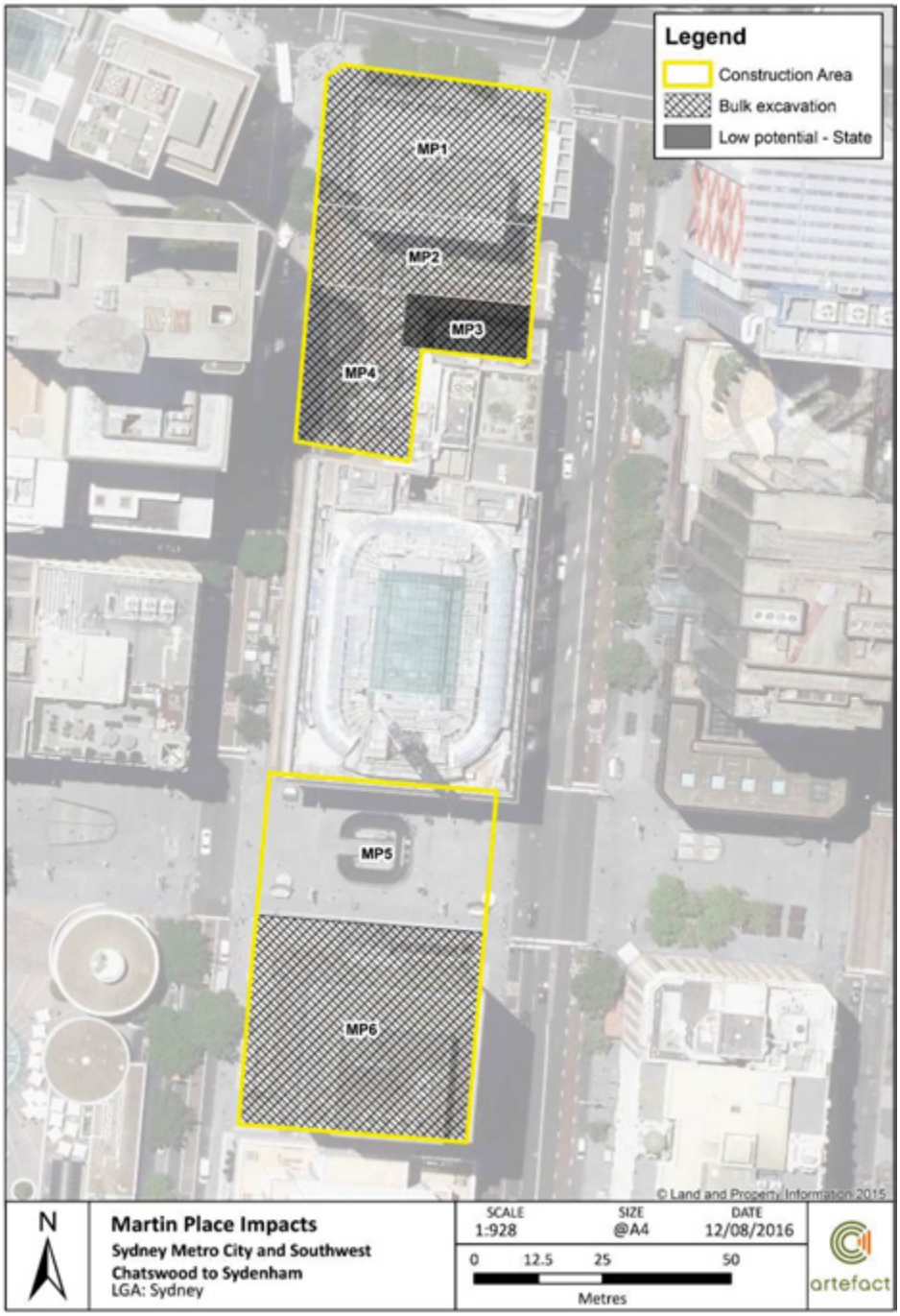
- Demolition of Prudential Building to Ground Floor
- Demolish existing plaza and subway structures
- Construct metro concourse structure and new pedestrian subway structure
- Install new pedestrian subway building services and systems
- Demolish remaining basement structure in Prudential Building (if necessary).
- Piling works – short and long piles
- Initial excavations to allow for the construction of working platform
- Shaft excavation to required depth
- Excavate top headings, followed by removal of benches.

### 7.5.2 Potential Archaeological Impacts

Bulk excavation of the majority of both Martin Place Station sites would not impact significant archaeological resources for Sites MP 1 to MP2 and MP 4 to MP 6. These areas have previously been excavated for deep basement or subsurface structures.

Construction work at Site MP 3 could result in impact to significant archaeological resources, should they be present. The site is currently occupied by a 1930s apartment building which will be demolished and the site bulk excavated. This would remove all archaeological remains present within the area.

**Figure 7-13: Potential archaeological impacts – Martin Place Station site**




## 7.6 Archaeological Management

Archaeological monitoring would be required for Site MP 3. Although there is low potential for archaeological remains, they could be of state significance. Unexpected finds procedure would apply to the rest of the Martin Place Station construction site. The archaeological mitigation is summarised in Table 7-5.

**Table 7-5: Summary of archaeological mitigation for the Martin Place Station site**

| Site Code | Potential archaeology | Impact | Mitigation |
|---|---|---|---|
| MP 3 | Low potential for State significant archaeological remains associated with early landscape and informal colonial use pre 1840 | Direct impact – demolition and bulk excavation | • AMS<br>• Monitoring/Salvage if required |
| MP 1<br>MP 2<br>MP 4<br>MP 5<br>MP 6 | Nil | Nil | Unexpected Finds Procedure |

### 7.6.1 Archaeological Methodology

The following archaeological methodology for the Martin Place Station construction site is based on impacts known at project approval stage. Explanation and further details regarding the archaeological process and methodologies identified below are provided in Section 12.0.

- An AMS would be prepared for the Martin Place Station site prior to construction works. The AMS would:
  - Review available basement data and clarify archaeological potential in Site MP 3
  - Identify environmental sampling strategy for Site MP 3, if applicable.
- Archaeological monitoring of construction works in Site MP 3 if undertaken would include the following steps:
  - Monitor ground disturbance associated with demolition with potential to impact archaeological remains, such as ground slab and footing removal
  - Monitor initial stages of bulk excavation and investigate potential archaeological remains
  - Salvage excavation of any significant archaeological remains identified.
- Unexpected finds procedure would apply to all other Sites (MP 1, MP 2, MP 4, MP 5 and MP 6).
- A preliminary results report would be written once archaeological fieldwork has been completed.
- Post-excavation analysis of fieldwork results, artefacts, samples and other archaeological data would be undertaken and included in a final archaeological investigation report.
- Significant archaeological findings would be considered for inclusion in heritage interpretation for the project.

### 7.6.2 Research Questions

The following research questions should guide archaeological monitoring at the MP 3 site.

- Are there intact soil deposits or cut features from the late eighteenth century present and what can they tell us about undocumented early colonial activities at this site?
- Is there evidence of early land clearance, such as burned tree roots, stumps and boles?
- Do soil and sediment profiles provide evidence of mechanical land clearance practices, such as felling, ploughing and hoeing?

- To what extent did the topography and environment of the study area change from erosion and disturbance after the clearing of native vegetation?
- How does the archaeobotanic evidence from Site MP 3 compare with the Pitt Street Station site evidence, and results from other archaeological investigations in the CBD?
- What activities, if any, took place on the site during the first half of the nineteenth century?
- Do the archaeological remains have research potential and how do they compare with other sites in the CBD?

# 8.0 PITT STREET STATION

## 8.1 Site Location

Pitt Street Station would be located between Pitt Street and Castlereagh Street, and near Park Street and Bathurst Street, in the City of Sydney LGA (Figure 8-1). The station box is predominantly located below the city block bounded by Pitt, Castlereagh, Park and Bathurst Streets. Station access points are to be located on Park and Bathurst Streets.

The site location for this analysis is based on the total area encompassed by the construction site. Tunnelling work at depth for the construction of pedestrian connections and adits (which involve deep horizontal excavation that do not impact the ground surface where archaeological deposits would remain), have not been included in this analysis.

### 8.1.1 Land Parcels

The Pitt Street Station site is located on land parcels presented in Table 8-1 and illustrated in Figure 8-1.

**Table 8-1: Land parcels and contemporary land use in the Pitt Street Station site**

| Site Code | Address | Lot | Existing Structures |
|---|---|---|---|
| **PS 1** | 302 Pitt Street, Sydney | Lot 1 DP62668 | "Druid House", six-storey hotel built in 1928; in the process of renovations to increase height to fifteen storeys. |
| **PS 2** | 296-300 Pitt Street, Sydney | Lot 1 DP436359 | Eight-storey mid-20th century hotel building. |
| **PS 3** | 125-129 Bathurst Street, Sydney | Lot 1 DP60293 | Five-storey late 20th century office and commercial building. |
| **PS 4** | 131-135 Bathurst Street, Sydney | Lot 1 DP59101 | Three-storey early 20th century commercial building; former chemist. |
| **PS 5** | 252-254 Pitt Street, Sydney | Lot 1 DP596474 | Three-storey early 20th century commercial building. |
| **PS 6** | 256 Pitt Street, Sydney | Lot 17 DP1095869 | Four-storey late 19th century commercial building (former Young's Chambers building). Ground floor a McDonald's restaurant. |
| **PS 7** | 40 Park Street, Sydney | Lot 2 DP509677 | Three-storey early 20th century commercial building. |
| **PS 8** | 42, 44 & 46 Park Street, Sydney | Lots 1 & 2 DP982663<br>Lot 3 DP61187 | Three adjoining three-storey late 19th century commercial buildings. |
| **PS 9** | 48 – 48A Park Street, Sydney | Lot 1 DP74367 | Five-storey late 19th century pub and hotel; Hotel Windsor (former Barley Mow Hotel) and Park8 Hotel. |
| **PS 10** | 175-183 Castlereagh Street, Sydney | Lot 1 DP229365<br>Lot 2 DP900055<br>Lot 3 DP74952 | Eleven-storey late 20th century office and commercial building, with underground car parking. |

**Figure 8-1: Pitt Street Station site showing existing modern development and site codes**


## 8.2 Historical Analysis

### 8.2.1 Early Land Grants

After the arrival of the First Fleet in 1788, Sydney steadily grew southward following the trajectory of the Tank Stream that provided fresh water for the colony. The Tank Stream was located between George and Pitt Street, north of the study area, with the basin starting between Park and Market Streets.[106] It was an integral source of water for the first 40 years until it was deemed to be heavily polluted, by which time other sources of water were being explored.[107]

The area around Pitt Street had been allocated as an area 'intended for buildings hereafter' on a Sketch of Sydney Cove and Port Jackson in 1788. In a map dating to 1802, the area was still mapped as open vegetation with the Old Burial Ground located nearby at what is now Town Hall. The public gallows were located on the site of the corner of Park and Castlereagh Streets in 1802, currently occupied by a pub (Figure 8-2).[108] This land was described in 1810 as "*grown over with a low scrub and small grass trees grew on it in profusion*".[109] Obed West also remarked that in the early 1800s, the land around the study area was "*unfenced ground without a single house upon it .... Pitt Row at*

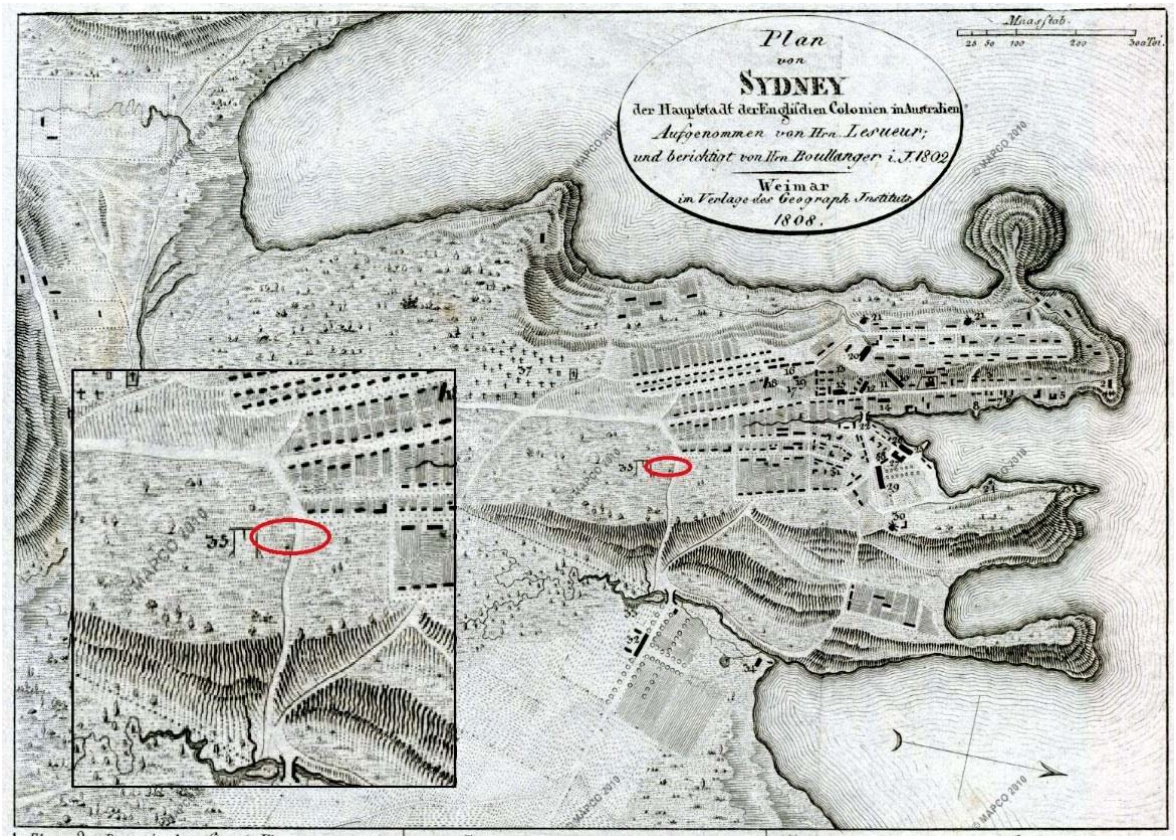
[106] Aird 1961, p.7
[107] Aird 1961, p.1
[108] Thorp 1997, p. 8
[109] Edward West Marriott, The Memoirs of Obed West, quoted in Thorp 2001

*that time virtually terminated at Bathurst Street … Beyond this point was might be said to be the country for there were only a few dwellings dotting the slope down to the Haymarket*".[110]

When Governor Lachlan Macquarie arrived to Sydney in 1810, the layout and building development of Sydney was standardised. The Governor ordered that the new houses would be made of brick or weatherboarded, have brick chimneys, and shingled roofs, and be no less than nine feet high.[111]

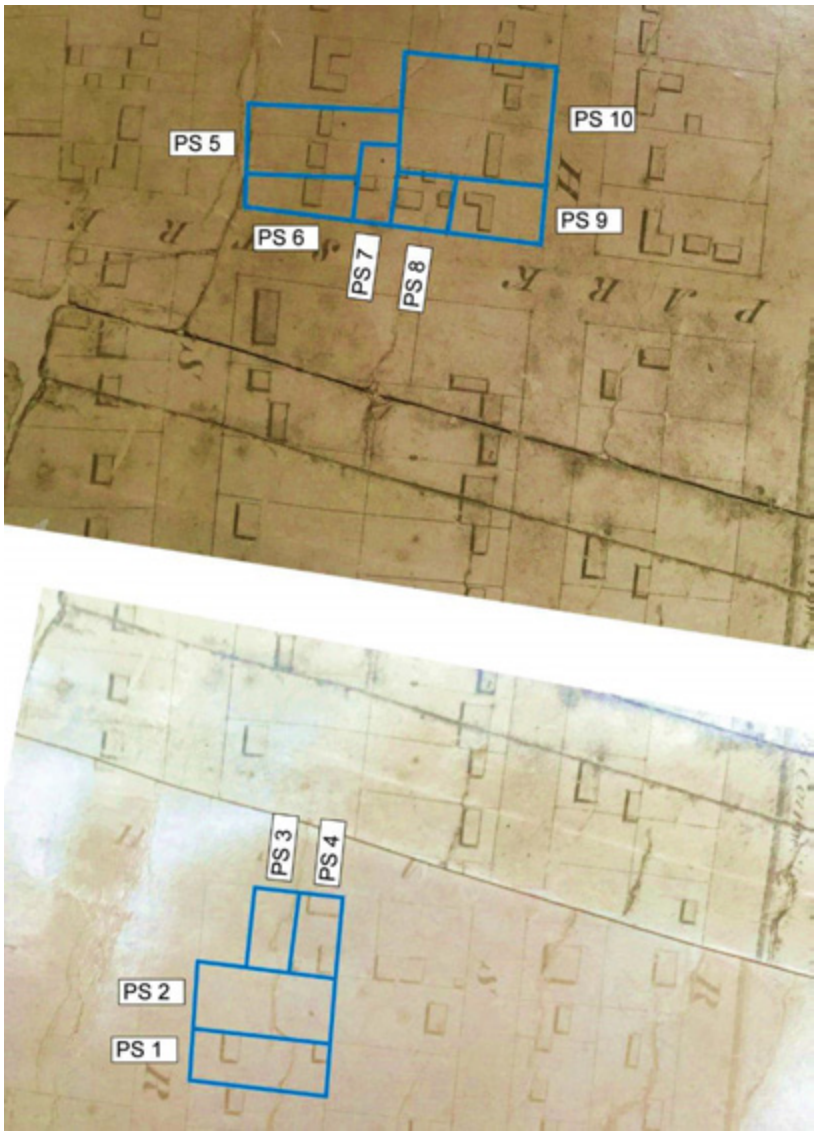
By 1823, as development grew in the area, Pitt Street was soon included within what was most likely mixed residential and agricultural allotments. A map dating to this period shows Pitt Street, Castlereagh Street, Park Street and Bathurst Street had been defined (Figure 8-3). The allotments were laid out with buildings, likely timber huts, and yards in the northern study area. The southern study area was reportedly occupied by Reuben Hannam in the 1820s and he operated a public house on the corner of Bathurst and Castlereagh (to east of study area).[112]

**Figure 8-2: Approximate Pitt Street Station site shown in red on de Lesueur's 1802 map**




[110] Edward West Marriott, The Memoirs of Obed West, quoted in Thorp 2001
[111] *The Sydney Gazette*, 15 December 1810
[112] *The Sydney Morning Herald*, 10 October 1831

**Figure 8-3: Harper's 1823 map with Pitt Street Station site shown in blue**




### 8.2.2 Early-Mid Nineteenth Century Development

Governor Darling was the instigator of the land grants in the study area, ordering that grants would be given to people who applied by 30 June 1829.[113] The City Section Survey Plans show that by 1833 land grants had been formalised, with allotments given to David Dyer, William Hill, Robert Jones, Catherine McLeod, William Dibbs, John Ennes, Richard William, Alexender Dick, and Tomas Bowers near Park Street with buildings noted on the land (Figure 8-4). The area near Bathurst Street was granted to Reuben Hannan, Robert Wardell and John Smith (Figure 8-5).

From the 1820s Sydney's population increased with an influx of free settlers. The labour force shifted from convict labour to immigrants. By the 1830s many local industries had been established and the economy prospered. With land formally granted, speculative building increased and helped drive the economy (Figure 8-6). A description of the fledgling property development industry in The New South Wales Magazine in 1834 is as follows:

[113] *The Sydney Gazette*, 9 June 1829

*The sort of building which promises the surest and most profitable return is the construction of small houses and shops for retail dealers… From the constant influx of emigrants and the number of mechanics and labourers with their families now employed in Sydney there is a constant demand for small houses or suitable apartments for the accommodation of small families of the industrious classes. To meet this demand houses may be built in the outskirts of the town for £35 each on ground of nearly the same value making the amount of capital expended about £75.*[114]

**Figure 8-4: 1833 City Section Survey Plan, northern Pitt Street Station site shown in blue**

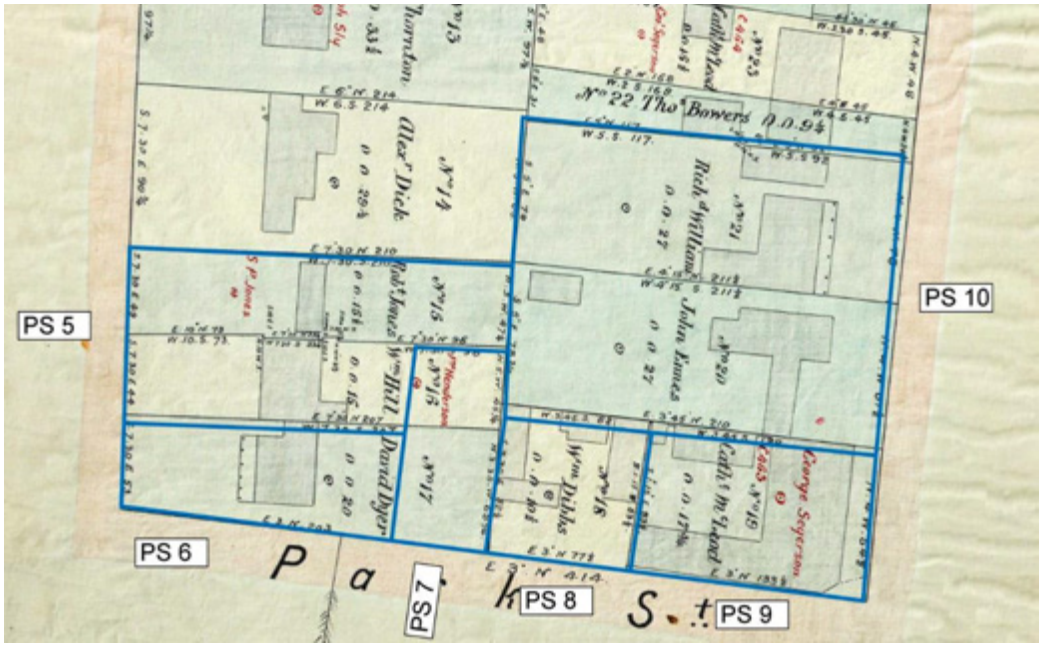
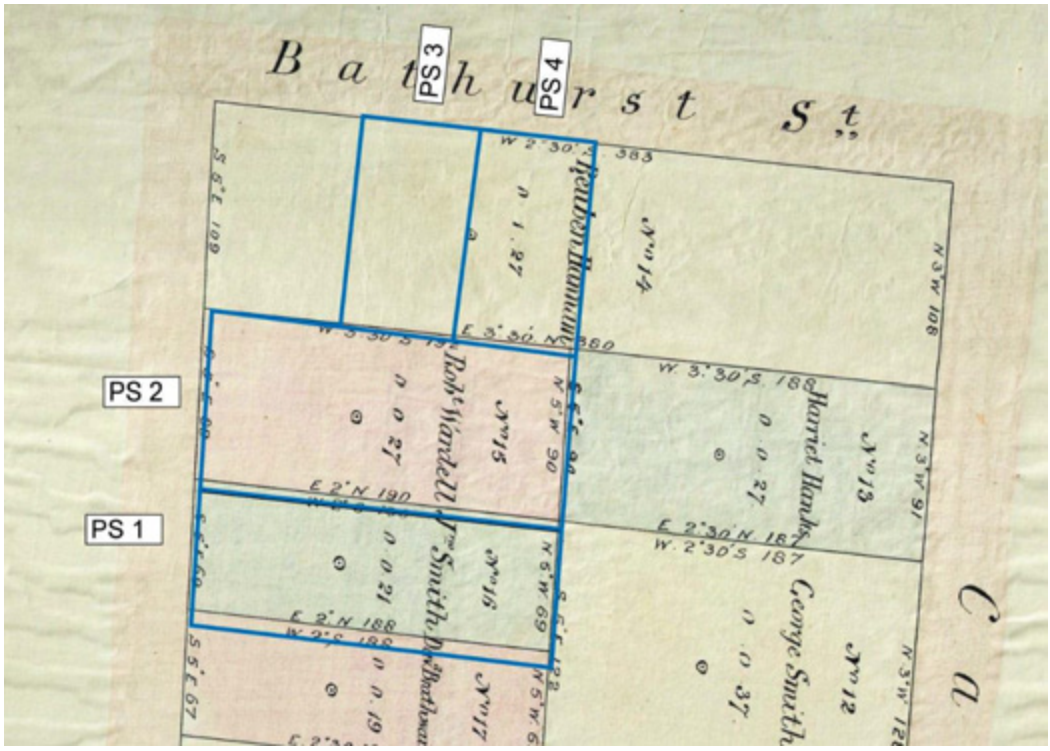
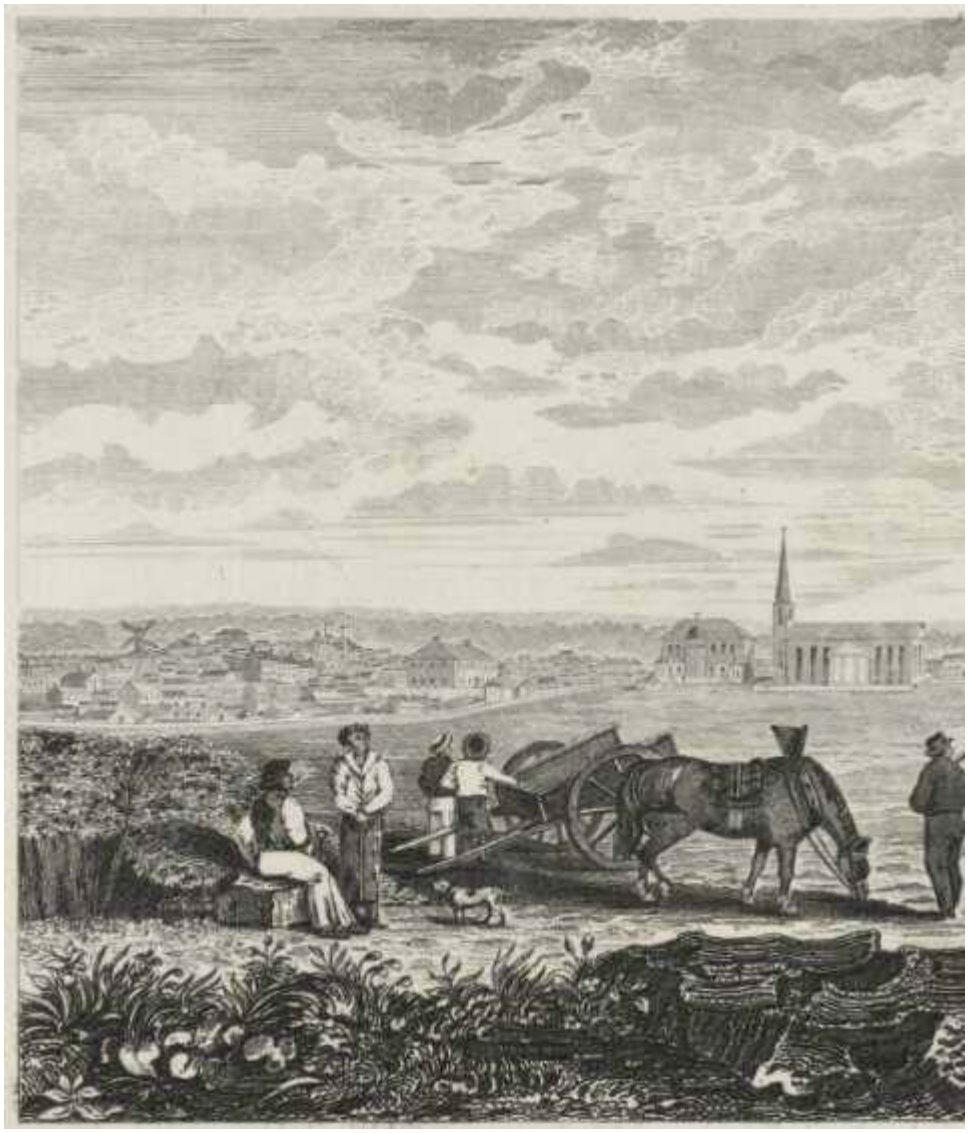



**Figure 8-5: 1833 City Section Survey Plan, southern Pitt Street Station site shown in blue**




[114] The New South Wales Magazine 1835:203-4

**Figure 8-6: Detail of sketch of Sydney, viewed from Hyde Park, 1829. Pitt Street Station site in left background[115]**



### 8.2.3 Nineteenth Century Urbanisation

Sydney became a municipality in 1842 and the city continued to expand and develop. The city now occupied land from Sydney Cove to Haymarket, and Darling Harbour eastwards to what is now Hyde Park and Woolloomooloo (Figure 8-7). The 1850s gold rush had a dramatic effect on Sydney and NSW. While the colony prospered, the rush to the gold fields temporarily paralysed city life and disrupted the economy and prices rose. However, Sydney's population grew rapidly in the following decades resulting in urban subdivision and commercial development along the city's main streets. An 1845 map illustrates the extent city development.

An 1854 plan indicates that the study area had been subdivided and developed with a number of buildings (Figure 8-8). By 1865 more subdivision had occurred (Figure 8-10 and Figure 8-11). The allotments were irregular and developed mostly with brick structures and timber or iron sheds and workshops.

[115] Carmichael, John. 1829, Sydney from Hyde Park J. Carmichael, Sydney viewed 1 June 2016 http://nla.gov.au/nla.obj-135319120

The subdivisions and buildings established by the 1860s remained largely unchanged by the 1880s. The 1880s Dove's map (Figure 8-12 and Figure 8-13) name commercial premises such as Sigmont Stationer, Lugg Dentist, Lobb Boots, Mandell Jewellery, Fletcher Ironmonger, Hugh's City Auction Rooms, Saunder's Barley Mow Hotel and Keary's Coach Factory. The Barley Mow Hotel had the same outline as the previous building marked on the 1833 map, present on Site PS 9. These brick/stone built businesses indicate a mix of small commercial development in the area. Further south near Bathurst Street businesses included Taylor Bedding Shop, Palten Sculptor, Stable Bakehouse, Cassin Baker, Anderson Tailor, and Walder Tent Maker, with yards and outdoor toilets more prominent.

With the construction of the School of Arts and the Independent (Presbyterian) Chapel on Pitt Street during the 1840s, the Presbyterian Church funded and constructed a training school for infants (two to six years old) on Pitt Street, located in Site PS 5 (Figure 8-9).

**Figure 8-7: Francis Webb Shield's Plan of Sydney, 1844, with indicative Pitt Street Station site**

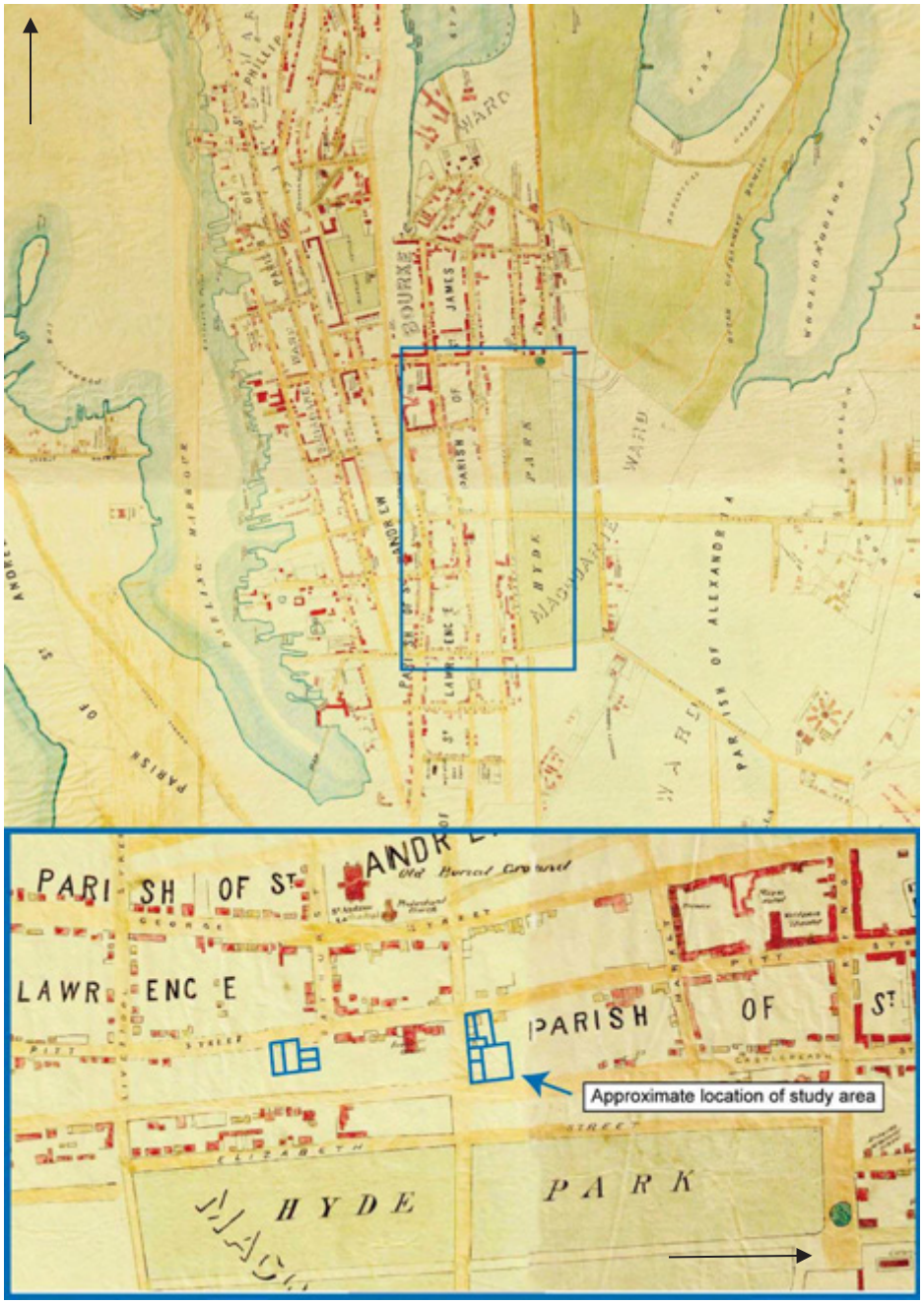
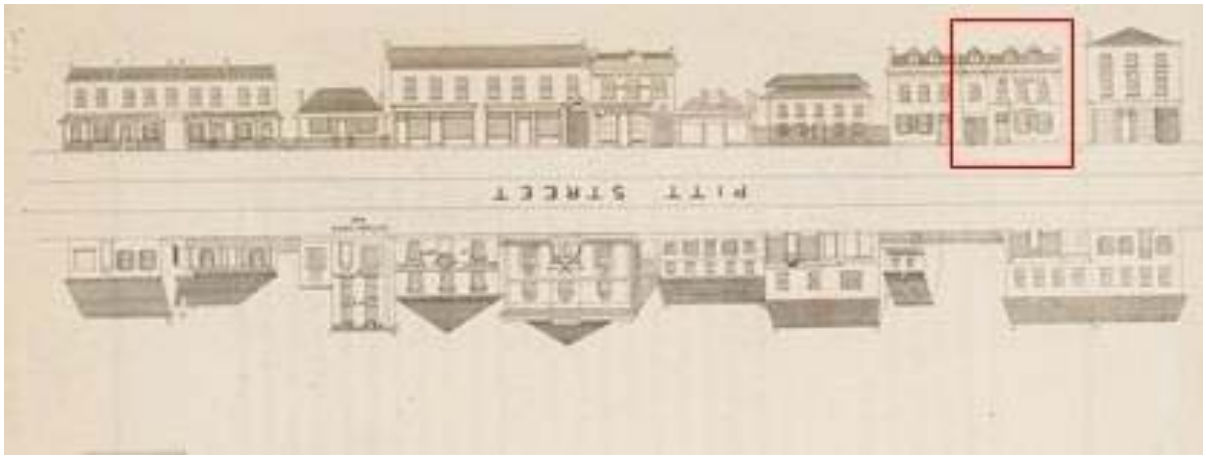


**Figure 8-8: Woolcott and Clarke's 1854 Plan of Sydney with Pitt Street Station site**


**Figure 8-9: Fowles 1848 sketch of Pitt Street, between Market and Park Streets. Steel's Infant's Training School outlined in red[116]**



[116] Fowles, J. 1848. *Sydney in 1848.* State Library of New South Wales, http://acms.sl.nsw.gov.au/album/albumView.aspx?itemID=985685&acmsid=0 viewed 1 June 2016.

**Figure 8-10: 1865 Trigonometrical Survey of Sydney, with northern Pitt Street Station site**

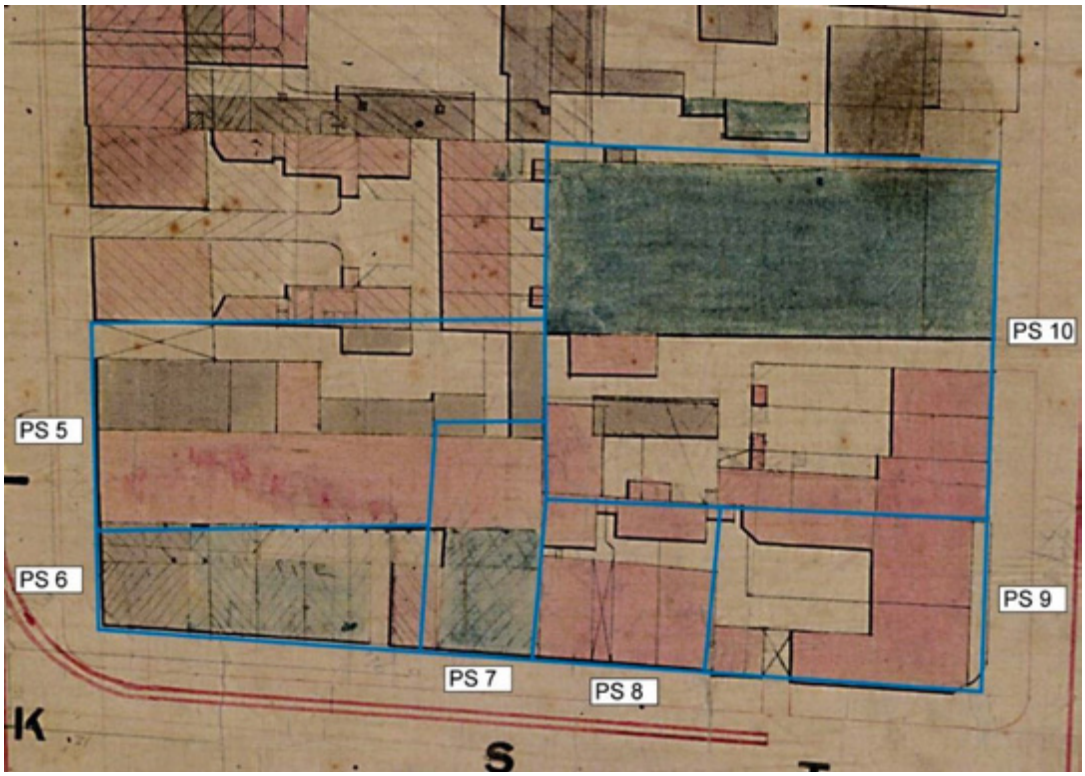



**Figure 8-11: 1865 Trigonometrical Survey of Sydney, with southern Pitt Street Station site**

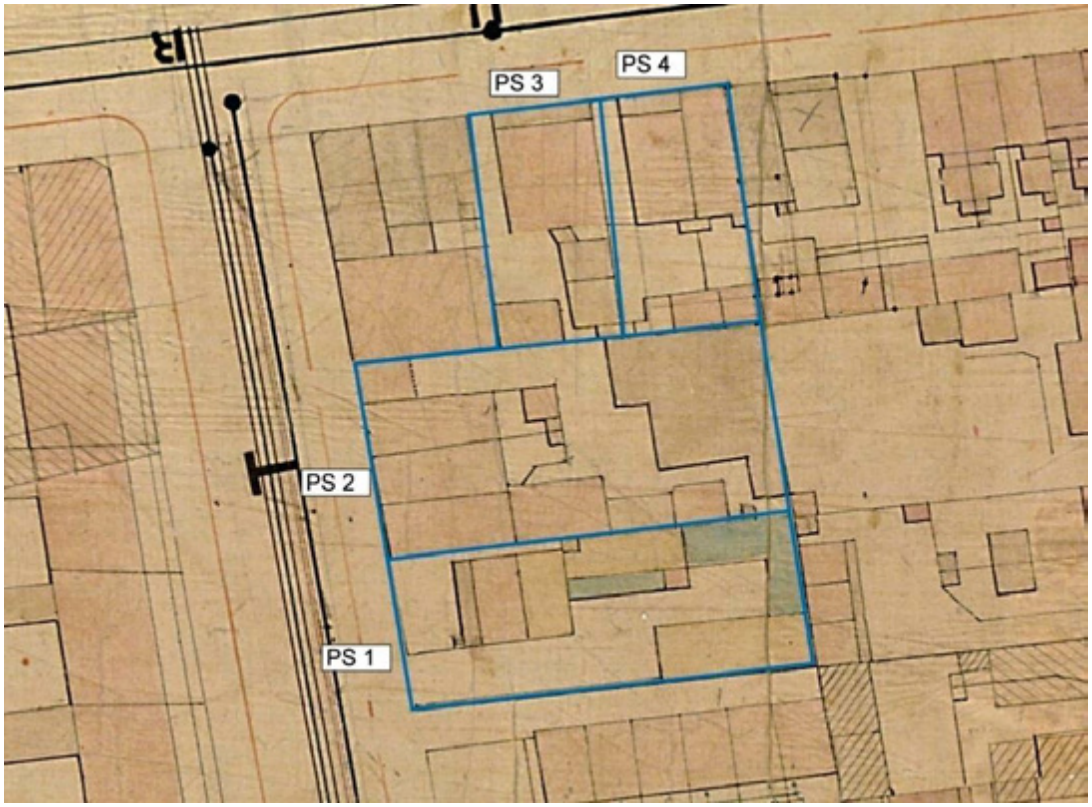


**Figure 8-12: 1880 Doves Plan of Sydney with northern Pitt Street Station site**

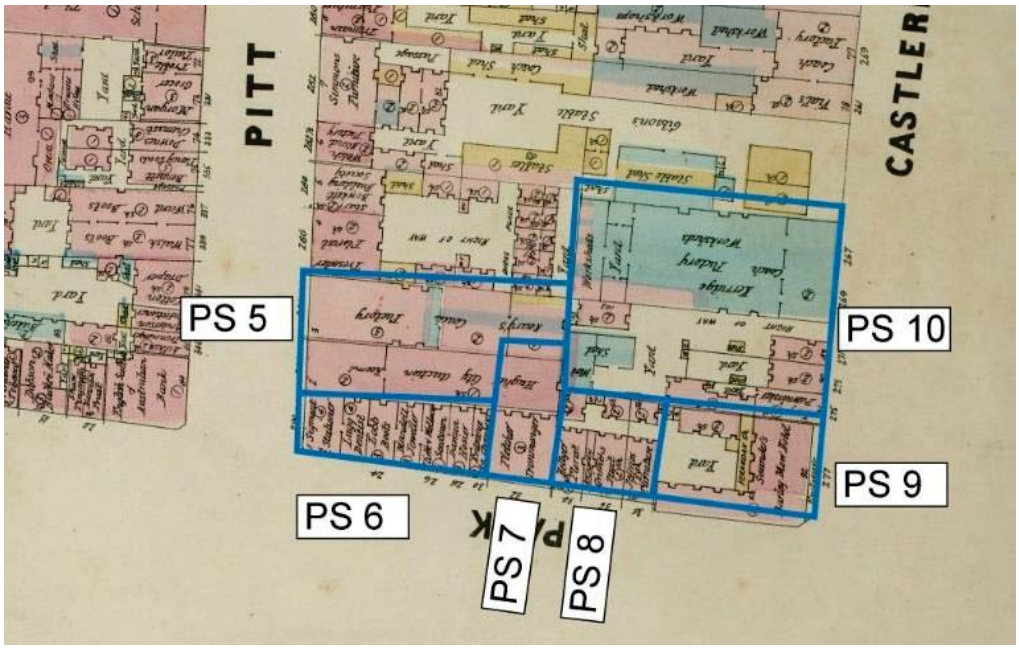
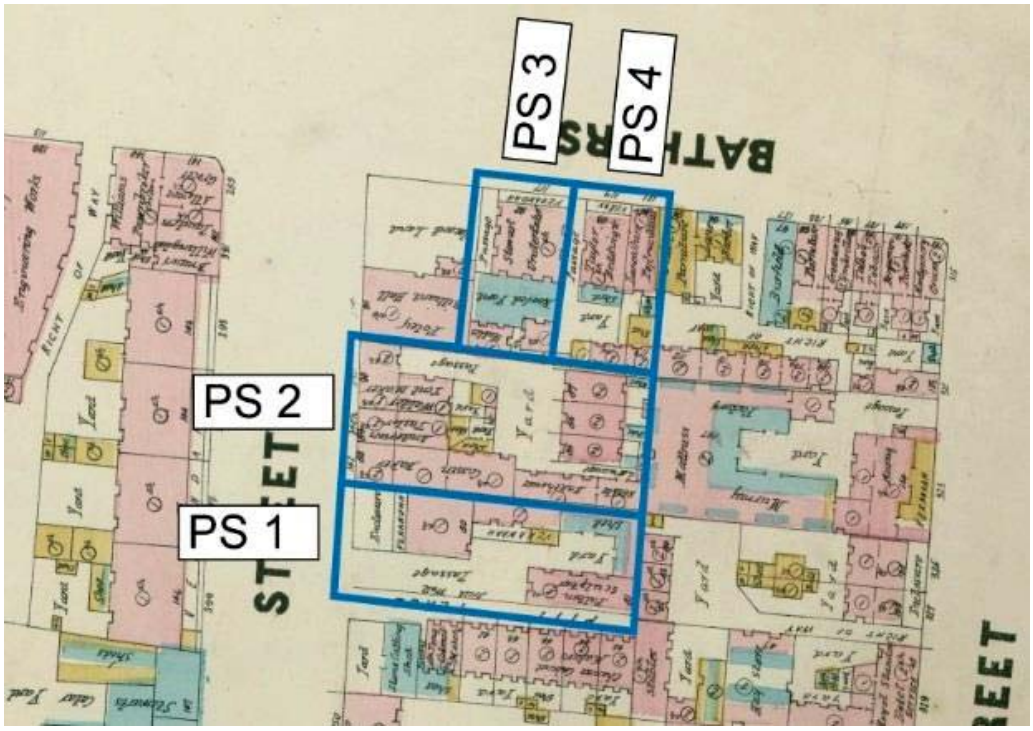



**Figure 8-13: 1880 Doves Plan of Sydney, with southern Pitt Street Station site**




### 8.2.4 Early Twentieth Century Commercial Development

Over the next 50 years the layout of the lots was kept with smaller businesses continuing to use the buildings. The City of Sydney Plan dating to 1910 covers the northern study area on Park Street, showing the continuation of some businesses such as the Barley Mow Hotel, and the ironmongers which was then owned by T.W. Henderson. Small businesses were still present along Park Street, and Victoria Hall took over the auction rooms. Sargent's Ltd, owned three properties in the study area, taking over the coach factory.

Sargent's continued to own properties, as evident in the 1917-1939 Fire Underwriter's Plans (Figure 8-14 and Figure 8-15). By this time The Australian Motor Service had taken ownership of some of the businesses, the Barley Mow Hotel was renamed Hotel Windsor, Young Chambers was present, and second hand dealers were common in the northern study area. In the southern study area office blocks with shops were built including Pacific House, Druids House, and Vauxhall House, with smaller shops fronting Bathurst Street such as Coles Red Star Pharmacy, a café, and a hairdresser.

The Hotel Windsor, Sargent's Ltd, and the Young Chambers continued in operation into 1956, with Meurant House taking over from the second hand dealers. Druids House and Pacific House were still operating in 1956, with the smaller shops operating on Bathurst Street (Figure 8-16 and Figure 8-17).

**Figure 8-14: 1930s Fire Underwriter's Plan, with northern Pitt Street Station site**

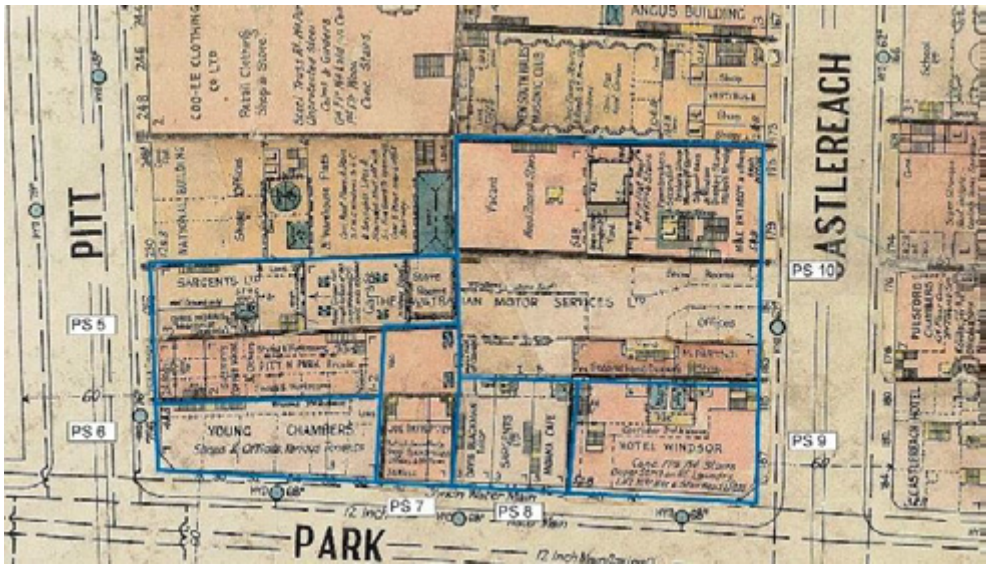



**Figure 8-15: 1930s Fire Underwriter's Plan, with southern Pitt Street Station site**

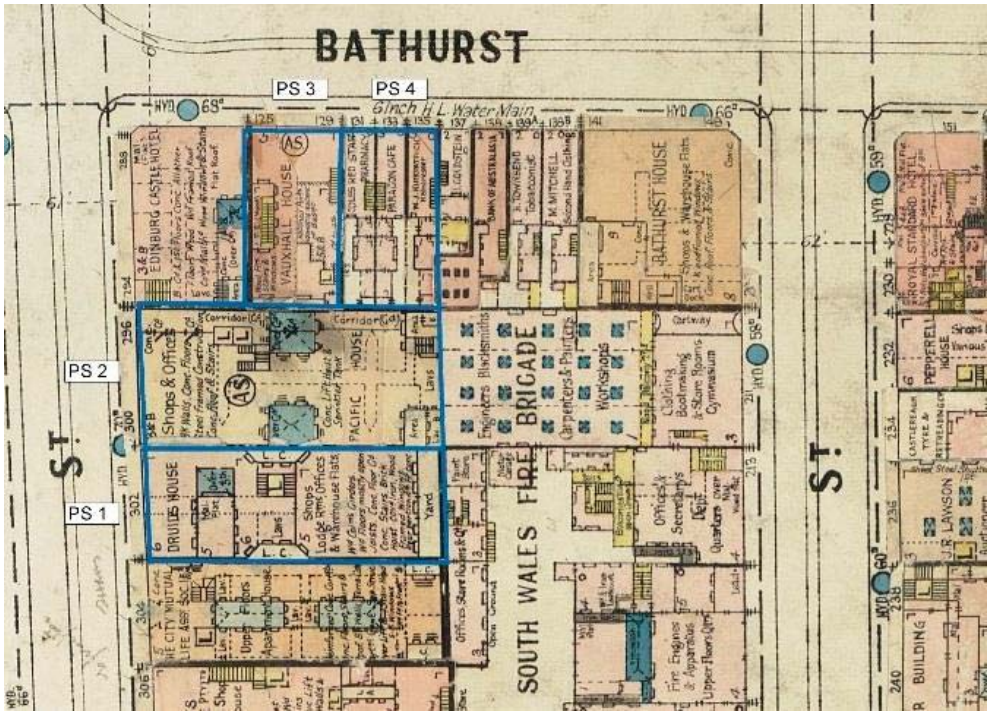


**Figure 8-16: City Building's Surveyor Detail Sheets from the 1950s, with northern Pitt Street Station site**

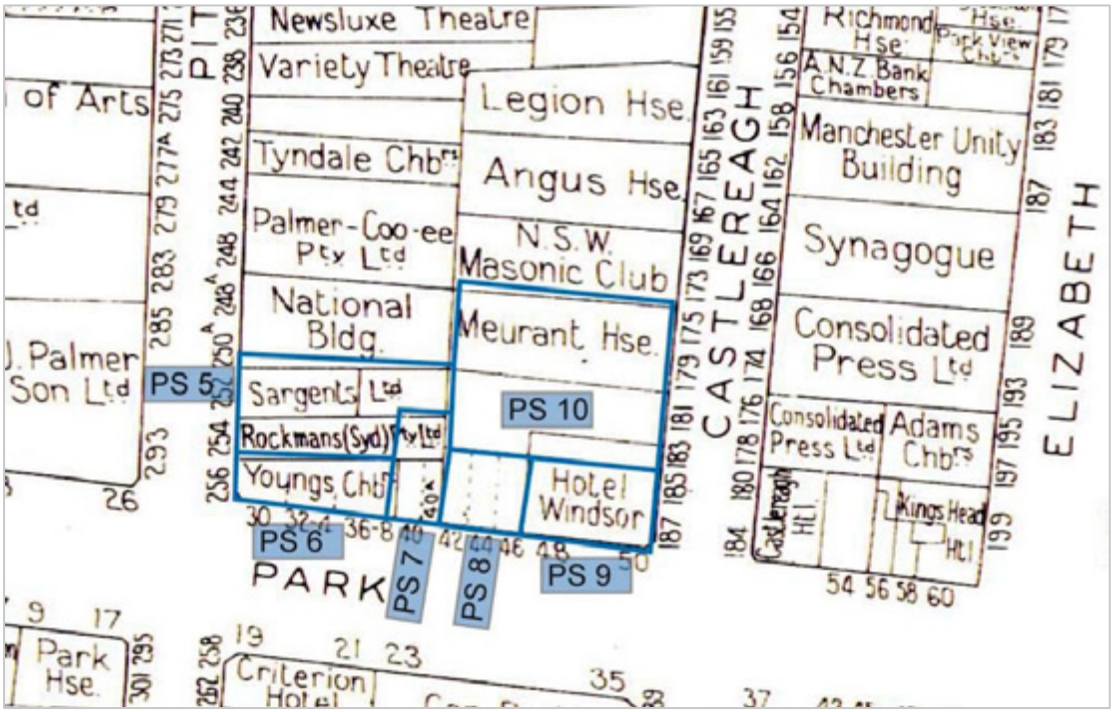
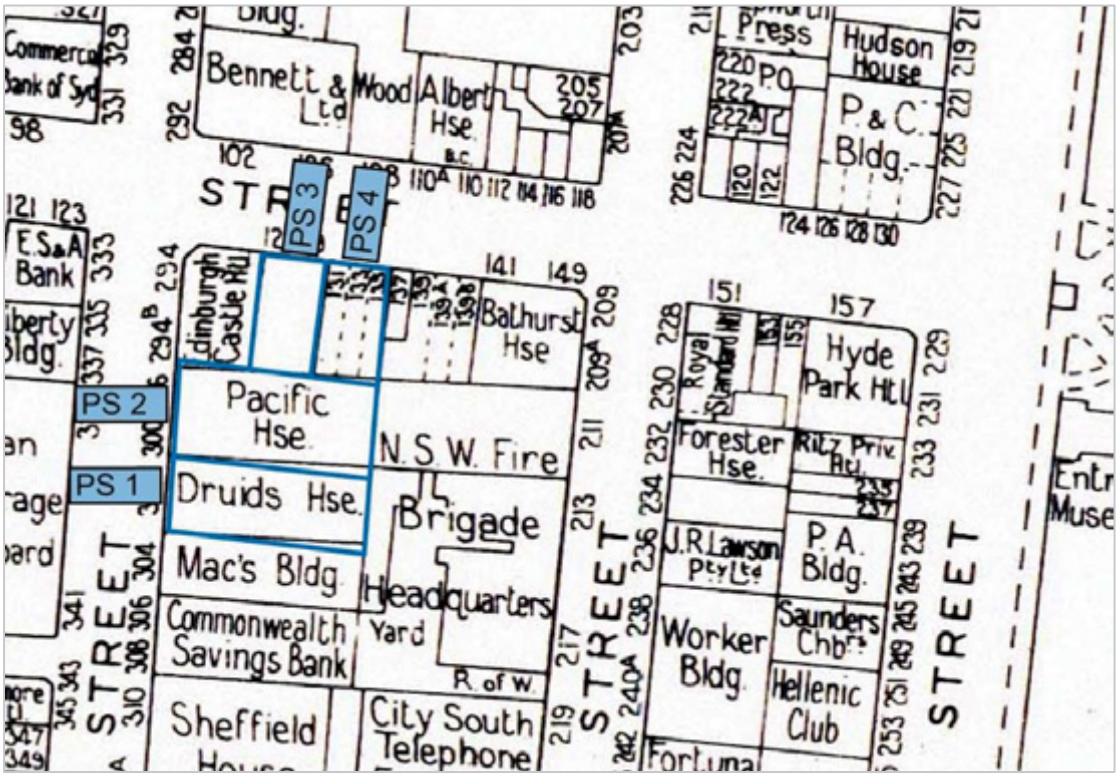



**Figure 8-17: City Building's Surveyor Detail Sheets from the 1950s, with southern Pitt Street Station site**



### 8.2.5 Late Twentieth Century Commercial Development

The area around Park Street retains many of the original buildings with Sargent's building along Pitt Street still in place today, currently operating as a Hungry Jacks. The Hotel Windsor is currently named Windsor on the Park, and the Young's Chambers is McDonalds.

The pharmacy on Bathurst Street is still signed as a chemist, although two other tenants are currently in place. Other new multi-storey buildings were developed along Bathurst and Pitt Street, such as the Metro Hotel.

**Figure 8-18: Hotel Windsor in 1970, formerly named Barley Mow Hotel and currently The Windsor on Park (Source: City of Sydney Archives)**

**Figure 8-19: Pitt Street Markets in 1970, formerly Sargent's Ltd, and Keary's Coach factory, currently operating as a Hungry Jacks (Source: City of Sydney Archives)**

**Figure 8-20: Young's Chambers in 1970, currently operating as McDonalds (Source: City of Sydney Archives)**


## 8.3 Archaeological Potential

### 8.3.1 Previous Archaeological Studies

The Archaeological Zoning Plan (AZP) of Sydney identifies 40, 42, 44, 46 Park Street (Site PS 7 and Site PS 8), 252-254, and 256 Pitt Street (Site PS 5 and Site PS 6), and 131-135 Bathurst Street (Site PS 4) as Areas of Archaeological Potential. These Areas refer to an allotment of land or feature that has been identified as being an area of high archaeological potential due to limited physical disturbance (usually limited to disturbance resulting from the most recent building development). No. 302 Pitt Street (Site PS 1) was identified as an Area of Archaeological Potential for deeper sub-surface features only, such as wells, cisterns, drains, and cesspits with associated fills.

Archaeological investigations by Australian Museum Consulting in 2013 on Bathurst Street at the corner with Castlereagh (209 Castlereagh Street) uncovered several phases of archaeology dating from the 1820s. The site contained evidence of the Red Cow Inn (1820s) and Louisa Terraces (1850s). Remains included wall trenches, postholes, stone footings, rubbish pits, drainage system remains and many artefacts relating to the various historical occupants and activities on the site. These remains were located below a building constructed in the mid twentieth century. This archaeological excavation demonstrates the multiple phases of archaeological evidence which can survive in the CBD area.

### 8.3.2 Land Use Summary

Each of the allotments in the Pitt Street Station site has several phases of historic development. However, the study area has been divided into four general phases of historical activity which frame the discussion of archaeological potential.

- Phase 1 (1788 – 1840) early land grants. Early land use associated with vegetation clearance of swampy ground near the Tank Stream; construction of timber structures, perhaps with brick or

stone footings or chimney bases; kitchen gardening and fencing; the development of early, small-scale trades (butchers, tanners, carpenters); commercial premises such as inns, public space associated with early race-courses and meeting places; and the laying out of roads.

- Phase 2 (1840 – 1900) urbanisation. Land use associated with the construction of brick and stone buildings, likely shops and commercial premises with residential quarters above; the development of underground water and sewerage services; the development of manufacturing workshops; the construction of public hotels; and the growth of retail and service shops.
- Phase 3 (1900 – 1950) early twentieth century commercial development. Land use associated with the increasing gentrification of commercial and retail premises; the renovation and partial removal of workshops and manufacturing workshops from the study area; the renovation of existing brick buildings and an increase in the height of buildings to five and six-storey premises; the construction of underground railways; increase in non-manufacturing and non-retail trades in the study area.
- Phase 4 (1950 – Present) late twentieth century commercial development. Land use associated with the demolition of earlier brick buildings and replacement with modern office high-rise construction; the construction of underground car parks and services; the construction of underground road tunnels.

### 8.3.3 Previous Impacts

The majority of impacts to potential archaeological remains are associated with the construction of multi-storey office towers from the 1960s onwards. Building construction prior to this time largely consisted of two to three-storey brick buildings with relatively shallow footings and minimal excavation. The majority of the extant buildings in the station site date from before 1940, and as such do not have basement car parks and are unlikely to have required extensive deep excavation during their construction. Impacts to potential archaeological remains in these areas would be low.

Utility services are located underneath the footpath on the streets within the study area. The excavation of electrical, gas and telecommunication services typically comprise narrow and sometimes shallow impacts to sub-surface deposits; while these services can intersect and damage archaeological remains, they do not necessarily remove all potential for recovering intact deposits.

Basement data provided for the office tower located at 175 – 183 Castlereagh Street (Site PS 10) shows that four below-ground stories have been excavated. These basements have excavated between 8.2 metres and 9.2 metres below the ground level for the entirety of the lot. The excavation for these basement levels would have removed all potential archaeological deposits in this area.

Basement data provided for the Windsor Hotel and Park Hotel on the corner of Park Street and Castlereagh Street (Site PS 9) shows that a basement level has been excavated at a level of 1.74 metres below ground level. This basement covers almost the entirety of the lot and is bounded by a concrete retaining wall facing towards Park and Castlereagh Streets. Drains in this building extend to up to 2.78 metres below ground level in isolated areas. The depth of the basement floor is likely to have removed any potential archaeological deposits below the building.

The Metro Hotel located at 296 – 300 Pitt Street (Site PS 2) was constructed in 1930 as 'Pacific House'. Advertising at the time noted that the design of the building incorporated a "commodious basement" to allow the "largest unbroken space suitable" for a billiard room and restaurant[117]. The extent of this basement is uncertain and may not extend to the entirety of the building footprint, or to a universally low depth.

The six-storey office building located at 125 – 129 Bathurst Street (Site PS 3) is a late twentieth century construction there are likely to be below ground impacts associated with lift shaft housings. It is unlikely this structure has a full basement level, however the footings and services for such a building would be substantial. There may be pockets of unaffected ground between footings and other building features which have archaeological potential.

**Table 8-2: Summary of basement data for Pitt Street Station site**

| Site Code | Address | Basement information | Impacts to archaeology |
|---|---|---|---|
| **PS 1** | 302 Pitt Street, Sydney | Possible basement level of uncertain depth and extent. | Uncertain level of impact to archaeological remains |
| **PS 2** | 296-300 Pitt Street, Sydney | Mid-20th century hotel with single large basement level. Extent and depth uncertain. | Uncertain level of impact to archaeological remains. Potentially moderate to high impact. |
| **PS 3** | 125-129 Bathurst Street, Sydney | Basement level of uncertain depth and extent. | Uncertain level of impact to archaeological remains. |
| **PS 4** | 131-135 Bathurst Street, Sydney | Three-storey early 20th century commercial building with no basement. | Low impact to archaeological remains. |
| **PS 5** | 252-254 Pitt Street, Sydney | Three-storey early 20th century commercial building with no basement. | Low impact to archaeological remains. |
| **PS 6** | 256 Pitt Street, Sydney | Late 19th century commercial building with no basement. | Low impact to archaeological remains. |
| **PS 7** | 40 Park Street, Sydney | Late 19th century commercial building with no basement. | Low impact to archaeological remains. |
| **PS 8** | 42, 44 & 46 Park Street, Sydney | Late 19th century commercial building with no basement. | Low impact to archaeological remains |
| **PS 9** | 48 Park Street, Sydney<br>185 Castlereagh Street, Sydney | Known basement data for Windsor and Park8 hotel. | Basement excavation would likely have removed archaeological resources in this area. |
| **PS 10** | 175-183 Castlereagh Street, Sydney | Known information for deep basement for undercover car parking. | Basement excavation would have removed all archaeological resources in this area |

### 8.3.4 Potential Archaeological Remains

***Phase 1: 1788 - 1840***

The earliest European activity in the study area consisted of land clearing and timber getting for the colony. Accounts up to the 1820s describe the landscape as only partially cleared, and the southern

[117] *The Sydney Morning Herald*, 5 August 1930.

sections of the station site as being sparsely inhabited. Land clearing activities are typically archaeologically ephemeral, as are informal use of partially cleared land for grazing of livestock. Excavations at the No. 1 Fire Station have shown the possibility of recovering some evidence of early land clearance, particularly from charcoal relating to tree stumps which were burned after their trunks were felled.

Residential cottages were constructed along Pitt Row as early as 1798, as evidenced by early paintings. While the earliest dwellings were constructed at the northern extent of the future Pitt Street, plans and accounts from 1822 show that dwellings had been constructed as far south as Bathurst Street by this time. These plans show that many of these early cottages had small plots of worked land within their yards. Accounts also indicate that minor and informal trades were often taken up by free settlers. The lack of municipal water and sewerage supplies during this time meant that rubbish was frequently disposed of within the lots. Wells were dug to provide water and cesspits to manage human waste.

Evidence of early buildings would consist of postholes, baseplates, stone or brick footings, brick or stone chimney bases and hearths, underfloor deposits, yard surfaces and deposits and drainage systems. Archaeological excavations of neighbouring sites have demonstrated that despite later nineteenth and twentieth century development, archaeological evidence of the initial early nineteenth century development and occupation can survive relatively intact.

***Phase 2: 1840 - 1900***

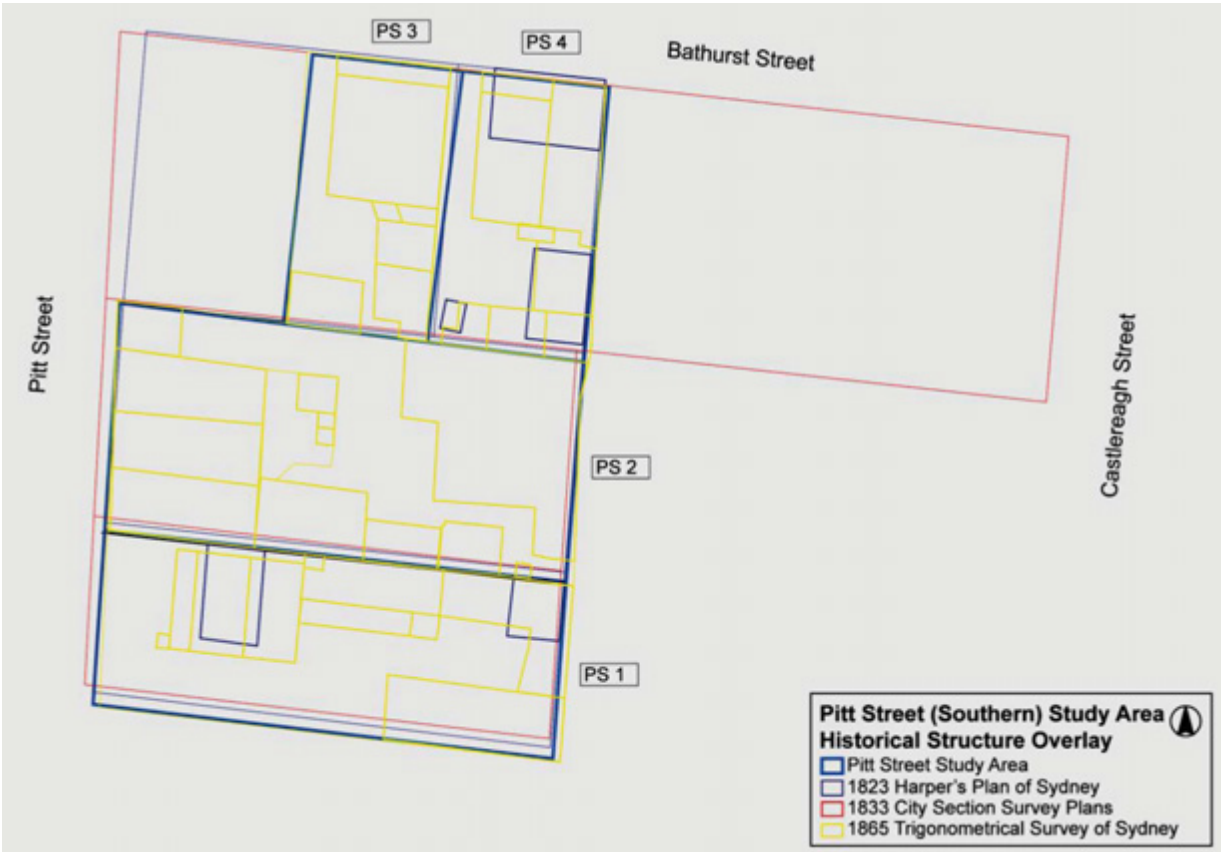
The 1840s saw the continued development of Pitt Street and Castlereagh Street as a commercial area. Earlier timber buildings by this time had been replaced with brick, multi-storey buildings. For the earlier part of this period, workshops were enlarged and replaced and numerous retail stores had been established by the middle of the nineteenth century. Multiple storey brick structures as well as large warehouses became the dominant structure by the end of the nineteenth century.

In several cases, the buildings which were constructed from the 1860s and onwards are still extant in the area. Archaeological resources dating from this time are located below later structures, predominantly structures that were built before the end of the 1800s. At several sites within the study area, the potential to recover archaeological deposits relating to mid-late nineteenth century residential occupation, workshops, retail stores and trades is high. Archaeological remains could consist of footings, backfilled wells and cesspits, underfloor deposits, yard surfaces and deposits, rubbish dumps and drainage systems (brick or stone drains). There may also be postholes and other cut features of more light-weight structures such as outhouses, sheds and timber buildings.

The Steel's Infant's Training School, located within site PS 5 and constructed by 1844, was demolished by 1865. The brick warehouse that was built to replace the original three-storey school building is still located on the site today. The relatively shallow footings and lack of basement excavation of the 1860s brick warehouse located on the site show that archaeological deposits related to the building and its use as a school are likely to remain. Archaeological remains of the school may consist of footings indicating class layout, wells and cesspits or outhouses. The cesspits may have continued in use or been backfilled as part of the redevelopment. There is potential for artefact-rich backfills and deposits which relate to the school and later the workshop.

**Figure 8-21: Historical structures and lot boundaries (Pitt Street Station site north)**


**Figure 8-22: Historical structures and lot boundaries (Pitt Street Station site south)**



***Phase 3: 1900 – 1950***

Commercial development in the study area during this time saw the continuing gentrification of trades away from factory work and more towards white-collar service provision. The Barley Mow Hotel, located within site PS 9, was renovated at this time, and several other hotels were also constructed during this period. These structures were predominantly built with basement levels for activity rooms and for storage. Archaeological remains from this period would consist of former utilities or footings relating to former building configurations. Accumulation of artefacts through rubbish deposition becomes less common as reticulated water, sewerage and garbage disposal services are provided toward the end of the nineteenth century. Structures built in this period generally have strip footings or pad foundations, which would have caused some impact to evidence of earlier phases. Several structures built in this period are still extant

***Phase 4: 1950 - Present***

With the increase in use of the motor car following World War II, and increasing conversion of city buildings into high storied offices, buildings constructed during this time in the study area have basement levels. One office building has a four-storey below ground car park. Buildings without basements but which are multi-level often have large strip footings or pad foundations, lift pits and major utilities. These would have impacted large areas though pockets of archaeological potential, in particular deeper subsurface features such as wells or cesspits, may exist. Buildings constructed during this period do not possess archaeological remains as they are still in use in the study area.

### 8.3.5 Summary of Archaeological Potential

Table 8-3 presents a summary of the potential archaeological remains in the Pitt Street study area. It is based on the historical analysis, land use history, comparative archaeological analysis and assessment of previous impacts such as basements.

**Table 8-3: Summary of potential archaeological remains at the Pitt Street Station site**

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| PS 1 | 1 (1788 – 1840) | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material. | Low |
| | | Land divided by 1820s and structures on the 1823 plan. Potential remains include postholes, brick or stone footings, underfloor deposits, rubbish dumps, wells, cesspits, garden soils, yard surfaces, drains and artefacts | Low - Moderate |
| | 2 (1840 – 1900) | Single storey brick buildings with rear yards and timber out sheds constructed on site by 1865. Courtyard, stables and toilets in rear yards. Rear yard timber out sheds replaced with brick two-storey premises by 1880. Mixed use commercial premises during this time, including use as a livery stable, coach-making workshops, tailor's premises, and as a tent-makers' workshop.<br><br>Archaeological potential for brick or stone footings; postholes; underfloor artefactual deposits (glass, ceramic, metal, bone); manufacturing and commercial discarded debris (leather, cloth, wooden and metal artefacts); manufacturing equipment (woodworking and metalworking equipment); rubbish pits, wells, cesspits, yard surfaces, drains (stone and brick). | Moderate |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **3 (1900 – 1950)** | 19th century brick commercial buildings and rear-yard present until construction of Druid House (six-storey commercial building) in 1928. Potential remains associated with former mid-20th century services and utilities such as drainage pits and pipes. The building is likely to have resulted in localised to moderate levels of impact to evidence of previous phases. | Low |
| **PS 2** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material. | Nil - Low |
| | **2 (1840 – 1900** | Building on lot in 1850s. 1930s basement level of unknown size, therefore there is some limited potential for archaeological remains such as brick or stone footings, truncated remains of brick or stone drains, wells and cesspits. Some potential for artefact-rich deposits within backfilled wells or cesspits. | Low |
| | **3 (1900 – 1950)** | Pacific Hotel constructed in 1930, including a below-ground basement level. It is unknown how extensive the basement is or whether it includes the entire lot footprint. There may be areas which have not been impacted and therefore evidence of earlier phases of occupation may survive in places. | Nil |
| **PS 3** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material.<br><br>Three buildings constructed on lot in 1820s; demolished by the 1850s. Residential building with possible garden and/or sheds for minor trades. Potential for timber postholes for building and fences; brick and sandstone footings; underfloor artefactual deposits; cisterns and wells; cesspits; rubbish dumps; field drains; sub-surface plough marks; artefacts. | Low |
| | **2 (1840 – 1900)** | Single storey brick building constructed by 1865, used as premises for a carpenter's and undertaker's business. Rear roofed yard and outhouse buildings. Potential for brick and stone footings; postholes; underfloor artefactual deposits (glass, ceramic, metal, bone); manufacturing and commercial debris (wooden and metal artefacts); wells or cisterns; cesspits containing artefact-rich backfills; rubbish dumps; yard surfaces and drains (stone and brick). | Low |
| | **3 (1900 – 1950)** | Construction of three-storey newspaper printers and commercial office in 1905, location of the Worker newspaper printing office. Potential for brick footings, drains, yard surfaces and artefact deposits. | Low |
| | **4 (1950 – Present)** | Construction of six-storey commercial office building with below ground basement level. | Nil |
| **PS 4** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material.<br><br>Three buildings constructed on lot in 1820s; demolished by the 1850s. Residential building with possible garden and/or sheds for minor trades. Potential for timber postholes for building and fences; brick and sandstone footings; underfloor artefactual deposits; cisterns and wells; cesspits; rubbish dumps; field drains; sub-surface plough marks; artefacts. | Low<br><br>Moderate |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **2 (1840 – 1900)** | Two single storey brick commercial buildings facing Bathurst Street frontage built in 1850s; rear yard containing two two-storey brick out-buildings, two single storey timber out-sheds; constructed by 1865 and still present in 1880. Mixed use commercial premises during this time (grocers, cabinet makers, tailors, hairdressers, leather workers).<br><br>Archaeological potential for brick or stone footings; postholes; underfloor artefactual deposits (glass, ceramic, metal, bone); manufacturing and commercial discarded debris (leather, cloth, wooden and metal artefacts); wells or cisterns; cesspits containing artefact-rich backfills; rubbish dumps; yard surfaces and drains (stone and brick). | Moderate - High |
| | **3 (1900 – 1950)** | Construction of three-storey Victorian Italianate building before 1910 with three commercial premises. Potential for archaeological remains of the initial services and utilities, such as drainage pits and pipes. The construction of this building is likely to have resulted in localised impacts for footings. | Low |
| **PS 5** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters, land drainage features, and fossilised pollens or other environmental material. Timber housing constructed on site by 1822. Possible location of kitchen garden and/or site of early informal industries. Potential for timber postholes for buildings or fences; brick and sandstone footings; underfloor artefactual deposits; cesspits and wells; rubbish dumps; drains; sub-surface plough marks; garden soils and artefacts. | Moderate |
| | **2 (1840 – 1900)** | Two-storey brick terraces. Steel's Infant's Training School occupied southern portion of site from 1844 until 1850s. Potential for brick and stone footings; postholes; underfloor artefactual deposits; cisterns and wells; cesspits; rubbish dumps; brick or stone drains and artefacts.<br><br>Timber and brick single storey workshop premises constructed by 1865 on northern portion of site. Potential for brick and stone footings; postholes; underfloor artefactual deposits; and cisterns and wells.<br><br>Two-storey brick warehouse constructed by 1865 on southern portion of site.<br><br>Three-storey brick workshop constructed between 1865 and 1880 on northern portion of the site. | Moderate - High |
| **PS 6** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material. | Low |
| | | One timber building and one fenced allotment constructed on this site by 1822. Timber building likely early residential, facing Pitt Street. Possible location of horticultural garden and/or site of early informal industries. Potential for timber postholes for buildings or fences; brick and sandstone footings; underfloor artefactual deposits; cisterns and wells; rubbish dumps; cesspits; field drains; sub-surface plough marks and artefacts. | Low - Moderate |
| | | Three-storey brick building with verandah constructed on site by 1830, facing Pitt Street. Potential for brick and stone footings; postholes; underfloor artefactual deposits; cesspits and wells; drains; rubbish dumps and artefacts. | Moderate |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **2 (1840 – 1900)** | Three-storey brick structure present on site until at least 1865, when lot is filled with timber, stone and brick commercial premises. All but western-most building face Park Street. Potential for brick and stone footings, postholes, underfloor artefactual deposits, and cesspits and wells; rubbish dumps; drains and artefacts.<br><br>Young's Chambers constructed by 1880. Commercial premises for retail trades (jeweller, stationer, dentist, hosier). | Moderate - High |
| **PS 7** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material. | Low |
| | | Fenced allotment constructed on site by 1822. Possible location of horticultural garden and/or site of early informal industries. Potential for post-holes, field drains, cisterns and wells, isolated artefacts and fossilised pollens or other environmental material. | Low - Moderate |
| | **2 (1840 – 1900)** | Timber iron-roofed structure present on site by 1865, used as workshops (cabinet makers, stove builders). Potential for post-holes, brick and stone footings, underfloor deposits, artefacts.<br><br>Three-storey brick commercial building constructed by 1880. Used initially as an ironmonger's workshop with above ground offices. Potential for footings, deposits containing artefacts and other structural remains. | Moderate - High |
| **PS 8** | **1 (1788 – 1840)** | Land clearance, potential for tree boles, charcoal tree remains, isolated artefact scatters and fossilised pollens or other environmental material. | Low |
| | | Timber cottage constructed on site by 1822. Potential for timber postholes for buildings or fences; brick and sandstone footings; underfloor artefactual deposits; cesspits and wells; rubbish dumps; drains and artefacts. | Low - Moderate |
| | | Four structures present on site by 1830, likely early industrial or agricultural buildings (workshops, storage rooms or stables). Potential for timber postholes for buildings or fences; brick and sandstone footings; underfloor artefactual deposits; cesspits and wells; rubbish dumps; drains and artefacts | Moderate |
| | **2 (1840 – 1900)** | Three three-storey brick commercial premises with rear yards and two-storey brick out buildings. Construction completed by 1859. Potential archaeological remains include footings, underfloor deposits, drains, rubbish dumps, structural remains, cesspits, wells and artefacts. | Moderate - High |
| **PS 9** | **3 (1900 – 1950)** | Construction of brick five-storey Barley Mow hotel including excavation of sub-surface basement level. | Nil |
| **PS 10** | **4 (1950 – Present)** | Construction of eleven-storey office block with four sub-surface basement levels. | Nil |

## 8.4 Assessment of Archaeological Significance

In general, the Pitt Street study area has moderate to high potential for archaeological remains associated with the earliest urban development of the area from the 1820s to the 1900s. Some sites within the study area have relatively low levels of previous impact and previous excavations in the vicinity have demonstrated a high degree of intactness and evidence for multiple phases of activity.

These types of archaeological sites are increasingly rare in the city, meaning their potential significance is greater. The following assesses the significance of the study area in terms of specific historical development phases or activities.

### 8.4.1 Environment and Land Clearance Activities (1788 – 1820s)

There is low potential for archaeological remains of these activities dating from 1788 to c.1820s in Sites PS 1, PS 2, PS 3, PS 4, PS 6, PS 7 and PS 8.

***Research Potential (Criterion E)***

Wendy Thorps' excavation of the No. 1 Fire Station on Castlereagh Street, very close to the study area, revealed intact archaeological remains relating to early convict vegetation clearance. In this project, a charcoal tree stump was uncovered at the lowest cultural layer of the excavation. The burning of tree stumps was common practice during land clearing activities during the time of the early colony, however our knowledge of this process is poorly understood.

Ecological and environmental information derived from pollen analysis of soils dating from the early convict era were analysed for the No.1 Fire Station excavation. This analysis provided information which was useful in characterising the environmental landscape at the time of European settlement. Pollen and other paleo-environmental data sets can also be useful for understanding successive changes in biome composition, land clearance and grazing and agricultural patterns. As the Pitt Street Station site resides in the catchment area for the Tank Stream, the way in which this landscape was utilised during the short period that the Tank Stream was still considered potable would be a valuable resource that could not be obtained from other archival or archaeological sources.

***Association with Individuals, Events or Groups of Historical Importance (Criteria A, B and D)***

The tree felling and clearing of the catchment area of the Tank Stream was conducted with convict labour within the first twenty years of the colony. The clearance of the native forest in this area was prompted by the urgency to provide housing and agricultural self-sufficiency in the early years of the colony. In the process, the vegetation clearing of this area in part led to the befouling of the Tank Stream, the colony's first fresh water source.

There would be considerable community interest in archaeological remains associated with early colonial landscape and environmental change. Open days at archaeological sites in the CBD area are well attended and also generate media interest. Potential archaeological remains associated with this phase also present opportunity for heritage interpretation.

***Aesthetic of Technical Significance (Criterion C)***

The clearing of land was originally conducted with government issued poor quality tools and with a poorly motivated labour force. The widespread burning of stumps instead of digging up the taproots was often conducted in response to these technological and labour shortcomings. Intact evidence of land clearing practices may demonstrate these techniques.

***Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F and G)***

The station site was the site of housing by the 1820s and likely earlier; evidence of vegetation clearing and burning would not post-date this event. As such, evidence of land clearing, if present, would be prominently attributable to the period of convict settlement in the colony. Paleo-environmental data could also be derived for this period.

However, charcoal, tree boles and discrete intact soil profiles necessary for paleo-environmental sampling are poorly preserved in areas with long histories of human activities. The degree of construction, demolition and reconstruction in the study area is likely to have disturbed these deposits unless they are preserved below later, sealed archaeological layers.

Legible and intact remains of this phase of activity would be of state significance under Criteria A, E and F, and locally significant under Criterion D.

### 8.4.2 Earlier Settler Development (Phase 1: 1820s-1840s)

There is low-moderate potential for archaeological evidence of early nineteenth century development and occupation dating from 1820s to 1840s in Sites PS 1, PS 6 and PS 7.

There is moderate potential for archaeological evidence of early nineteenth century development and occupation dating from 1820s to 1840s in Sites PS 4 and PS 5.

There is moderate to high potential for archaeological evidence of early nineteenth century development and occupation dating from 1820s to 1840s in Site PS 8.

***Research Potential (Criterion E)***

The majority of the allotment of land grants by the colonial government did not formally occur within the boundaries of the township of Sydney before the late 1820s, however the division and use of land for private purposes preceded these formal allotments. Drawings from 1798 show a reasonably orderly layout of timber convict residences in the colony, particularly along the northern extent of Pitt Row (now Pitt Street). A drawing from 1829 however, shows that the land along Pitt Street near the station site had been extensively built up, with numerous private buildings illustrated along the length of the street, in between larger public buildings (Figure 8-6). Plans from 1823 and 1830 illustrate houses with yards within the northern station site, which are replaced by the 1840s and 1850s with larger brick dwellings.

These early timber buildings were often built as speculative developments and were occupied by both emancipated convicts and free settlers. Many of these early timber slab huts and wattle and daub cottages had small garden plots in their yards. Archival sources mention that these small cottages and early private buildings engaged in horticultural and minor trade pursuits, particularly in the early 1800s. The exact nature and degree of these informal industries are not well understood.

Archaeological remains associated with early housing structures may consist of brick and stone footings and timber postholes. These remains could provide information regarding construction techniques and availability of local building materials during this period of speculative development. Archaeological deposits from these sites may contain artefacts relating to domestic life, early horticulture and informal trades. These resources would have a high research potential and would provide valuable datasets for comparative analysis.

The potential archaeological remains would provide valuable information regarding early colonial life in Sydney and NSW.

***Association with Individuals, Events or Groups of Historical Importance (Criteria A, B and D)***

The potential archaeological resource of this phase is associated with the initial urban expansion of Sydney and its development from a colonial town into an economically successful city in the southern hemisphere. By the 1820s the use and reliance on convict labour within the CBD area had declined. The decade also witnessed a rapidly increasing population of free settlers which in turn boosted commercial and economic growth in the city and the rest of the colony.

The cottages and huts constructed in the station site preceded formal land grants in Sydney and were likely constructed by free settlers or emancipated convicts during a period of increased immigration to the colony and population growth. The lack of formal title for many of these plots of land mean that we have little documentation of the people who built and lived in these cottages. The archaeological remains could provide evidence regarding the differing lives of free settlers and emancipated convicts in this important phase of Sydney's and NSW's history.

There would be considerable community interest in archaeological remains associated with early colonial settlement. Open days at archaeological sites in the CBD area are well attended and also generate media interest. Potential archaeological remains associated with this phase also present opportunity for heritage interpretation.

***Aesthetic of Technical Significance (Criterion C)***

Remains of cottages and huts may demonstrate the adaptation of British rural vernacular architectural forms (wattle and daub, timber slab) to the Australian environment.

***Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F and G)***

The preservation of structural remains and artefactual deposits are dependent on later phases of construction which may have removed these deposits. However, later construction phases in the Pitt Street Station site may not have involved deep excavation, potentially leaving these deposits intact. Wells and cisterns which may have existed in these yards are also likely to be preserved below ground level, and would contain artefactual material of high research value. Such archaeological resources dating to the 1820s and 1830s are rare in Sydney and NSW.

Archaeological resources relating to these structures and activities would be of state significance under Criteria A, B, C, E and F. The archaeological remains would be locally significant under Criterion D.

### 8.4.3 Mid-Late Nineteenth Century Urbanisation (Phase 2: 1840s-1900)

There is low potential for archaeological remains of urban and commercial development (1850s-1900) in Sites PS 2 and 3 – subject to confirmation of basement data or archaeological testing.

There is moderate potential for archaeological remains of urban and commercial development (1850s-1900) in Site PS 1.

There is moderate to high potential for archaeological remains of urban and commercial development (1850s-1900) in Sites PS 4, PS 5, PS 6, PS 7 and PS 8.

***Research Potential (Criterion E)***

Generally, there are more historical sources available for this period, including maps, government records and historical accounts. However, these sources are somewhat biased and limited in their value to illustrate the daily life, living conditions, economic status and working lives of those living in the city. Archaeological remains of the former cottages, terraces and sheds or workshops could provide evidence regarding the evolution of construction techniques and supply of local or imported building materials. Structural and artefactual evidence could provide evidence of cottage industry, light industry and commerce of lower and middle class occupants of this part of the city. Generally, sites of this type yield a high number of artefacts. Those related to occupation, such as underfloor deposits, could provide information regarding the nature of domestic life, and the roles of women and children in the city. There have been a number of archaeological excavations of similar sites in the city and inner suburbs which would provide data for comparative analysis.

***Association with Individuals, Events or Groups of Historical Importance (Criteria A, B and D)***

The potential archaeological resources within the study area are associated with a period of rapid growth and expansion of Sydney's urban centre. Following the gold rush in the 1850s, the population increased rapidly as did the economic success of the city and colony. The commercial development and varying fortunes of Sydney through the latter half of the nineteenth century can be exemplified by the potential archaeological resources.

There would be considerable community interest in archaeological remains at this site. Open days at archaeological sites in the CBD area are well attended and also generate media interest. Potential

archaeological remains, in particular artefacts, associated with this phase also present considerable opportunity for heritage interpretation.

***Aesthetic of Technical Significance (Criterion C)***

There are sites with moderate to high potential for multiple phases of archaeological remains associated with this phase. Footings, wells and cesspits tend to have some aesthetic value and the public can easily engage with such tangible remains. Artefacts from the site also have the potential to engage a public audience if used as part of heritage interpretation. The potential archaeological resources of this phase is not expected to display any particular technical significance, insofar as the remains relate to common building types. There may be a possibility that evidence of artisan trades or crafts could display technical significance.

***Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F and G)***

The potential archaeological remains are expected to survive with a moderate to high level of intactness. There are also sites which are likely to contain several distinct phases of archaeological remains from the 1820s. The potential archaeological resource within the study area can demonstrate the urbanisation and commercial development of Sydney from a penal colony to a thriving and important urban centre in the southern hemisphere.

Relatively intact archaeological remains can provide tangible evidence of Sydney's historical development. The local community and heritage / history interest groups are known to engage with archaeological investigations at open days and through other public interpretation initiatives. Open days at the 209 Castlereagh Street and Town Hall excavations were well attended and generated local media interest. Results and artefacts from the excavation would likely be suitable for interpretation. Investigation of the potential archaeological resources at the Pitt Street site would be of interest to the local and wider community, media and those interested in the development of Sydney.

The potential archaeological remains of this phase of activity would be of local significance under Criteria A, C, D, E and G.

### 8.4.4 Steel's Infant's Training School (Phase 2)

There is moderate to high potential to locate archaeological remains relating to Steel's Infant's Training School in Site PS 5.

***Research Potential (Criterion E)***

Peter Steel opened the Infant's Training School on Pitt Street in 1844 as a school for students aged two to six years old. This school was a companion school to the Presbyterian Juvenile School for older children. These schools were associated with the Independent (then Presbyterian) Chapel on Pitt Street, and the Edinburgh Session Schools that preceded them in early 1800s Scotland. These schools were designed as attempts to prevent the moral decay of the youth of the colony, with Sunday School education promulgated to very young children to ensure the inculcation of Presbyterian morality. The outspoken Presbyterian minister, John Dunmore Lang, was personally responsible in encouraging the development of the school.[118]

Steel's Infant's Training School was no longer located on the site by the 1850s, and the fortunes of the school paralleled the relative popularity of Presbyterian Methodism in the colony throughout its history. The scholastic focus on educating very young pupils was not a common attitude towards schooling at the time. While there is a measure of archival sources which describe the public events of the school, the methods of education and the material conditions of the pupils are not well known.

[118] *The Colonist*, 17 January 1838

The potential archaeological resource could also be used a dataset for comparative analysis with other religious education institutions dating to the mid to late nineteenth century in the Sydney area. It could also be used to demonstrate the evolution of the education system from the earliest colonial times.

***Association with Individuals, Events or Groups of Historical Importance (Criteria A, B and D)***

The Training School is related to John Dunmore Lang, the first Presbyterian minister in the colony of Sydney[119]. While he did not teach at the school, the school was related to a number of Presbyterian educational and religious institutions in the area. The Methodist and Presbyterian communities were established early in the colony of Sydney, and the 1840s and 1850s when the school was operating was a period of the construction of many of their earliest permanent structures and institutions.

***Aesthetic of Technical Significance (Criterion C)***

From Fowles' 1848 sketch of Pitt Street (Figure 8-9), the Training School was operated out of a two-storey Georgian terrace row-house. Depending on the state of preservation of structural remains, these may possess technical and aesthetic significance.

***Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F and G)***

Building construction on the site of the Training School has been minimal since the building's demolition by 1865. Replacement structures on the site are not likely to possess deep footings and it is likely that archaeological remains related to the Training School survive. Underfloor and cistern deposits, if intact, are likely to have a high research potential. The potential archaeological resource is therefore likely to be able to demonstrate the historical development of the school and be related to those who attended or taught there. Such archaeological remains would be representative of religious or institutional provision of education in the latter half of the nineteenth century.

Potential archaeological resources relating to the school are of local significance under Criteria A, B, E and G.

### 8.4.5 Statement of Archaeological Significance

The Pitt Street study area has the potential for both local and State significant archaeological resources (Table 8-4 and Figure 8-23). The potential archaeological resources of the Pitt Street study area relate to the earliest European settlement of Sydney. Located within the Tank Stream catchment and initially on the edge of the embryonic colonial town, the area began to be developed in the 1820s following an influx of free settlers. With Pitt Street and allotments formalised by the early 1830s, several buildings occupied the sites. Granted to free settlers and emancipated convicts, the area developed as a commercial hub with various businesses, trades and residential properties. The potential archaeological resources could provide evidence of the urbanisation of Sydney, evolution of construction techniques and use of local and imported building materials, living and working conditions of the working and middle class city dwellers, lives and status of women and children, local economies and trades. Results of archaeological investigations and artefacts recovered from the sites could provide engaging material evidence for heritage interpretation and connect the public to the history and values of the place.

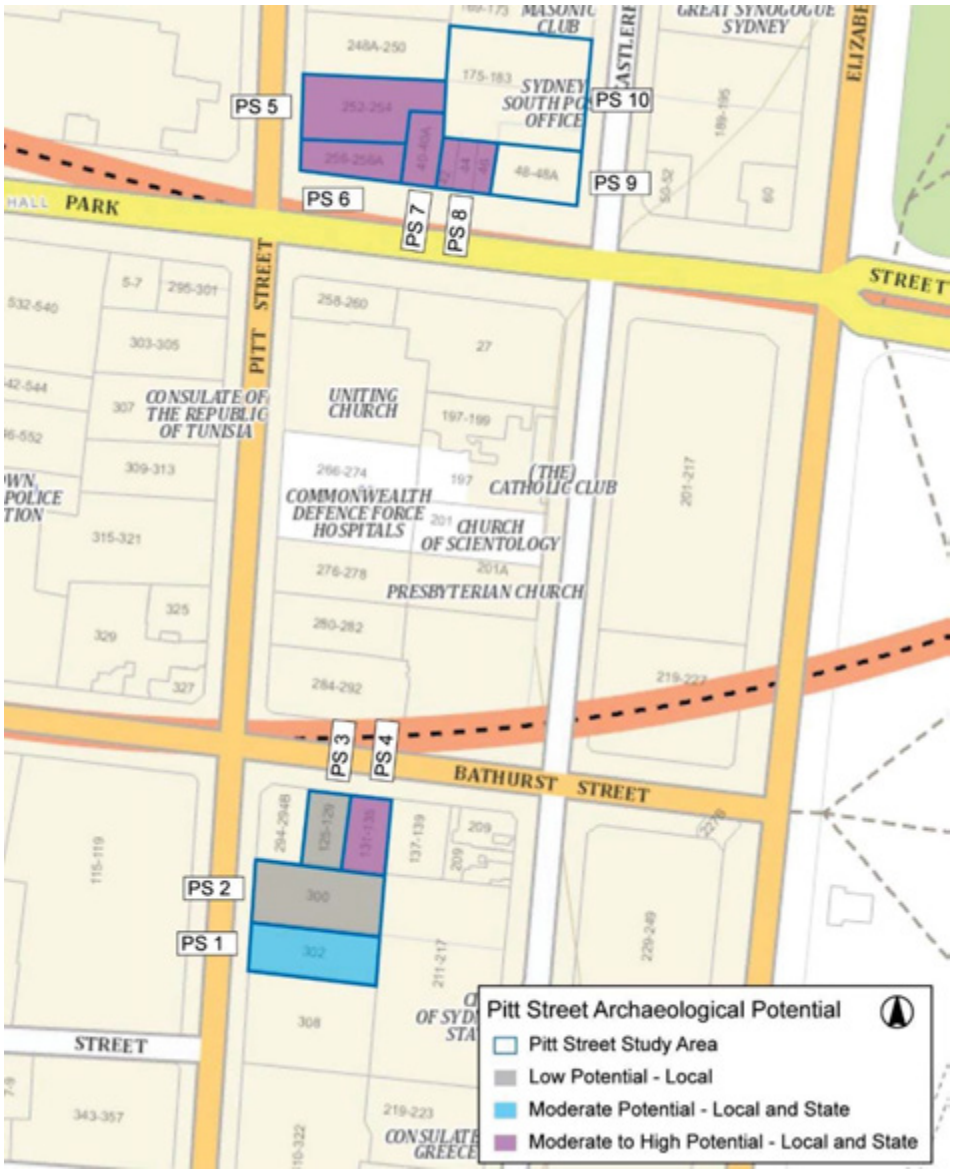
Potential archaeological remains associated with post 1900s development (Phase 3 and Phase 4) are unlikely to have research potential and would not meet the threshold for local significance.

[119] D. W. A. Baker, 'Lang, John Dunmore (1799–1878)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/lang-john-dunmore-2326/text2953, published first in hardcopy 1967, accessed online 1 June 2016.

**Table 8-4: Summary of areas with potential for significant archaeology at the Pitt Street Station site**

| Site Code | Phase | Potential | Archaeological resource | Significance |
|---|---|---|---|---|
| PS 1 | 1 (1788 – 1840) | Low - Moderate | Evidence of natural environment and land clearance, and 1820s/1830s development and occupation | State |
| | 2 (1840 – 1900) | Moderate | Evidence of urban redevelopment, commercial and residential occupation | Local |
| PS 2 | 2 (1840 – 1900) | Low | Basement data not available. Potential for truncated or localised remains associated with urban development and occupation | Local |
| PS 3 | 2 (1840 – 1900) | Low | Basement data not available. Potential for truncated or localised remains associated with urban development and occupation | Local |
| PS 4 | 1 (1788 – 1840) | Low - Moderate | Evidence of natural environment and land clearance, and 1820s/1830s development and occupation | State |
| | 2 (1840 – 1900) | Moderate - High | Evidence of urban redevelopment, commercial and residential occupation | Local |
| PS 5 | 1 (1788 – 1840) | Moderate | Evidence of natural environment and land clearance, and 1820s/1830s development and occupation | State |
| | 2 (1840 – 1900) | Moderate - High | Potential archaeological resources relating to Steel's Infant's Training School (1840s to 1850s). Evidence of urban development, commercial and residential occupation | Local |
| PS 6 | 1 (1788 – 1840) | Low - Moderate | Evidence of natural environment and land clearance, and 1820s/1830s development and occupation | State |
| | 2 (1840 – 1900) | Moderate - High | Evidence of urban redevelopment, commercial and residential occupation | Local |
| PS 7 | 1 (1788 – 1840) | Low - Moderate | Evidence of natural environment and land clearance, and 1820s/1830s development and occupation | State |
| | 2 (1840 – 1900) | Moderate - High | Evidence of urban redevelopment, commercial and residential occupation | Local |
| PS 8 | 1 (1788 – 1840) | Low - High | Evidence of natural environment and land clearance, and 1820s/1830s development and occupation | State |
| | 2 (1840 – 1900) | Moderate - High | Evidence of urban redevelopment, commercial and residential occupation | Local |

**Figure 8-23: Areas with potential for significant archaeology at Pitt Street Station site**




## 8.5 Archaeological Impacts

### 8.5.1 Proposed Works

The proposed design involves a binocular station cavern arrangement with both platforms at the same level under Pitt and Castlereagh Streets. It has two separated entrances with the southern entry on Bathurst Street and the northern entry on the corner of Pitt and Park Street. Following the shaft excavation works, roadheaders are proposed to be launched from the northern shaft to excavate the station caverns and adits.

***Construction impacts***

Ground disturbance and excavation works at the Pitt Street sites include:

- Demolition of existing buildings
- Contiguous piles encompassing cut and cover boxes extending into competent rock
- Bulk excavation of majority of both sites to construct the station.

### 8.5.2 Potential Archaeological Impacts

Removal of ground slab and footings as part of the demolition process has potential to expose and impact significant archaeological remains across most areas of the site (Sites PS 1 to PS 8).

Piling is likely to result in localised impacts to significant archaeological resources.

Bulk excavation is proposed for the majority of both Pitt Street Station construction sites. Bulk excavation at Sites PS 1 to PS 8 would remove all archaeological remains within the excavation footprint. This would result in major impacts to potential archaeological resources of both local and state significance.

**Figure 8-24: Potential archaeological impacts - Pitt Street Station site**

## 8.6 Archaeological Management

The Pitt Street Station construction site has potential to contain multiple phases of archaeological remains of both state and local significance. Large-scale archaeological salvage excavation and monitoring would be required for the majority of the Pitt Street Station construction sites (Sites PS 1 to PS 8). Considering the potential for archaeology, archaeological mitigation at demolition and piling stages would also be required.

**Table 8-5: Summary of archaeological mitigation for Pitt Street Station site**

| Site Code | Potential archaeology | Impact | Mitigation |
|---|---|---|---|
| PS 1 | Moderate potential for State and locally significant archaeological remains dating from c.1820s. | Direct impact – demolition, piling and bulk excavation | • AMS<br>• Monitoring demolition<br>• Salvage |
| PS 2<br>PS 3 | Low potential for locally significant archaeological remains dating from c.1850s. Basement extent unknown. | Direct impact – demolition, piling and bulk excavation | • AMS<br>• Monitoring bulk excavation/Salvage if required |
| PS 4<br>PS 5<br>PS 6<br>PS 7<br>PS 8 | Moderate-High potential for State and locally significant archaeological remains dating from c.1820s. | Direct impact – demolition, piling and bulk excavation | • AMS<br>• Monitoring demolition<br>• Salvage |
| PS 9<br>PS 10 | Nil (basements) | Nil | • Unexpected Finds Procedure |

### 8.6.1 Archaeological Methodology

The following archaeological methodology for the Pitt Street Station construction sites is based on impacts known at EIS stage. Explanation and further details regarding the archaeological process and methodologies identified below are provided in Section 12.0.

- An AMS would be prepared prior to commencement of demolition and construction works at the Pitt Street Station site. The AMS would:
    - Review available basement and existing services data to update archaeological potential if required
    - Review piling design, scope of demolition works and construction methodology
    - Identify specific archaeological mitigation requirements for demolition and piling impacts, such as monitoring during demolition or salvage excavation prior to piling
    - Provide details of the archaeological program within the overall construction program (including demolition, site preparation work, piling and bulk excavation)
    - Provide the environmental sampling strategy for the construction sites
    - Provide additional archival information (eg rates assessments, sands directory) and additional research questions as required
    - Provide details of how the Aboriginal archaeological excavations, if required, would be include in the program.

- Demolition work with potential to expose and impact archaeological remains, such as slab and footings removal, at Sites PS 1, PS 4, PS 5, PS 6, PS7 and PS 8 would be monitored.
- Salvage excavation would be undertaken in Sites PS 1, PS 4, PS 5, PS 6, PS7 and PS 8 prior to construction-related impacts. Generally, this would be undertaken between demolition and bulk excavation stages of construction. The AMS would provide a detailed archaeological program within the construction program.
- Archaeological monitoring would be undertaken at Sites PS 2 and PS 3 during the initial bulk excavation works (pending confirmation of existing basement extent). Salvage excavation would be required if significant archaeological remains are uncovered. The AMS for the Pitt Street site would confirm these archaeological investigation requirements for Sites PS 2 and PS 3.
- Unexpected finds procedure would apply to Sites PS 9 and PS 10.
- Publicly accessible information regarding the historical significance of archaeological remans should be made available during the archaeological investigation program.
- A preliminary results report would be written once archaeological fieldwork has been completed.
- Post-excavation analysis of fieldwork results, artefacts, samples and other archaeological data would be undertaken and included in a final archaeological investigation report.
- Significant archaeological findings would be included in heritage interpretation at this site and for the project.

### 8.6.2 Research Questions

The Heritage Council of NSW has produced a list of historically relevant themes to guide the broader interpretation of archaeological remains. A selection of appropriate themes for the Pitt Street study area is presented in Table 10-5.

**Table 8-6: Historical themes associated with the Pitt Street Station site**

| Australian theme | NSW theme | Explanatory Notes | Comments |
|---|---|---|---|
| 1. Tracing the natural evolution of Australia | Environment – naturally evolved | Features occurring naturally in the physical environment which have shaped or influenced human life and cultures | The Pitt Street study area is located in the former catchment area of the Tank Stream. The original landscape was poorly drained forest. |
| 2. Peopling Australia | Convict | Activities relating to incarceration, transport, reform, accommodation and working during the convict period in NSW (1788 – 1850) | Land-clearing in the study area was conducted with convict labour. Early residential premises would have been partially occupied by either convicts or emancipated convicts. |
| 3. Developing local, regional and national economies | Agriculture | Activities related to the cultivation and rearing of plant and animal species, usually for commercial purposes | Plans from the 1820s show that horticultural gardens were established on early properties in the study area. These gardens were prompted by the difficulties the early colony had in securing food self-sufficiency in the early 19th century. |

| Australian theme | NSW theme | Explanatory Notes | Comments |
|---|---|---|---|
| 3. Developing local, regional and national economies | Commerce | Activities related to buying, selling and exchanging goods and services | The Pitt Street study area has been extensively developed with commercial premises since the 1840s until today. Large-scale commercial enterprises such as auction houses, as well as administrative commercial facilities (property brokers, legal services), have been prominent in the study area throughout its commercial history. |
| 3. Developing local, regional and national economies | Environment – cultural landscapes | Activities associated with the interaction between humans, human societies and the shaping of their physical surroundings | The Pitt Street study area is located in the catchment area of the Tank Stream. The clearing of this area was partially responsible for the pollution of the colony's first freshwater source. |
| 3. Developing local, regional and national economies | Industry | Activities associated with the manufacture, production and distribution of goods | The Pitt Street study area was the location of a number of industries and manufacturing workshops during the 19th century. |
| 4. Building settlements, towns and cites | Accommodation | Activities associated with the provision of types of accommodation, and particular types of accommodation | The Pitt Street study area was the located of a long-used public house and hotel, the Barley Mow Hotel (now the Windsor Hotel). |
| 6. Educating | Education | Activities associated with teaching and learning by children and adults, formally and informally | A short-lived Presbyterian infant's school was established in the study area, called Steel's Infant's Training School. This school operated in the 1840s and 1850s. |
| 8. Developing Australia's cultural life | Domestic life | Activities associated with creating, maintaining, living in and working around houses and institutions | The Pitt Street study area was the location for the residence of the growing 19th century urban population. Artefactual evidence may provide information regarding daily work and living practices. |

The following research questions would guide archaeological investigations of the Pitt Street study area.

### *Early Environment and Land Clearance Activities*

- Are there intact surface soil deposits from the late eighteenth century present at the site?
- Is there evidence of early land clearance, such as burned tree roots, stumps and boles?
- Can paleo-environmental evidence (pollen and other plant microfossils) be extracted from intact soil deposits, and can these evidences provide us with data on native vegetation distribution?
- Do soil and sediment profiles provide evidence of mechanical land clearance practices, such as felling, ploughing and hoeing?
- To what extent did the topography of the study area change from erosion and disturbance after the clearing of native vegetation?
- To what extent did land clearance alter the drainage and catchment systems for the nearby Tank Stream?

- Did early land clearance activities contribute to polluting the Tank Stream?
- How does the archaeobotanical evidence compare with results from other archaeological excavations in the CBD?

### *Settler Housing*

- How intact are structural remains relating to the first residential occupation in the study area?
- Can the earliest phase of construction in the study area be discriminated from later construction?
- Can early yards and horticultural fields be identified?
- Did the occupants of these residences practice trades, and what material signature did these trades leave?
- Due to the relative scarcity of building materials during the first decades of settlement, do any surviving structural remains show evidence of ad hoc construction or architectural adaptation to local building materials?
- Can artefactual and structural evidence inform us of the identity of the occupants who resided at these homes? Can free settlers and emancipated convicts be discriminated from the material evidence?
- Can artefactual evidence provide us with a picture of the daily life of the early settlers in the colony?
- What was the level of material wealth of the early settlers?
- Is there evidence regarding ethnicity and religious practices of the occupants?
- How do archaeological deposits from domestic contexts compare with other early Sydney excavations and material deposits?
- How does the domestic archaeological signature from the early 1800s compare to material deposits from later Pitt Street nineteenth century archaeological signatures?

### *Mid- to Late-Nineteenth Century Urbanisation*

- Are structural remains of the former brick buildings in the study area still present? To what extent can they be discriminated against earlier and later construction phases?
- Does the artefactual record provide information regarding the daily life and relative material wealth of the occupants?
- Is there evidence regarding ethnicity and religious practices of the occupants?
- Does artefactual evidence of the trades that were conducted in these buildings survive? How does this evidence compare with other excavated artisanal and workshop material datasets from this period?
- Are structural features such as footings and wells intact and of demonstrable quality for public engagement with the site?
- How does the material signature of the site show the change from residential to commercial use over time?
- Does this site's urban development mimic the pattern in other parts of the CBD or suburbs?
- How does the artefact assemblage compare with other similar sites in the CBD or inner suburbs?

### *Steel's Infant's Training School*

- Are there intact and recognisable structural remains of the brick Infant's School?
- To what extent do former yards and cesspits survive from the school in the study area?
- Fowles' 1848 sketch shows that the building does not resemble a purpose-built school, but rather appears similar to a Georgian residential house. Can the use of this building as a school be recognised archaeologically?
- Do artefact deposits, particularly underfloor deposits, inform us of the daily life and educational practices of the school and the school's students?
- Can the material wealth and identity of the pupils be ascertained from discard deposits?
- How does the archaeological evidence from the school compare with other Methodist and nineteenth century religious schools?

Note: additional research questions may be developed depending on the archaeological findings and additional archival research.

# 9.0 CENTRAL STATION

## 9.1 Site Location

The Central Station site is predominantly located within the boundary of the present Central Railway Station, located in the City of Sydney LGA (Figure 9-1). The station would be located below the existing platforms 13, 14 and 15. A new vehicle access would involve the construction of a bridge over the rail corridor to link to Regent Street. The site location for this analysis is based on the total area encompassed by the construction, as well as a number of ancillary areas which will be used or impacted during the construction phase. These areas will be referred to as the Central Station site.

### 9.1.1 Land Parcels

The Central Station site is located on land parcels presented in Table 9-1. As Central Station is designated as a single lot (Lot 118//DP 1078271), it has been subdivided into different site code regions for clarity. These site codes and land parcels are illustrated in Figure 9-1.

**Table 9-1: Land parcels and contemporary land use in the Central Station site**

| Site Code | Description of Area | Lot | Address |
|---|---|---|---|
| **CS 2** | Area coinciding with Platforms 13, 14, 15, adjacent rail corridor areas and access roads; extending from the southern edge of the Devonshire Street pedestrian tunnel to the Eddy Avenue access road. Not including area covered by CS 3 (station box excavation area) | Lot 118 DP1078271 | Central Station, Haymarket, NSW |
| **CS 3** | Area coinciding with Platforms 13 and 14 and intervening rail corridor; extending from southern edge of Devonshire Street pedestrian tunnel to near northern edge of platform (station box excavation area). | Lot 118 DP1078271 | Central Station, Haymarket, NSW. |
| **CS 4** | Sydney Yards siding area located between the rail corridors of the T1 line (associated with platform 16) and the country services line (associated with platform 15). | Lot 118 DP1078271 | Central Station, Haymarket and Chippendale, NSW. |
| **CS 5** | Area Across country services rail line, between rail siding and rear of Regent Street properties. Area approximately 600m$^2$ in size; 60m E-W and 10m N-S. | Lot 118 DP1078271 | Central Station, Chippendale, NSW. |
| **CS 6** | Two- and three-storey properties on Regent Street | Lots 1 through 10, DP 224852 | 56, 58, 60, 62 & 64 Regent Street, Chippendale NSW. |
| **CS 7** | 680m perimeter line (2m wide) surrounding Central Station in segments from the corner of Elizabeth St/Foveaux St in the north, along the centre line of platform 2/3 in the west and between platform 2/3 and the Devonshire St tunnel in the south. | Lot 118 DP1078271 | Central Station and Elizabeth Street, Haymarket and Chippendale NSW. |

| Site Code | Description of Area | Lot | Address |
|---|---|---|---|
| **CS 8** | Approximately 1,000m$^2$ area located directly to the east of Mortuary Station, overlying the existing rail corridor cess and vehicle parking hard stand. | Lot 118 DP1078271 | Central Station, Chippendale NSW |

**Figure 9-1: Central Station site showing existing modern development and site codes**


## 9.2 Historical Analysis

### 9.2.1 Early European Settlement and the Devonshire Street Cemetery (1788 – 1855)

Early European settlement in the colony of Sydney was predominantly focussed on the foreshores of Port Jackson and, until the 1820s, the southern edge of the settlement of the town was near where Bathurst Street it today[120]. For the first twenty years of the colony, the area where Central Station is now located was not developed, consisting primarily of scrub-covered sand dunes[121]. The only noticeable settlement in this area prior to the 1820s was the development of the Brickfields, approximately 300 metres to the north-west of the study area.

The first European development in the area consisted of convicts clearing the vegetation to the west of the study area to lay out the road to Parramatta from 1789 to 1791. By the early nineteenth century the road became a critical thoroughfare between Sydney and Parramatta for commercial movement

[120] Shirley Fitzgerald, Haymarket, Dictionary of Sydney, 2009, http://dictionaryofsydney.org/entry/haymarket, viewed 1 Jun 2016.
[121] Thorpe, W. 1999. Northern Concourse Central Station, Archaeological Assessment. Report prepared for Abigroup. p. 8.

of goods. In order to ensure funding for the maintenance of the road and its 37 bridges, a toll-gate was constructed at the junction of Pitt and George Streets by 1821 (Figure 9-2). This toll gate marked the official southern boundary of the township of Sydney[122].

By 1820 the Old Burial Ground, located on George Street at the corner with Druitt Street (a site now occupied by Sydney Town Hall), had reached capacity and a new burial ground was required. The new burial grounds, called the Sandhills Cemetery or the Devonshire Street Cemetery, was consecrated in 1820[123]. The site was chosen due to the remote location of the cemetery compared to the growing town of Sydney. Located at the farthest outer limit of the town past the Brickfields, the cemetery was situated at a suitable distance to avoid inconveniencing the gentrifying township.

Also situated at the outer limit of the township was the Benevolent Asylum, a poor house constructed in 1821 by the Benevolent Society of New South Wales. The Benevolent Society was a charity that had been established by journalist Edward Smith Hall, the asylum operated on private donations for the majority of its operation. Within a year it was housing over fifty people and, with additional wings being added to the building by 1840, over 1,000 people were living at the asylum which was providing shelter, food and medical assistance.

Also established in 1847 in the Central Station site was a Wesleyan Mission chapel on Regent Street. The Wesleyan mission in Australia was first founded in 1813 and was focussed on charitable support and education for the poorer segments of society in the colony. With partial support from the colonial government and the Church of England, the Wesleyan Mission built a number of chapels in Sydney, Parramatta and in the new settlements along the Hawkesbury. The original chapel was converted to use as a school and a hall when a larger stone church was constructed in 1867 on an adjacent site[124] (Figure 9-4).

While the northern part of the Central Station site was occupied by the Devonshire Street cemetery and the western portion occupied by the Wesleyan church and school, the majority of the study area was not developed during this time (Figure 9-5). The southern part of the station site was an area of public pasturage, called the Cleveland (named after the Cleveland estate to the east) or Government Paddocks[125]. These paddocks were owned by the government and used ostensibly for public recreation and pasturage. Their location at the outer edge of the town, and the perceived insalubriousness of the area around the Benevolent Asylum, led to complaints of robbery and theft in the paddock by the 1840s[126]. Sketches from this time show that the paddock was undulating sand dune with thin grass (Figure 9-6), where on dark nights the “ditches and holes serve effectually to conceal any footpads”[127].

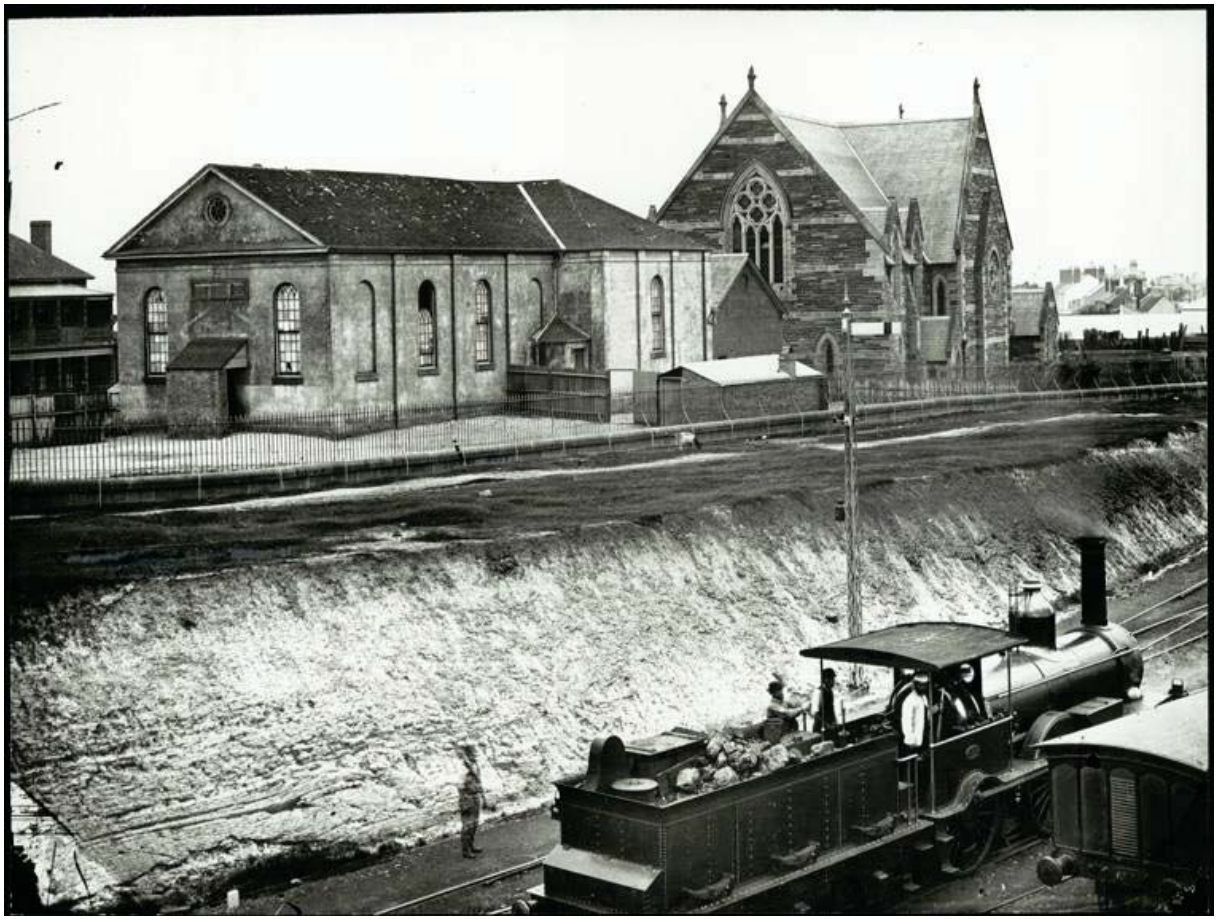
[122] Terri McCormack, Benevolent Society and Asylum, Dictionary of Sydney, 2008, http://dictionaryofsydney.org/entry/benevolent_society_and_asylum, viewed 1 June 2016
[123] *The Sydney Gazette and New South Wales Advertiser*, February 5 1820.
[124] State Heritage Inventory Sheet “Co-Masonic Temple including interior” http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2424289 viewed 1 June 2016.
[125] Rappoport Pty Ltd & NSW Government Architects Office. 2013. *Central Station Conservation Management Plan*. pp. 32 – 35.
[126] *The Australian Magazine* 15 May 1847
[127] *Ibid.*

**Figure 9-2: Sketch of toll gate with adjacent Benevolent Asylum (Poor House) in 1821 by Edward Mason, facing south[128]. The site of the future Central Station is located on the left of the image, behind the Benevolent Asylum**


**Figure 9-3: Extract from the 1845 Sheilds plan of Sydney showing the burial ground and Government Paddocks**


[128] Mason, Edward, 1821 – 1823 [1892] *Views of Sydney and Surrounding District*, State Library of New South Wales Collection, http://acms.sl.nsw.gov.au/album/ItemViewer.aspx?itemid=886747&suppress=N&imgindex=17, viewed 1 June 2016.

**Figure 9-4: 1870 Photo of 1867 Wesleyan Church (right) and 1847 Wesleyan School Hall (left of frame)[129]**



[129] State Records NSW http://investigator.records.nsw.gov.au/asp/photosearch/photo.asp?15051_a047_002880 viewed 1 June 2016.

**Figure 9-5: 1848 plan of proposed railway station and the Redfern and Haymarket area. The green and yellow shaded areas between Devonshire and Cleveland Streets are the location of the Government Paddocks [130]**


**Figure 9-6: View of Sydney looking north from the Government Paddocks, 1844[131]**


[130] Plan of proposed Central Station, 1849. Note that this plan shows the original proposal to build the railway station south of Hay Street. The first railway station was built in 1855 south of Devonshire Street. SR Map 6408. http://gallery.records.nsw.gov.au/index.php/galleries/through-the-lens-central-railway-station/ viewed 1 June 2016.
[131] Prout, J.S. 1844. The City of Sydney NSW from the Government Paddock. National Library of Australia, http://nla.gov.au/nla.obj-135613619/view, viewed 1 June 2016.

### 9.2.2 First and Second Railway Stations (1855 – 1900)

The development of passenger railway technology in England in the early 1830s coincided with the opening up of agricultural and pastoral settlement of the interior of New South Wales. The need to effectively ship wool from the interior to the coastal ports for export drove the economic demand for the growth of railways[132]. The railway line was proposed to operate between the two main settlements at Sydney and Parramatta, with the Parramatta station constructed near Mort Street in what is now the suburb of Granville. The first Sydney station was originally called Redfern Station, as it was constructed on the Government Paddock near the newly subdivided Redfern estate. Public interest in the new station was considerable, with large crowds assembling to watch the construction of the station (Figure 9-7) as well as large crowds assembling for the first locomotive journey in the colony.

The station consisted of a single platform with a double railway line and a small number of semi-permanent iron buildings for carriages and offices (Figure 9-8). Trigonometric survey plans from the 1850s and 1860s show a number of additional carriage sheds constructed at the station by 1865, with a train turntable installed to allow steam locomotive engines to be turned around before entering the workshops of carriage sheds. This railway turntable continued to be used up until it disappears from station plans in the 1890s, shortly before the early twentieth century enlargement of the station commenced (Figure 9-9)[133].

The railway station was constructed on predominantly open ground in the Government Paddocks, where the upper course of Blackwattle Creek was located. This creek was converted to a sewerage and stormwater drain underneath the rail corridor towards the south part of the station in the 1850s and discharged into an open culvert which drained water and refuse down the cut of the Darling Harbour goods line. By the 1870s the whole drainage line was covered and connected with the extension of the Sydney sewerage network, becoming part of the Prince Alfred Sewer, which drained into Blackwattle Bay. The sewer was originally a series of brick drains and stone culverts, however continual renovation of the sewer main occurred during the progressive phases of expansion of the railway station. Portions of the sewer which maintain their original late nineteenth century fabric are predominately located outside the Central station area to the east and west.

Due to the semi-permanent structures and the limited amount of rail lines at the first station, the second railway station was constructed in 1874. The Mortuary Station had been constructed in 1869 to handle the movement of bodies to the new cemetery at Rookwood once the burial grounds in Sydney were declared full. By this time also, the passenger railway and goods railway networks had substantially increased in NSW and the first railway station did not possess sufficient facilities to handle the demand. A permanent station building was constructed facing Devonshire Street in a Neo-Classical style and by the 1880s the development of workshops, siding yards and carriage works had expanded to such a degree that a new site was chosen in Eveleigh to house further expansion[134].

The second railway station expanded the buildings, sidings and facilities in the same location at the first station. By 1895 the number of passenger platforms had increased to two single-platforms and two double-platforms, with a profusion of sidings, goods yards, station buildings, workshops and carriage sheds, as well as the Mortuary Station facilities and Darling Harbour goods line, filling up the remainder of the site (Figure 9-10, Figure 9-11).

During this period, the Devonshire Street cemetery had been declared at capacity, and took no more burials from 1865 onwards. Like the Old Sydney Burial Ground before it, the Devonshire Street Cemetery was no longer situated at a polite distance from the centre of the city of Sydney; rather the city had grown up and around it instead. Images from the 1890s, shortly before the cemetery was

[132] Rappoport Pty Ltd & NSW Government Architects Office. 2013. p. 31
[133] Trigonometric Survey of Sydney, 1855 – 1865. Historical Atlas of Sydney, http://www.photosau.com.au/CoSMaps/scripts/home.asp viewed 1 June 2016.
[134] *Rappoport Pty Ltd & NSW Government Architects Office. 2013*. pp. 38 – 39.

resumed for the expansion of the station, show that the original brick walls for the burial ground were still intact (Figure 9-12). The roads surrounding the cemetery are at a substantially reduced level at the eastern side, showing that the original undulating sand dunes that lay at the eastern base of the ridge line that rises to Surry Hills had been extensively modified by this time. The ground level of the cemetery descends to the west, preserving much of the original ground level of the Central Station area.

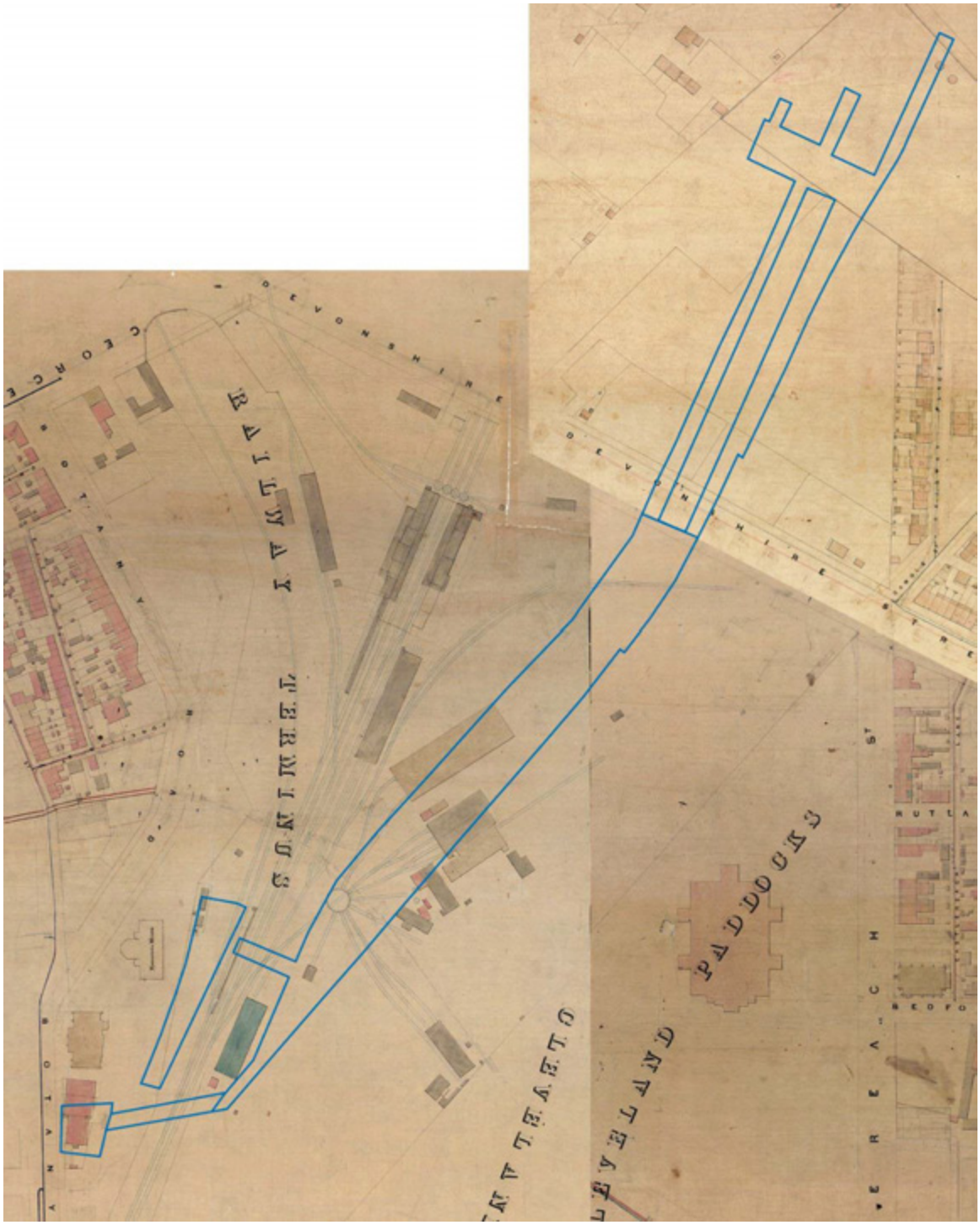
By 1898 the Wesleyan Society was suffering reduced membership and revenues and, following the 1880s and 1890s commercial expansion along Regent Street, subdivided their churchyard in Chippendale. The school hall was demolished and a new hall constructed (using some of building material from the original 1847 structure) to build a new hall closer to the church; the remainder of the yard was constructed on and commercially leased. The 1898 hall is still present on the site, and the late 1890s Federation two-storey brick commercial buildings are also largely intact today[135].

**Figure 9-7: 1850 painting of the turning of the first sod of ground for the construction of the first railway station[136]**

**Figure 9-8: 1871 Photo of First Sydney Railway station carriage buildings[137]**

[135] State Heritage Inventory Sheet “Co-Masonic Temple including interior”.
[136] Rae, J. 1850. “Turning the first turf of the first railway in the Australasian colonies at Redfern, Sydney, NSW 3rd July 1850”. Mitchell Library Collection, http://acmssearch.sl.nsw.gov.au/search/itemDetailPaged.cgi?itemID=404690 viewed 1 June 2016.
[137] http://gallery.records.nsw.gov.au/index.php/galleries/through-the-lens-central-railway-station/ viewed 1 June 2016.

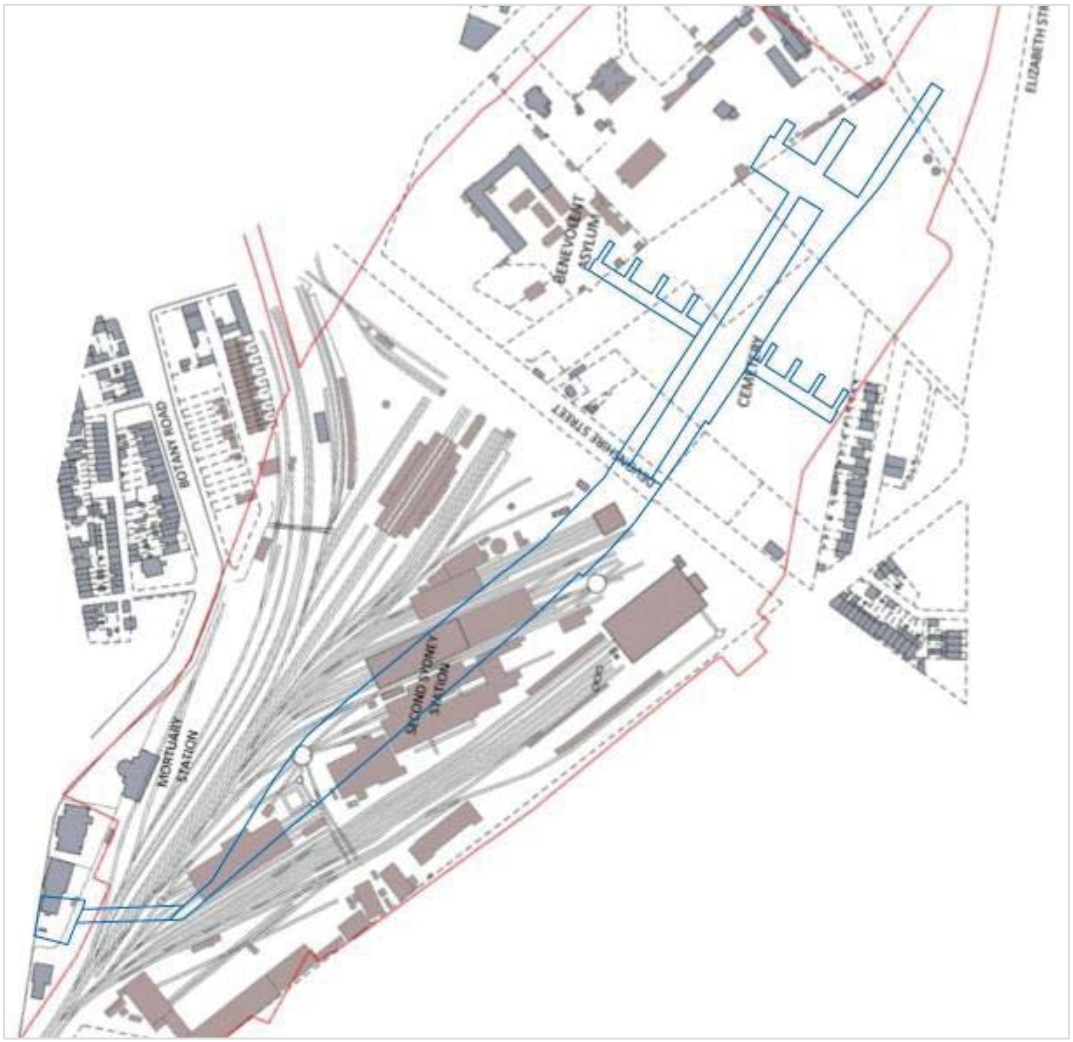
**Figure 9-9: 1865 Trigonometric Survey of Sydney map of railway station facilities with Central Station site shown in blue[138]**



[138] Trigonometric Survey of Sydney, 1855 – 1865. Historical Atlas of Sydney, http://www.photosau.com.au/CoSMaps/scripts/home.asp viewed 1 June 2016.

**Figure 9-10: 1895 photo of the second railway station, facing south-east from Pitt Street[139]**


**Figure 9-11: Second Railway Station map from CMP (Central Station site shown in blue) 1895**




[139] Kerry & Co. 1895. "Original Redfern Railway Station, Sydney". National Library of Australia, http://nla.gov.au/nla.obj-148351252/view viewed 1 June 2016.

**Figure 9-12: 1890s photo of the Church of England area of the Devonshire Street Cemetery, facing south from north-eastern corner[140]**

### 9.2.3 Twentieth Century Land Resumptions and Station Expansion (1901 – 1930)

The existing nineteenth century railway station terminated the suburban railway lines at Devonshire Street, after which trams were the only other public transport into the centre of the city of Sydney. Proposals to bring the suburban railway network into the city, as well over the harbour by bridge, had been raised in the 1880s and 1890s. Economic depression in the 1890s prevented these plans from being developed or realised. While the inner city railway stations were not developed until the 1930s, the construction of a larger station facility which could accommodate the increased number of railway lines that terminated at Central was required. In the late 1890s and early 1900s the design for the current Main Concourse was developed, which involved a 'head house' design to link the terminating railway lines with intersecting tram and vehicle traffic[141].

Two proposals for this station were presented – the first at Hyde Park and the second over the Devonshire Street cemetery. The latter proposal was adopted and the clearing of the Devonshire Street Cemetery commenced in 1901. On the 17 January 1901, the government issued a notice declaring that representatives of any deceased in the cemetery must remove their relatives within two months[142]. The high brick walls of the cemetery were taken down and then the sand hills of the cemetery were excavated by labourers, with much of the spoil being used to build new embankments in Belmore Park[143]. The sand hills were noted as significantly higher than the level of the existing station line on the eastern side, with infill required to create a level platform on the western side[144].

[140] Photograph Collection of Redfern Railway Station and Central Railway Station, Sydney, 1871 – 1920. State Library of New South Wales, http://acms.sl.nsw.gov.au/album/ItemViewer.aspx?itemid=1017387&suppress=N&imgindex=6 viewed 1 June 2016.
[141] *Rappoport Pty Ltd & NSW Government Architects Office. 2013*. pp. 46 – 48
[142] *The Sydney Morning Herald*, 25 January 1901.
[143] *The Sydney Morning Herald*, 3 January 1902
[144] Thorpe, W. 1999. p. 11.

**Figure 9-13: 1902 photo of the cleared Devonshire Street Cemetery area for the construction of the Main Concourse, view from Pitt Street facing south [145]**


While the new railway terminus and main concourse level were completed in 1906, the upper level of the station and the clock tower were not completed until 1921. New tram lines were constructed and connected to the Eddy Avenue and upper concourse interchange, which was built level with the railway platforms to the south. Underneath the concourses and platforms, subways and service rooms were constructed including coal stores, kitchens, bathrooms and loading docks[146]. The Devonshire Street tunnel was largely completed at this time, allowing pedestrian movement along the alignment of the former Devonshire Street road once it was covered over by the enlarged station.

To ease the tram and vehicle congestion in the city of Sydney, electrified subway rail lines and stations were proposed in 1909 and work commenced in 1917. A double underground railway was constructed which linked with the new rail services to cross the Sydney Harbour Bridge when it was completed in 1932. In order to cater for the additional railway lines, Central Station had four additional double platforms constructed on its eastern side by 1926 (today's platforms 16 – 23). The construction of these new platforms resulted in the demolition of the existing three eastern platforms, rail sidings and goods sheds[147].

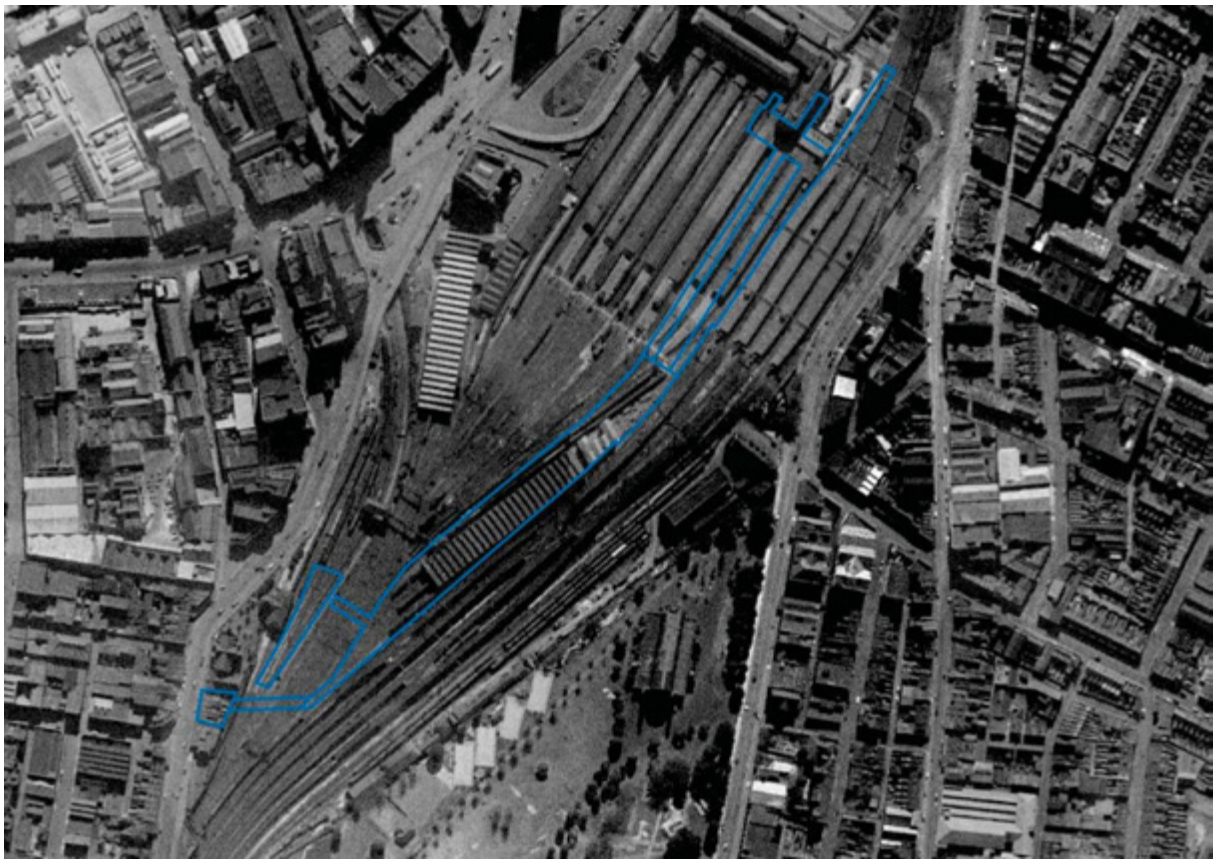
[145] Photograph Collection of Redfern Railway Station and Central Railway Station, Sydney, 1871 – 1920. State Library of New South Wales, http://acms.sl.nsw.gov.au/album/ItemViewer.aspx?itemid=1017387&suppress=N&imgindex=16 viewed 1 June 2016.
[146] *Rappoport Pty Ltd & NSW Government Architects Office. 2013*. pp. 47 – 48
[147] *Ibid.* pp. 53 – 54.

### 9.2.4 Mid-to-late Twentieth Century Station Modifications (1930 – Present)

A number of renovations were made to Central Station since the completion of its primary facilities in 1926. The largest renovations were the incorporation of new platforms for the Eastern Suburbs Railway in 1979, after more than thirty years of delays in their construction. The Eastern Suburbs Railway involved the excavation of new tunnels north of the station with two double-platforms constructed underneath what is now the footpath on Chalmers Street. The platforms were constructed on top of each other, however the lower platforms were never used and have no railway lines attached to them[148].

In the 1950s and 1960s, infrastructure located within the Sydney Yards area was progressively removed or upgraded as steam locomotives were replaced with diesel engines. This resulted in the removal of coal storage sheds and water tanks in the Sydney Yards. The east carriage shed (Figure 9-14), located in the Sydney Yards, was removed after 1987, and the majority of the Sydney Yards consists now of sealed bitumen and open ground[149].

**Figure 9-14: 1943 Aerial photo with Central Station site shown in blue, source: LPI**



## 9.3 Archaeological Potential

### 9.3.1 Previous Archaeological Studies

A number of archaeological investigations and assessments have been made in the area of Central Station. The Central Station Conservation Management Plan (CMP) 2013 has included a general

[148] *Ibid*. pp. 56 – 57.
[149] *Ibid*. pp. 59 – 60.

assessment of archaeological potential and significance in their guidelines[150]. In their assessment they show areas of archaeological potential associated with the Devonshire Street cemetery, the location of former nineteenth century buildings and laydown areas of former rail sidings and infrastructure. The archaeological potential mapping does not include potential for former rail infrastructure in the south-west, though there is likely to be such buried remains.

Some areas within Central Station have been extensively disturbed, in particular where subway rail tunnels and below-ground concourses have been constructed. Thorp conducted an archaeological assessment of the northern concourse at Central Station in 1999[151]. Her assessment concluded that because of the earthworks involved in the construction of the third station buildings and platforms, the area below the northern concourse of Central Station exhibited no potential to recover remains associated with the Devonshire Street cemetery.

However, test excavations in the Western Forecourt of the station in 2009 revealed building demolition deposits associated with the former nineteenth century Benevolent Asylum[152]. These deposits were located less than a metre below the forecourt, in an area that Thorp had characterised as built up to make the site level[153]. The lack of archaeological excavations, and only limited shallow geotechnical investigation, within the boundary of the Central Station precinct has meant that it is difficult to ascertain the uniformity of ground disturbance across the site.

Excavations conducted below Sydney Town Hall in 1974, 1991[154] and 2007/2008[155] investigated the Old Sydney Burial Ground which is located below the Town Hall. The site of the first planned cemetery in the colony, the Old Burial Ground was established in 1792 and closed in 1820 when it was determined to be at capacity and the new burial ground at the Sandhills (Devonshire Street) was established. Following several decades of neglect, the site of the burial ground was chosen as the location of St Andrews Church and the Sydney Town Hall, which were both constructed on the site between 1842 and 1869. Prior to the construction of these buildings, the graves were ostensibly exhumed and relocated to Rookwood Cemetery. Archaeological investigations revealed that while most of the interments had been removed, a number had been overlooked during exhumation. In addition, partial interments, damaged tombs and tombstones still remained. Even in those graves that had been exhumed in the nineteenth century, grave locations and grave cuts were clearly identifiable.

Archaeological remains associated with nineteenth and early twentieth century rail yards were examined during excavation works at the Eveleigh Rail Yards near Redfern Station in 2000. Excavations below former workshops revealed remains from former furnaces and flues. Industrial waste such as ash, brick and metal slag was located in the base of former furnaces. The original construction of many of the workshops and carriage sheds involved the excavation of the local sand to basal clay in order to provide a resilient foundation for the buildings; however, in some cases ground was levelled with introduced fill to create a level surface[156].

Excavation at the site of original 1855 Parramatta Railway Station located the train wagon turntable[157]. This turntable was located below redeposited railway ballast as well as backfilled local clay. The remaining turntable consisted of a radial arrangement of large wooden blocks up to 34 cm in width and laid level, on which the basal ironwork for the turntable was believed to have been placed

[150] *Rappoport Pty Ltd & NSW Government Architects Office. 2013*. p. 111.
[151] Thorpe, W. 1999.
[152] *Op cit.* pp. 64 – 65.
[153] *Op cit.* p. 11.
[154] Lowe, A. & Mackay, R. 1992. "Old Sydney Burial Ground", *Australasian Historical Archaeology* vol 10.
[155] Casey & Lowe, 2008. *Peace Hall, Sydney Town Hall, Results of Archaeological Program (Interim Report).*
[156] Thorp, W. 2000. Archaeological Report for the Eveleigh Yards. Report prepared on behalf of NSW Department of Public Works.
[157] Higgingbotham, E. 1995. "Report on the Stage 2 Archaeological Excavation of the Site of the 1855 Parramatta Railway Terminus, Mort Street, Granville NSW". Report prepared for the State Rail Authority, NSW. pp. 12 – 14.

before it was removed during demolition. Several wooden wedges which would have been used to secure the iron base of the turntable were also identified.

### 9.3.2 Land Use Summary

European occupation of the Central Station study area has been divided into four distinct phases of historical activity, which are:

- Phase 1 (1788 – 1855) early European settlement and the Devonshire Street Cemetery. Early land use associated with the construction of early brick and sandstone buildings, road building, wall construction, pasturage and the development of the Devonshire Street cemetery. Construction of first Wesleyan chapel and conversion to a school hall.
- Phase 2 (1855 – 1900) first and second railway stations. Land use predominantly associated with the development of Sydney's first railway station and the expansion of the railway station. Earthworks and industrial rail infrastructure developed on the site at this time. Road building and grading in the area as nearby subdivisions are laid out and built on. Construction of early water and sewerage infrastructure. Redevelopment of properties on Regent Street at the end of this phase.
- Phase 3 (1900 – 1930) twentieth century land resumptions and station expansion. Land use predominantly associated with the enlargement of Central station north of Devonshire Street and the large-scale earthworks required for this expansion. Exhumation of burials. Excavation of large areas of tunnels, basements and below station services. Renovation of existing station sidings and facilities in southern part of the station.
- Phase 4 (1930 – present) mid- to late-twentieth century station modifications. Further excavation of below-ground service tunnels and new underground platforms. Redevelopment of carriage sheds and rail sidings areas.

### 9.3.3 Previous Impacts

The Central Station site is located in a level area on the western side of the former sand dunes and hill slopes that led up to the crest of the Surry Hills on Crown Street. This landscape has been significantly modified since European settlement, predominantly from work associated with the construction of Central Station in its three phases of development. However, this ground disturbance has not been uniform across the site.

The construction of the third (current) railway station with the main concourse on Eddy Avenue involved the excavation of large amounts of pre-existing sand dune in the eastern part of the site. Areas on the sloping west-ward side were filled in to make the site level. The Devonshire Street cemetery was exhumed, excavated and graded level prior to the construction of the concourse buildings (Figure 9-15). The burial ground had a variable ground level, with a higher elevation in the east than in the west. The interments were also excavated below the previous ground level, up to potentially two metres deep. Despite the clearing and levelling of the burial ground in 1901 and 1902, the degree to which the vertical profile of the graves is disturbed throughout the entire cemetery is uncertain. While the majority of the cemetery was likely removed, these impacts may not have been uniform or complete.

Further excavation between Eddy Avenue and Devonshire Street occurred to build the below-platform tunnels and storage areas at the station. These tunnels and storage areas are not uniform across the northern part of the site however. While below-platform elements have been installed, the extent to which these excavations continue underneath the rail corridor is not certain.

**Figure 9-15: 1901 photo of interments being exhumed in the Devonshire Street cemetery[158]**

South of Devonshire Street, ground disturbance has been less severe. Multiple rail corridors have been constructed, modified and rebuilt. However, the deepest grade cutting is associated with the Darling Harbour goods line, which is located outside of the Central Station site. The construction and later removal of rail lines and sidings may not necessarily have required extensive excavation. While the upper surfaces of this area are disturbed from these infrastructure installation activities, the depth of this ground disturbance is unknown.

The Sydney Yards area has seen several phases of rail line, workshop and carriage shed remodelling since the station was constructed. While the renovation of these areas is likely to have involved excavation, once again the depth of these excavations are unknown.

The construction of the four Federation-era two-storey commercial buildings on Regent Street is not likely to have caused deep ground disturbance. Buildings of this era do not typically have deep footings and are often constructed on a layer of supporting fill to level the ground. It is highly likely that previous archaeological deposits below these buildings would remain intact.

Geotechnical investigations conducted for the Sydney Metro project have shown that underneath the rail corridor between platform 15 and 16, local Quaternary sands are present at a depth between 0.6 metres and 1.7 metres. These sand deposits are up to 3.6 metres thick. The degree to which these sand deposits represent imported or redeposited local sand as fill or back-fill, or in situ Tuggerah sands, is unknown.

### 9.3.4 Potential Archaeological Remains

***Phase 1: 1788 - 1855***

Archaeological remains in the Central Station site would be associated with the Government Paddocks and the Devonshire Street cemetery. Tree and bush clearance in this area occurred within the first twenty years of settlement, partly associated with the construction of the nearby Parramatta Road. The soils in the area are aeolian deposited Quaternary sands, stabilised by native vegetation. After land was cleared, the intact ground surfaces were rapidly eroded. As such, archaeological

[158] Photograph Collection of Redfern Railway Station and Central Railway Station, Sydney, 1871 – 1920. State Library of New South Wales, http://acms.sl.nsw.gov.au/album/ItemViewer.aspx?itemid=1017387&suppress=N&imgindex=16 viewed 1 June 2016.

deposits associated with land clearance, timber getting and road construction are unlikely to have been preserved.

The Government Paddocks are similarly archaeologically ephemeral. The area had no buildings constructed on it from the time of European settlement to 1855, with the exception of wooden fences constructed on the outer margins of the field (visible in Figure 9-6). The study area crosses the line of this former boundary fence at the southern alignment of Devonshire Street. Isolated artefactual deposits relating to the incidental use of the paddock for recreation or animal grazing may also be present.

The Devonshire Street cemetery was located in the northern half of the Central Station site. Remaining material from the cemetery could include structural remains such as former footings for the deconstructed burial ground walls, residual brick and stone tombs, and tombstones. Coffins, coffin furniture and human skeletal remains and associated artefacts may also be preserved. Evidence of grave excavation in the form of cut soils and potential clay and sand backfill would be located from the base of the grave shaft to the top of the former ground level.

The first Wesleyan Chapel in Chippendale was built in 1847. It was repurposed as a school and meeting hall when a larger Wesleyan sandstone church was constructed on an adjacent site in 1867. This hall was demolished in 1898. The 50-year use of the Wesleyan Chapel and hall is likely to have left archaeological deposits associated with an early Methodist church and later conversion to a school hall. Underfloor and rubbish deposits could have accumulated prior to the development of municipal rubbish collection in the mid-nineteenth century. The former churchyard contained three out-buildings, either as sheds or as outhouses, all located in the study area. The latter could have preserved cesspits including artefact-rich backfills located below them.

***Phase 2: 1855 – 1900***

The first and second railway stations were constructed south of Devonshire Street between 1855 and 1874. Rail cuttings, railway lines, carriage workshops and sheds were constructed in what is now the Sydney Yards throughout this period, with various phases of reconstruction and re-use. Preserved evidence of these activities could include rails; sleepers and ballast; iron, wooden and concrete foundations; brick and stone footings for structures; wooden beams and potential post-holes; metal slag and ash from workshops and discarded carriage and locomotive items.

Significant expansion of the Sydney sewerage network occurred throughout the 1850s, with a brick and stone stormwater drain being constructed underneath the railway lines of the first Central Station at that time. Subsequent renovations to the sewerage line (the Prince Alfred Sewer) and to Central Station has significantly impacted the integrity of the original drain. Current Sydney Water plans (DBYD plan 2016) indicate that none of the original stone and brick drains remain below Central Station. Portions of the original fabric, or undocumented branches of the sewerage line could still remain however. The drain ran east to west underneath the Sydney Yard. Preserved evidence of the sewer could include sandstock brick barrel drains, sandstone culverts and arches, and isolated artefact deposits.

The second station building was located on the southern edge of the former Devonshire Street alignment. The station platforms were expanded over time to encompass up to 13 platforms (including Mortuary Station) with a profusion of work and carriage sheds. The deconstruction of these buildings was required for the extension of passenger platforms from the new station building on Eddy Avenue, although the southern extent of these buildings are located partially underneath the Sydney Yards. Archaeological remains associated with these former structures may include brick and sandstone footings, rubbish deposits, remains of former coal cellars, storage rooms and yard surfaces.

A train carriage/wagon turntable is identifiable on 1855 and 1895 plans of the railway station. It was no longer in operation during the third phase of Central Station after 1906. 1855 plans for the wagon turntable show that it was located at the junction of only two railway lines, but by 1865 it is connected to nine railway lines. It is possible that the wagon turntable was enlarged or renovated during the 1860s until near the end of the century as further workshops and carriage sheds were constructed on the site.

Wagon turntables are likely dismantled and the substructure then infilled, and archaeological deposits associated with these two turntables would include wooden beams, joists and pegs; metal supporting elements, frames and nails; potential wooden or metal turntable pivots; and outer brick walls and footings of the circumference of the turntable.

The growth of Central Station during this time involved the progressive increase in railway lines and accompanying rail infrastructure across the site. Archaeologically recognisable items would include rail beams, sleepers and ballast; signalling equipment and rail point technology. The latter pieces of equipment, if preserved, would provide a potentially datable technological assemblage. These technological changes would assist in individuating phases of the intertwined and interconnected development of rail infrastructure at the station.

The expansion of Central Station in the early twentieth century involved the removal of prior station platforms and their replacement with the current alignment of platforms 1 – 23. Previous platform infrastructure may remain within or below the existing platforms. Archaeological remains associated with nineteenth century platforms would consist of brick and concrete footings and walls. Remains of former station signs, canopy pylons and supports could also be present.

The Devonshire Street cemetery was closed for interments by the 1860s, however accounts from 1901 mention the accumulation of rubbish inside the burial ground walls. As such, isolated artefactual deposits of mid- to late-nineteenth century domestic rubbish (ceramics and glass in particular) may be present.

***Phase 3: 1900 – 1930***

The large-scale expansion of Central Station in 1906 – 1926 involved extensive excavation works and the construction of the present structures on the site today. Archaeological remains associated with this phase of construction may be present. Former workshops and sheds that were constructed in the early twentieth century may be difficult to distinguish from the successive phases of development of rail infrastructure that preceded it. The development of the carriage works in nearby Eveleigh moved much of the train construction and maintenance facilities away from Central and fewer workshops and construction areas were developed after 1926.

The present-day above-ground railway platforms had all been originally completed by the 1920s, although they have been subsequently altered and extended since their original construction. Alterations include the excavation and construction of new below-platform utility services, the extension of platforms 1 and 2/3 and several phases of resurfacing and platform elevation adjustment. In particular, renovations to the station platforms during the 1990s laid several courses of brick to increase the height of the platforms.

Archaeological remains relating to the original platforms would include brick former platform surfaces, brick retaining walls and footings for former canopy supports. Subsurface platform surface and wall fabric are likely to have intruding fabric from subsequent concrete and brick platform modifications[159].

[159] Australian Museum Consulting, 2015. *Heritage Platforms Conservation Management Strategy*, report prepared for Sydney Trains. pp. 10 – 11.

### *Phase 4: 1930 to Present*

The east carriage shed, formerly located in the Sydney Yards area, was a series of approximately 20 edge-on carriage sheds that ran for much of the length of the siding. These were removed after 1987. Archaeological deposits associated with the carriage sheds would involve brick and concrete footings; rail infrastructure such as rail lines and sleepers; and evidence of diesel and electric carriages and engines.

**Figure 9-16: Graphic illustrating Central Station in 1855 (source: CMP 2013)**

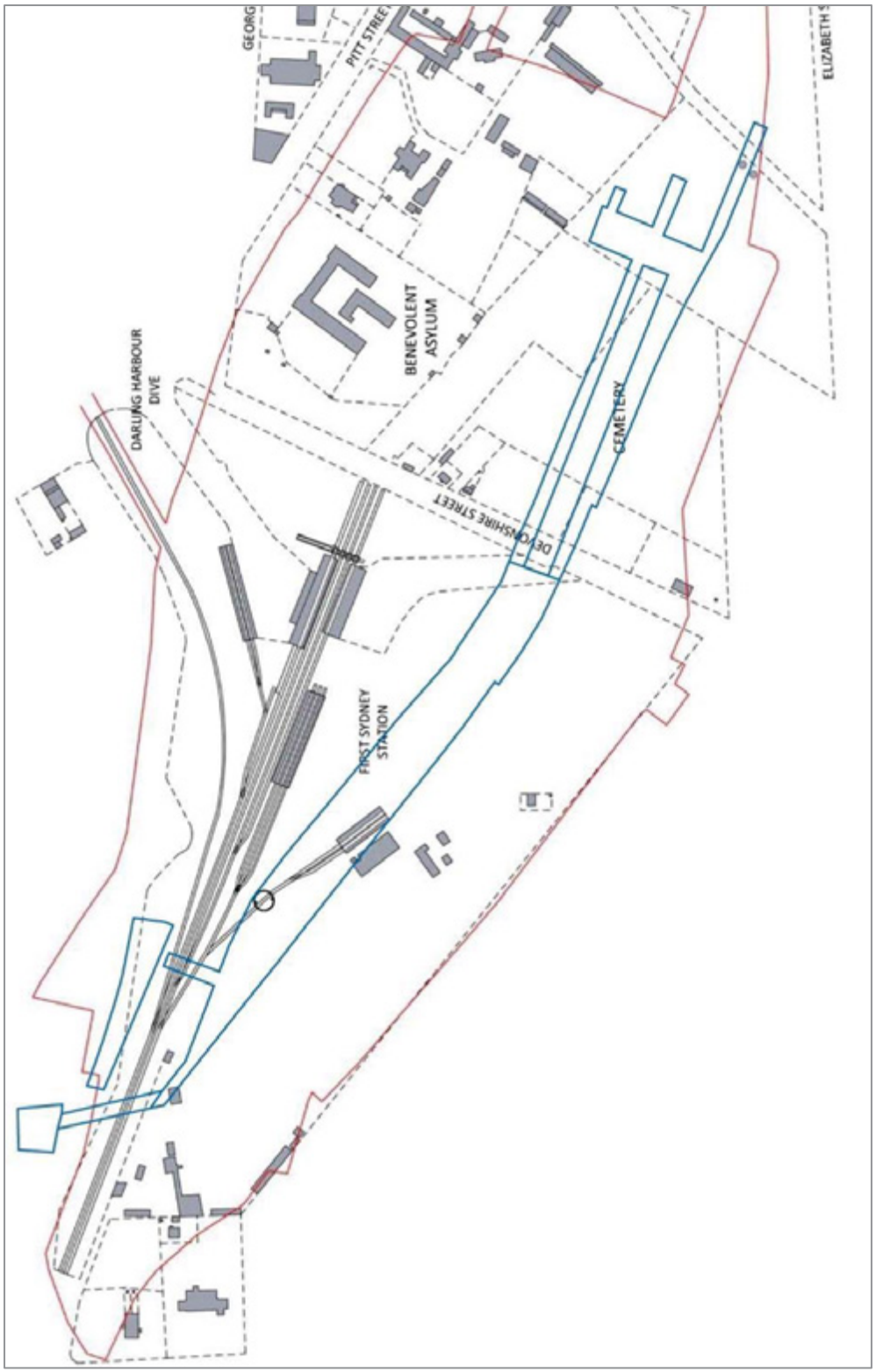


**Figure 9-17: Graphic illustrating Central Station in 1865 (source: CMP 2013)**

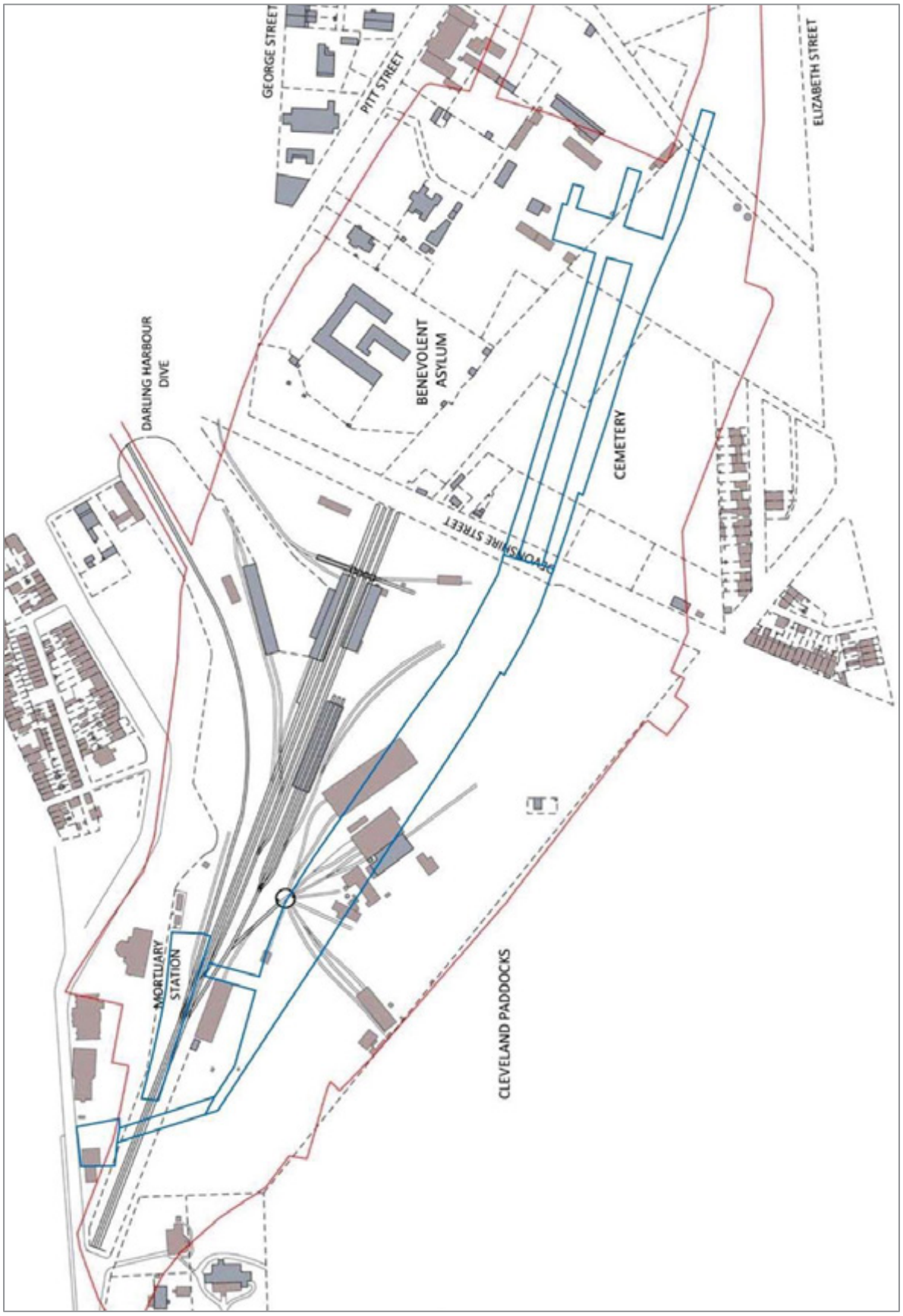


**Figure 9-18: Graphic illustrating Central Station in 1887 (source: CMP 2013)**

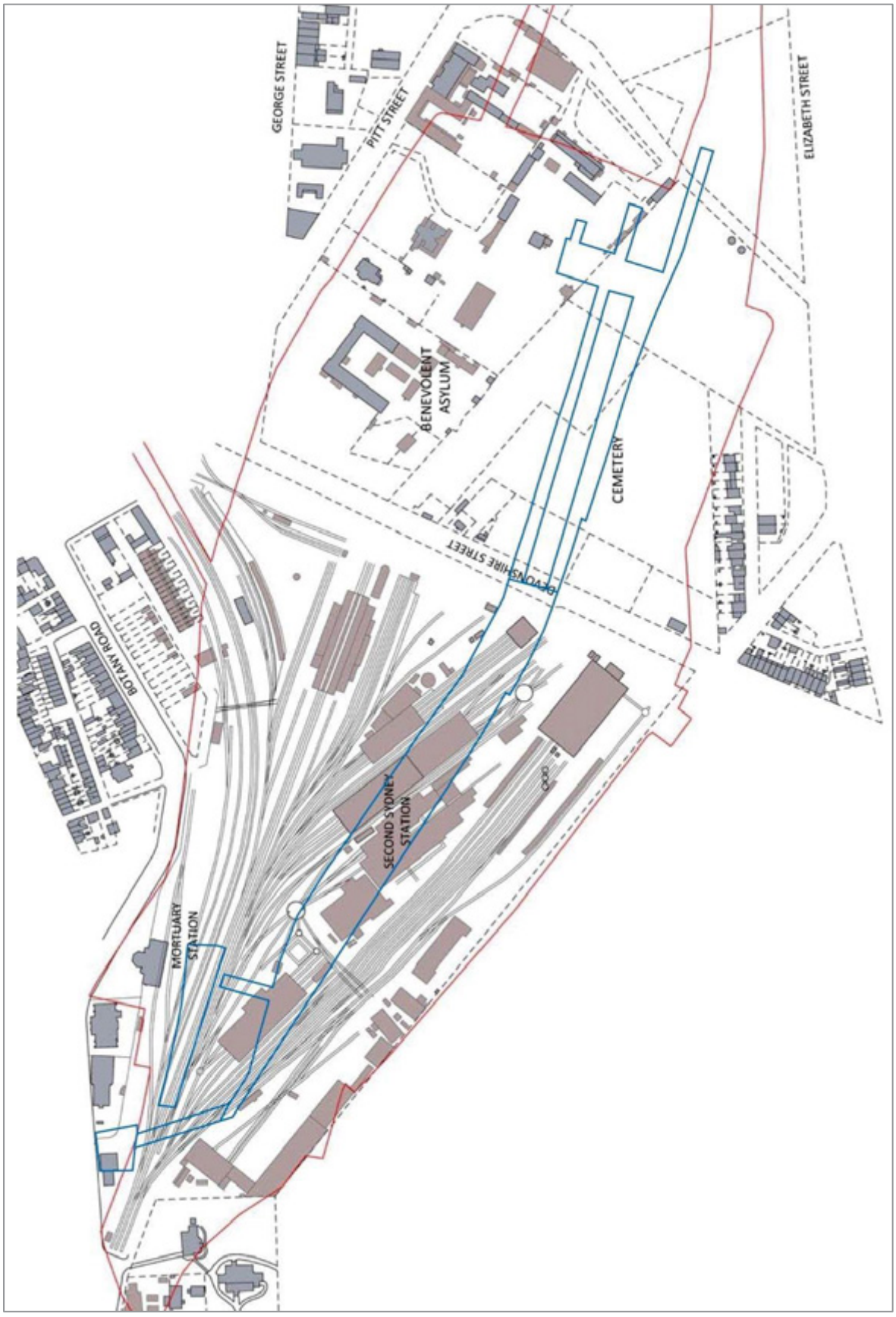


**Figure 9-19: Graphic illustrating Central Station in 2013 (source: CMP 2013)**

**Figure 9-20: Overlay of potential archaeological remains from the CMP 2013. Note this does not include illustrations of former railway related items in the south west of Central Station**

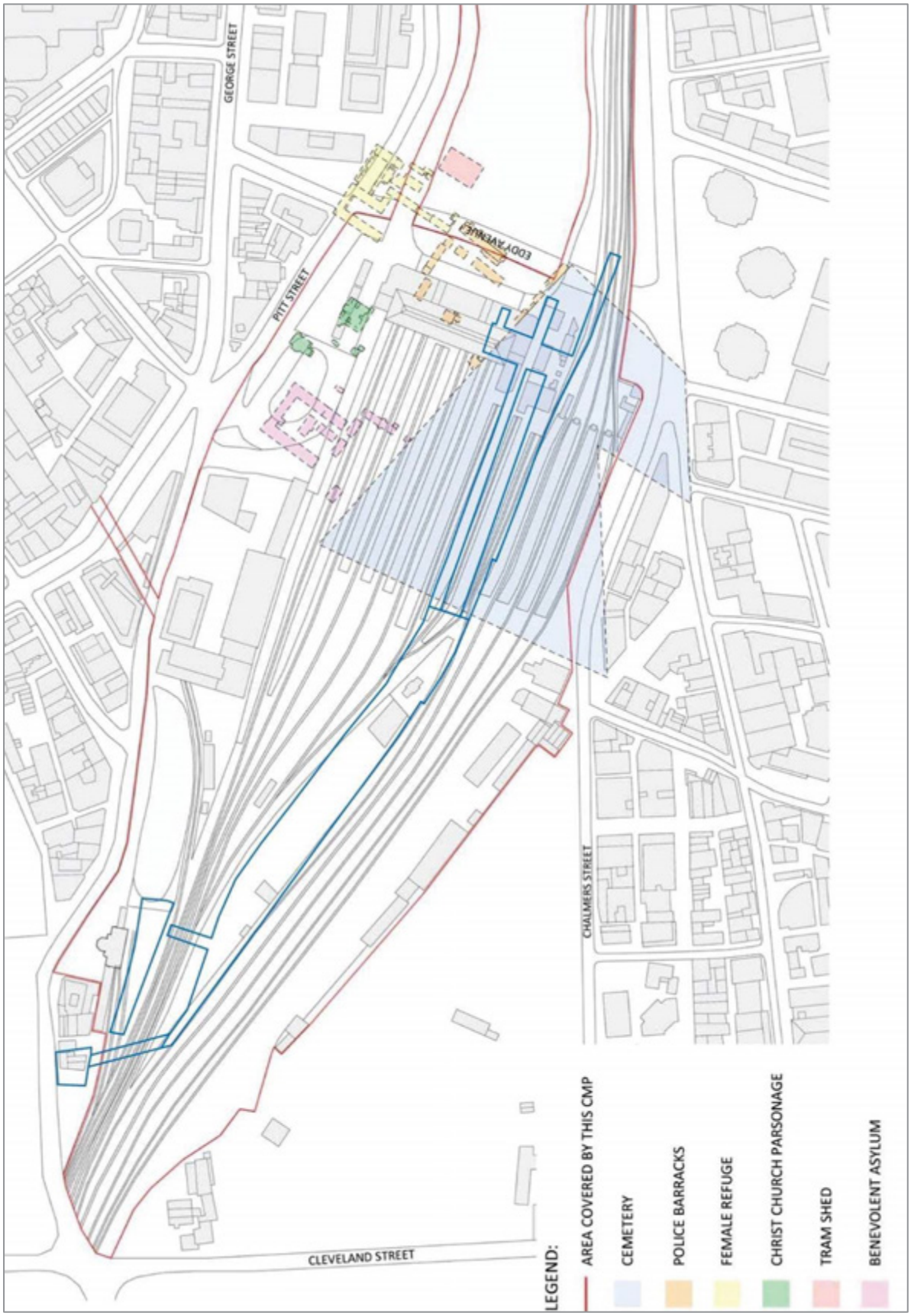
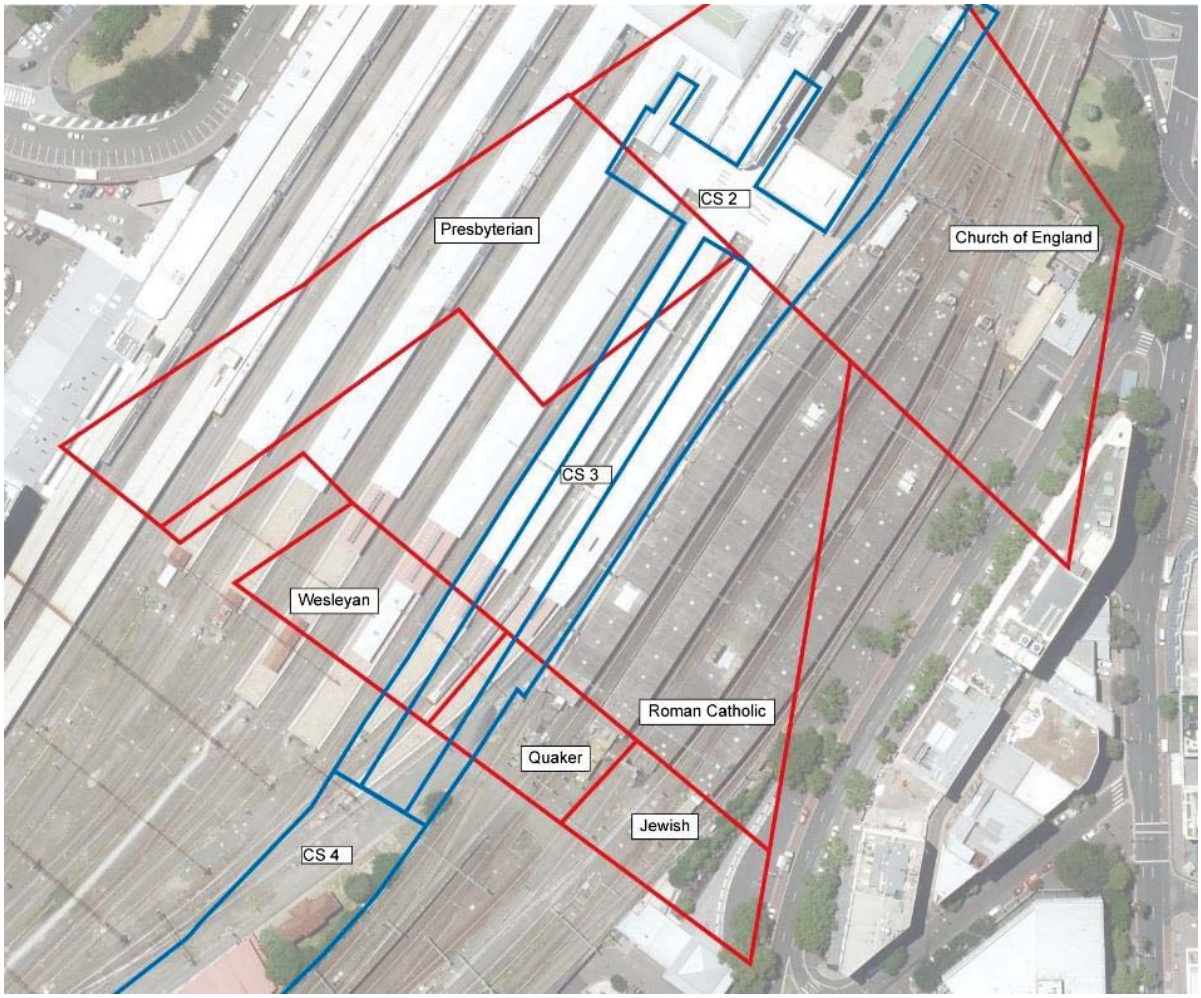


**Figure 9-21: Devonshire Cemetery and denomination areas**




### 9.3.5 Summary of Archaeological Potential

Based on historical information, land use data and evidence of sub-surface impacts, a summary of the potential archaeological remains in the Central Station site is provided in Table 9-2 below.

**Table 9-2: Summary of potential archaeological remains at the Central Station site**

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| **CS 2** | **1 (1788 – 1855)** | Devonshire Street Cemetery located in this area. No documented structures located within this area. Area contained graves, tombstones and grave cuts. The area was located in the Church of England, Presbyterian, Wesleyan and Roman Catholic burial grounds. Potential archaeological remains such as skeletal material, coffin furniture, personal items such as jewellery and clothing, coffin timber, disarticulated human skeletal material and artefacts. The outer perimeter of the cemetery had a 4-foot 6-inch brick outer fence in the southern part of this area. | Low |
| | **2 (1855 – 1900)** | Devonshire Street Cemetery located in this area, no burials continued after the 1860s. Isolated artefacts from deposited nineteenth century rubbish. | Low |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **3 (1900 – 1930)** | Third Central Station original railway platforms located in this area. Potential archaeological remains would include brick former platform surfaces and retaining walls, and former footings for original canopy supports. | Low |
| | **4 (1930 – Present)** | Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure. | Nil |
| **CS 3** | **1 (1788 – 1855)** | Devonshire Street Cemetery located in this area. No documented structures located within this area. Area contained graves, tombstones and grave cuts. The area was located in the Church of England, Presbyterian, Wesleyan and Roman Catholic burial grounds. Potential archaeological remains such as skeletal remains, coffin furniture, personal items such as jewellery and clothing, coffin timber, ghosts, disarticulated human skeletal material and artefacts. The outer perimeter of the cemetery had a 4-foot 6-inch brick outer fence in the southern part of this area. | Low |
| | **2 (1855 – 1900)** | Devonshire Street Cemetery located in this area, no burials continued after the 1860s. Isolated artefacts from deposited nineteenth century rubbish. | Low |
| | **3 (1900 – 1930)** | Third Central Station original railway platforms located in this area. Potential archaeological remains would include brick former platform surfaces and retaining walls, and former footings for original canopy supports. | Low |
| | **4 (1930 – Present)** | Expansion of Central Station, existing built heritage and sub-surface deposits relating to post-1901 station infrastructure. | Nil |
| **CS 4** | **1 (1788 – 1855)** | Area located within Government Paddocks, no evidence of built structures in this area. Potential for evidence of former wooden boundary fences, postholes, field drains, isolated artefact scatters. | Nil - Low |
| | **2 (1855 – 1900)** | First and second railway station expansion (1855 and 1874) located in this area. This area was predominantly the location of the main rail sidings and train storage areas. Buildings consisted of stone, wood and brick train sheds and workshops, of which former footings and discarded industrial objects are likely to be present. Rail siding lines also present, likely partially remaining below modern ground surface. Rail infrastructure from this period could include former signalling equipment and rail points as well as rail beams, sleepers and ballast.<br><br>A train turntable was located in this area from 1855 until 1895. The turntable was likely infilled during the third phase of Central Station's expansion in 1901. Remains associated with the turntable would include the outer brick-lining of the turntable; a metal circular rail around the lower base of the turntable supported by wooden sleepers and footings; the possible remains of a steel rail bridge used to support the locomotives; and mechanical remains of the central pivot to the rail bridge.<br><br>Remnants of the original fabric of the Prince Alfred Sewer may be located in this area. Remains associated with the sewer could include sandstone culverts, sandstock brick barrel drains and isolated artefact deposits. | Moderate - High |
| | **3 (1900 – 1930)** | East carriage shed was constructed during this period, demolished in 1987. Potential remains include postholes, footings, surfaces and artefacts. | Moderate - High |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **4 (1930 – Present)** | Area is predominately open ground with sealed road and side yards, with three existing structures on the site (two sheds, one brick building). | Nil |
| **CS 5** | **1 (1788 – 1855)** | Area located within Government Paddocks, no evidence of built structures in this area. Potential for evidence of former wooden boundary fences, postholes, field drains, isolated artefact scatters. | Nil - Low |
| | **2 (1855 – 1900)** | Excavation of ground to incorporate railway grade changes for Darling Harbour line. | Low |
| | **3 (1900 – 1930)** | Railway infrastructure re-development, rail ballast, former rail lines, sleepers. | Low |
| | **4 (1930 – Present)** | Railway infrastructure re-development, rail ballast, former rail lines, sleepers. | Low - Moderate |
| **CS 6** | **1 (1788 – 1855)** | Wesleyan chapel constructed in 1847, brick building with surrounding yard. Brick footings, underfloor and other artefactual deposits, yard surfaces, potential cesspits and wells, and drainage systems. | Moderate - High |
| | **2 (1855 – 1900)** | Conversion of the Wesleyan chapel into a school hall in 1867. No known structural changes. Brick footings, yard surfaces, isolated and underfloor and other artefactual deposits, potential cesspits and wells, demolition material and fills, and drainage systems. | Moderate - High |
| | **3 (1900 - 1930)** | Wesleyan hall demolished in 1898, two-storey Federation commercial buildings constructed. Potential for demolition material and fills, former services. | Low |
| | **4 (1930 – Present)** | Federation-era brick residential/commercial buildings remain on site. Minor renovations to facades; some renovations to backyards. | Nil |
| **CS 7** | **4 (1930 – Present)** | Expansion of Third Central Station in this area. | Nil |
| **CS 8** | **1 (1788 – 1855)** | Area located within Government Paddocks, no evidence of built structures in this area. Potential for evidence of former wooden boundary fences, postholes, field drains, isolated artefact scatters. | Nil - Low |
| | **2 (1855 – 1900)** | First and second railway station expansion (1855 and 1874) located in this area. This area was predominantly the location of the main rail sidings with minor ancillary buildings. Buildings consisted of timber sheds, with a low likelihood for the preservation of artefactual material. Rail infrastructure from this period could include former signalling equipment and rail points as well as rail beams, sleepers and ballast.<br><br>Remnants of the original fabric of the Prince Alfred Sewer may be located in this area. Remains associated with the sewer could include sandstone culverts, sandstock brick barrel drains and isolated artefact deposits. | Nil – Low |
| | **3 (1900 - 1930)** | Railway infrastructure re-development, rail ballast, former rail lines, sleepers. | Low |
| | **4 (1930 – Present)** | Railway infrastructure re-development, rail ballast, former rail lines, sleepers. | Low - Moderate |

## 9.4 Archaeological Significance

There is potential for archaeological remains to have been preserved in sections of the Central Station study area.

Generally, there is low potential for archaeological remains associated with the Devonshire Cemetery across the north east of the study area (Sites CS 2 and CS 3). As there is a lack of available geotechnical data, the presence of truncated burial-related remains or disarticulated human skeletal material cannot be ruled out.

Site CS 6 is likely to contain archaeological remains associated with the mid to late nineteenth century Wesleyan chapel and school. Sites CS 4 and CS 5 are likely to contain archaeological remains of former rail infrastructure of varying phases.

### 9.4.1 Assessment of Archaeological Significance

The significance of the various types of potential archaeological remains is discussed below. Due to the complex layering of the site, the discussion incorporates the archaeological significance assessment criteria guidelines per item, rather than addressing those criteria separately.

***Devonshire Street Cemetery***

The Devonshire Street Cemetery was the second formal burial ground established in the colony in 1820, and continued in use until the 1860s. Despite the cemetery's exhumation and levelling in 1901 and 1902, it is possible that not all of the burials were removed due to the short period of time that was allotted to the exhumation and the potentially deep burial of some its occupants.

Archival records can supply some information on the identities of the people who were buried at the cemetery, however this record may not be complete. Pauper's graves and lacunae within the historical record may mean that some interments are incompletely documented. The division of the burials into separate congregational areas may have material distinctions between the burial evidence of the graves. Forensic, osteological and isotopic analysis of skeletal remains can yield information about the health and diet of the interred, information which is not available from other sources. Burial ornamentation such as tombstones and tomb structures provide valuable symbolic evidence of funerary practices and attitudes towards death. These types of symbolic values are understood for wealthier burials from historic records, however the large number of poor or historically unmentioned people in the early colony are not as clearly understood from archival records. Burials from the period of the early colony at around 1820, particularly during the convict period (before 1840), and up to 1860 when the cemetery closed, are rare and highly valuable archaeological resources.

However, the heritage significance of these remains is constrained by the degree of intactness of any potential deposits. It is likely that the majority of the graves were exhumed and that the original landscape that they were buried in has been nearly entirely disturbed. The possibility of deeper deposits remaining below the level of Central Station cannot be discounted. Geotechnical evidence of the soil profile along the rail corridor at Central Station shows that a significant (up to 3 metres) sand layer is intact below rail ballast and backfill. Even if burials in these potentially residual pockets of in situ sand were removed, the location and alignment of grave cuts associated with these interments would provide important archaeological information.

Legible in situ archaeological remains associated with the Devonshire Street Cemetery would be State significant under Criteria A, D, E and F.

### *First and Second Railway Stations*

The first railway station at Central (then Redfern Station) represents the terminus of the second railway in Australia and the first railway in New South Wales. The construction of this railway and station was considered a significant event in the colony at the time, as demonstrated by the crowds that turned up for both the beginning of construction of the station and for the first train trip at the station (Figure 9-7). The technology to construct locomotives and railway infrastructure in the 1850s is relatively rare compared to the majority of rail infrastructure apparent today, which is predominantly of a later period of manufacturing. The first railway station building was conceived as a temporary structure (hence why it was upgraded and replaced in 1874) and any material evidence of this structure would be State heritage significant because of its potential research and technical value, and historical connections with the development of infrastructure in New South Wales.

Archaeological remains associated with the second railway station would also have historical associations. The second railway station was the central terminus of the expanding railway network in the 1870s. By the 1870s when the second station was constructed, railway networks had been established in rural areas in order to transport goods, particularly wool, to Sydney ports for export. As the terminus point and one of the principal maintenance stations for the goods rail network, archaeological remains associated with the second railway station could have historic, associative, technical values and research potential.

Due to the continual upgrading of the station facilities, in particular with the construction of the third railway station in 1906, material remains of the first and second railway stations are not likely to be substantially intact. In the study area, there is a possibility for remnant platform structures to be located within or below present station platforms south of the Devonshire Street pedestrian tunnel, however they are not likely to be substantially intact.

A number of carriage sheds and workshops may be located in the study area, dating from the first station (1865). Footings related to stone and brick buildings in this area may exist below the present Sydney Yard ground surface. Intact remnants of these buildings represent some of the earliest material evidence of railway infrastructure in Australia. Residual rail infrastructure such as signalling equipment and railway point switches could provide evidence of continuation of use of the station, as well as evidence of technological change over time. Archaeological remains would have historical and associative significance and, if relatively intact, could provide information about railway functions and engineering at the advent of the rail industry in NSW.

The Prince Alfred Sewer was originally constructed in the study area in the 1850s, as part of the expansion of the metropolitan Sydney sewerage system. It was later linked to further sewerage expansion in the Newtown and Camperdown areas in the 1870s. Original fabric of this sewerage system is an example of the growth of municipal institutions in Sydney in the 1850s, improving attitudes towards public health in the nineteenth century and would show material techniques of infrastructure development from that time.

A locomotive/wagon turntable was constructed in the first station in 1855 for the reorientation of vehicles, and continued in use until 1895. It was no longer present after the construction of the third station in 1906 – 1926. The original turntable would have been constructed as the companion turntable to the one excavated in 1995 at the first Parramatta railway station. While the turntable may not be completely intact it is likely that a substantial portion of the object would remain in the Sydney Yards. Despite several historical plans of the first and railway stations the turntable is depicted in, there is little other archival evidence of its construction and use.

While the significance of Central Station as a built heritage item is at a State level, the potential archaeological remains associated with previous phases of its development may not reach this level of heritage significance. Though of historical importance, the potential remains are not expected to be intact, and therefore their other values such as technical or research potential lessen. The potential

archaeological remains associated with the first and second railway station are of local heritage significance (Criteria A, B and C). Should intact and extensive remains be present, these would be of state significance (Criteria A, E and F).

***Original Platforms from Third Central Station Expansion***

The original Central station platforms were constructed as brick masonry walls with a vertical profile. In accordance with the Heritage Platforms Conservation Management Strategy[160], this type of platform design is not recognised as an uncommon or unique material design. Design plans of the original platform configuration for the third Central station are accessible. However, the sequence of platform modifications since their construction is likely to provide information on the alteration over time of the operation of Central station. It is likely that portions of these former platform surfaces and walls are significantly intact.

Intact structures of the original platform surfaces for the third Central station would meet the threshold of local significance (Criteria A and C).

***Wesleyan Chapel and School Hall***

The Wesleyan chapel was constructed in 1847 and represents an early permanent church established by the Wesleyan mission in Australia. The Methodist ministry had a strong focus on charitable outreach amongst the working class in the colony. The chapel was constructed near the expanded Benevolent Asylum in order to facilitate moral guidance for people relegated to what was then the edge of the town, usually for their poverty. The conversion of the chapel to a school and hall in 1867 demonstrates the growing Wesleyan community in Chippendale during the mid-nineteenth century.

Archival records for the Wesleyan society from the nineteenth century are not comprehensive and oral accounts of the use of the chapel and school hall are disputed.[161] The likelihood of recovering intact archaeological resources associated with everyday uses of this site (artefact-rich deposits, cesspit or well backfills and underfloor deposits in particular) would potentially illustrate the daily life of some of Sydney's poorest inhabitants. The archaeological results could be compared with datasets from other religious or institutional sites in Sydney. The potential remains are of local significance under Criteria A, B, E and G.

***Other archaeological remains within the Central Station study area***

Archaeological remains associated with buried infrastructural elements of the third railway station, are examples of the frequent upgrading of the technology and the continual alteration of the railway station. Former rail lines and building footings associated with post-1906 construction would unlikely meet the threshold of local heritage significance.

### 9.4.2 Statement of Archaeological Significance

It is unlikely that intact archaeological remains of the Devonshire Cemetery are located within the Central Station site. However, there is limited potential for truncated or ex situ remains. Legible archaeological evidence of the former cemetery is a rare resource and would be of high research potential. Investigation of such remains could provide knowledge of the nature of life and death in the early to mid-nineteenth century. Such remains would be of state significance.

Potential archaeological remains of the first and second railways would provide material evidence of the station's early development and changes in railway engineering and technology. There is

[160] Australian Museum Consulting, 2015. *Heritage Platforms Conservation Management Strategy*, report prepared for Sydney Trains. pp. 109 – 110.
[161] State Heritage Inventory Sheet "Co-Masonic Temple including interior".

moderate to high potential for truncated and disturbed remains in the Central Station study area. These remains would be of local significance and of state significance if intact and extensive.

There is moderate to high potential for archaeological remains associated with the Wesleyan chapel, and later school, constructed in 1847. Investigation of this site could provide information regarding religious life and associations with community work in the mid nineteenth century. Structural and artefactual evidence would contribute to questions regarding education and children, particularly the poor, during this time. Such information is not frequently found in other historical records and results of archaeological excavation could be compared with other religious institutional or educational sites in Sydney. The potential archaeological remains are of local heritage significance.

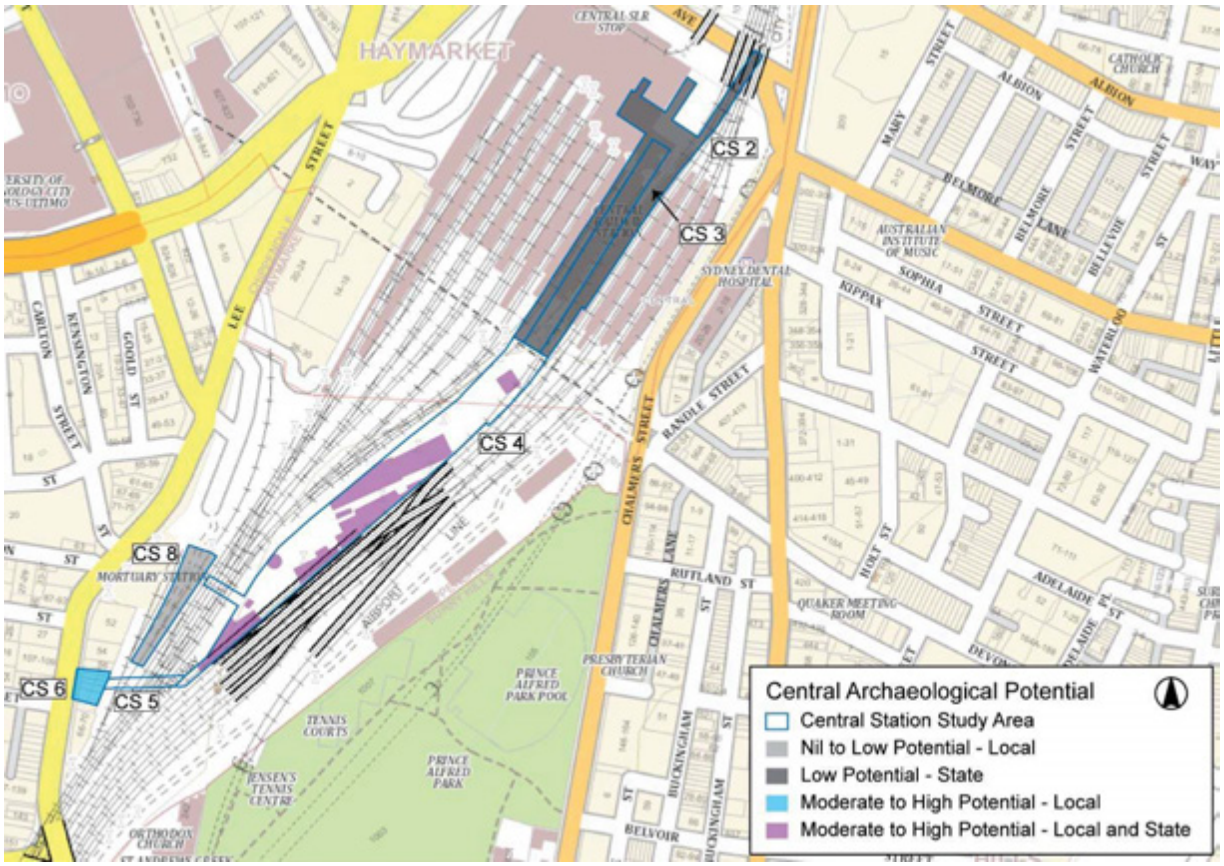
Remains dating from the early to mid-twentieth century are unlikely to have research potential and are unlikely to reach the threshold for local significance. Areas where there is limited potential for archaeological remains which are unlikely to reach the significance threshold are Site CS 5 (twentieth century and contemporary rail infrastructure), Site CS 7 and Site CS 8.

A summary of the Central Station study area's archaeological significance is presented in Table 9-3 and illustrated in Figure 9-22.

**Table 9-3: Summary of areas with potential for significant archaeology at the Central Station site**

| Site Code | Phase | Potential | Archaeological resource | Significance |
|---|---|---|---|---|
| CS 2 | **1 (1788 – 1855)** | Low | Evidence associated with Devonshire Cemetery. | State |
| | **2 (1855 – 1900)** | Low | Evidence of burials until 1860. Followed by informal rubbish dumping. | State |
| | **3 (1900 – 1930)** | Low | Evidence of Third Central Station railway platforms. | Local |
| CS 3 | **1 (1788 – 1855)** | Low | Evidence associated with Devonshire Cemetery. | State |
| | **2 (1855 – 1900)** | Low | Evidence of burials until 1860. Followed by informal rubbish dumping. | State |
| | **3 (1900 – 1930)** | Low | Evidence of Third Central Station railway platforms. | Local |
| CS 4 | **2 (1855 – 1900)** | Moderate - High | Remains of workshops, sheds, rail infrastructure, former sewerage infrastructure and discarded industrial objects and artefacts associated with the first and second railway station expansion (1855 and 1874).<br><br>Remains of the train turntable was located in this area from 1855 until 1895. | Local – State |
| CS 6 | **1 – 2 (1788 – 1900)** | Moderate - High | Remains of the Wesleyan chapel and school constructed in 1847 | Local |
| CS 8 | **2 (1855 – 1900)** | Nil – Low | Remains of sheds, rail infrastructure, former sewerage infrastructure and discarded industrial objects and artefacts associated with the first and second railway station expansion (1855 and 1874). | Local |

**Figure 9-22: Areas for potential significant archaeology at Central Station site**




## 9.5 Archaeological Impacts

### 9.5.1 Proposed Works

The construction of the Central Metro Station involves a number of excavation and construction activities. The new metro station platform would be located below the existing platforms 13, 14 and 15. A new vehicle access would be constructed to connect the Sydney Yards area with Regent Street, involving a vehicle overbridge over the rail corridor at the southern end of Central Station. The construction excavation works are described below and summarised in Table 9-4.

***Station and Utilities Structure***

Bulk excavation below platforms 13, 14 and 15 would be required to construct the station and utilities building. This would involve the excavation of the entire of Site CS 3 and northern part of Site CS 4. This would result in the complete removal of any archaeological remains in this area.

The removal of existing station platforms would involve demolition, grading and levelling in CS 2. The depth of ground disturbing impacts from these works are uncertain but are likely to be shallow.

***Construction of Workshop and Lay Down Areas***

The Sydney Rail Yards area (Site CS 4) would be used as a laydown and site facility area during the construction of the Metro platform. This would require the removal of existing buildings in this area, as well as potentially clearing, grubbing and levelling of the ground surface. The level of sub-surface impacts is likely to be shallow, although this is yet to be confirmed.

### *Construction of Sydney Yard Access Bridge*

The construction of the Sydney Yard access bridge would involve the demolition of existing buildings at the addresses of 56 – 64 Regent Street (located in Site CS 6). A new road entrance would then be constructed at this site to access the new bridge. The demolition and clearing of these sites would involve clearing, grading and levelling to an unknown depth.

The construction of the access bridge would involve piling excavation for bridge support struts to an unknown depth. This excavation would occur across Sites CS 6, CS 5 and the southern portion of Site CS 4. Ground-disturbing impacts in these areas would be deep but localised to the vicinity of the piling works.

### *Excavation of Combined Services Ring (CSR)*

The existing services route at Central Station will be partially relocated to a new service ring around the perimeter of the station. This will involve under-boring a new services tunnel to the west, south and east of the station (located in Site CS 7).

Impacts to potential archaeology as a result of the installation of the CSR would be minimal, due to the narrow width of under-boring, understanding that the majority of the CSR would be located predominantly in existing service corridors and underground station tunnels. There is potential for localised excavation within Site CS 4 for feeder pits.

## 9.5.2 Potential Archaeological Impacts

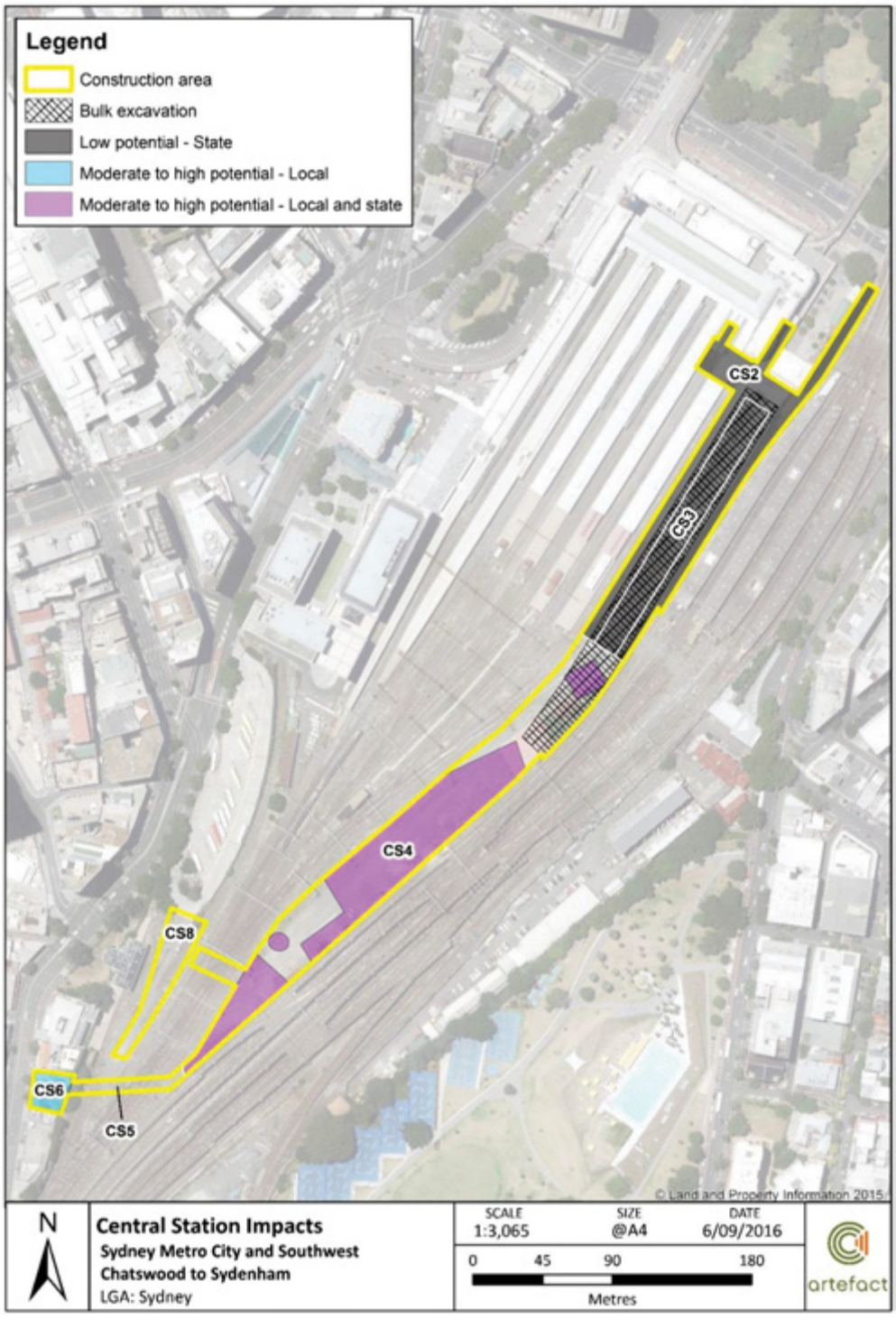
The following table describes the potential archaeological impacts at the Central Station construction site.

**Table 9-4: Potential archaeological impacts - Central Station site**

| Site Code | Description of works | Potential archaeological impact |
|---|---|---|
| **CS 2** | Removal of Platforms 13 and 14/15, clearing and grading of rail corridor and access roads. | Low potential for archaeological remains associated with State significant Devonshire Cemetery. Potential archaeological remains within existing platforms.<br><br>Removal of archaeological deposits to an uncertain, but likely shallow, depth. Nil – low potential to impact. |
| **CS 3** | Total excavation of station area from the platform level to up to 24 metres below current ground level. Removal of platform surfaces, sub-surface ground deposits and station concourse areas located in station box excavation footprint. | Low potential – archaeological remains associated with State significant Devonshire Cemetery.<br><br>Complete removal of all potential archaeological deposits in this area. |
| **CS 4** | Demolition of existing buildings on railway siding and work yard. Clearing and levelling of ground surface. Bulk excavation is northern part for station utilities structure.<br><br>Piling works to install support structures for Sydney Yard Access Bridge in southern portion of the work area. | Moderate-High potential for rail-related remains from 1850s-1900s, including the turntable.<br><br>Clearing and ground disturbance likely to cause only shallow impacts to subsurface remains.<br><br>Bulk excavation for utilities structure would remove all archaeology within footprint.<br><br>Piling works will impact archaeological remains to a significant depth, restricted directly to size of piling areas. |

| Site Code | Description of works | Potential archaeological impact |
|---|---|---|
| **CS 5** | Piling works to install support structures for Sydney Yard Access Bridge, spaced across work area. | Unlikely to contain significant archaeological remains. Therefore no impact to significant archaeology expected. |
| **CS 6** | Demolition of existing buildings on this site, to construct new access road for the Sydney Yards.<br><br>Piling works to install support structures for Sydney Yard Access Bridge and road-entrance ramp. | Moderate-High potential for remains of the Wesleyan chapel and school constructed in 1847.<br><br>Demolition of existing buildings and construction of new access road will involve removal of rubble and shallow subsurface excavation. Uncertain depth of excavation.<br><br>Piling works will impact deposits to a significant depth, restricted directly to size of piling areas. |
| **CS 7** | Under-boring and open excavation of service tunnel (2m diameter) to install new segments of combined services ring. Services would be ideally placed in pre-existing service tunnels; however, some new tunnelling would be required.<br><br>Machine excavation of bore feeding and receiving pits in undetermined locations. | Boring would involve no expected archaeological impacts.<br><br>Excavation for bore feeder and receiving pits have nil-low potential to impact archaeological remains associated with the Devonshire Street Cemetery and the First and Second Central Stations. Archaeological remains associated with items located outside of the station precinct (such as the Benevolent Asylum) could have nil to low potential for impacts pending detailed constructability assessments. |
| **CS 8** | Preparation of the area for a crane pad for the construction of Sydney Yards Access Road, involving excavation up to approximately 2m, the removal of existing hard stand and surface rail infrastructure. Construction of new hard stand for crane support. | Nil to low potential for remains associated with the First and Second Central Stations. |

**Figure 9-23: Potential archaeological impacts - Central Station site**




## 9.6 Archaeological Management

Excavation work within the former Devonshire Cemetery site (Sites CS 2 and CS 3) would require archaeological management. As potential for human skeletal and burial-related remains cannot be ruled out entirely at this stage, archaeological monitoring and testing should be undertaken.

Ground disturbance such as slab and footing removal, and footing construction at Site CS 6 has potential to impact archaeological remains associated with the former Wesleyan Chapel/School.

Archaeological management, such as monitoring, may be required. Piling at this site may result in archaeological impacts. Archaeological mitigation is not always possible and a review of the piling design should be undertaken to identify potential mitigation strategies (testing prior to piling, or unexpected finds procedure during piling).

Ground disturbance and excavation work in Sites CS 4 with potential to impact significant archaeological remains (rail-related 1850s-1900s) would require archaeological mitigation. This would be monitoring or test/salvage depending on extent of work and level of potential impact, for example, archaeological test/salvage in the northern part of Site CS 4 subject to bulk excavation for the station utilities structure.

**Table 9-5: Summary of archaeological mitigation for the Central Station site**

| Site Code | Potential archaeology | Impact | Mitigation |
|---|---|---|---|
| CS 2<br>CS 3 | Low potential for State significant archaeological remains associated with Devonshire Cemetery | Direct impact – piling and bulk excavation<br>Potential direct impacts – temporary platform construction, demolition and levelling | • AMS<br>• Monitoring / Testing and Salvage if required<br>• Exhumation Policy applies |
| CS 4 | Moderate-High potential for rail-related remains from 1850s-1900s<br>Local / State | Direct impact –bulk excavation northern CS 4<br>Potential direct impacts – ground works, piling | • AMS<br>• Test / Salvage CS 4 north<br>• Monitoring / Salvage if required CS 4 and CS 5 |
| CS 5 | Nil – Low potential for 20th century remains. Unlikely to reach significance threshold | Potential direct impact – ground works, piling | • Unexpected Finds Procedure |
| CS 6 | Moderate-High potential for remains of the Wesleyan chapel and school constructed in 1847. | Potential direct impact – ground works, footing excavation, piling | • AMS<br>• Monitoring / Salvage if required |
| CS 7 | Nil | Nil | • Unexpected Finds Procedure |
| CS 8 | Nil – Low potential for remains of first and second railway station, including timber work sheds and former sewerage infrastructure | Direct impact – bulk excavation of area | • Unexpected Finds Procedure |

### 9.6.1 Archaeological Methodology

The following archaeological methodology for the Central Station Metro construction site is based on impacts known at EIS stage. Explanation and further details regarding the archaeological process and methodologies identified below are provided in Section 12.0.

- An AMS would be prepared prior to commencement of construction. This document would:
  - Review piling design, detailed design, scope of works, construction program and methodology
  - Reassess potential for impacts to significant archaeological resources in Sites CS 2, CS 4 and CS 6 based on construction methodology

  - Review contamination reports and provide archaeological mitigation strategies for any remediation with the potential to impact significant archaeology
  - Identify opportunity for in situ conservation of archaeological remains in these areas
  - Review Exhumation Policy and update the archaeological methodology and research design as required
  - Provide details on how information on the archaeological investigations would made available to the public
  - Provide a detailed archaeological mitigation for potential impacts in these areas, such as monitoring or salvage excavation
  - Outline how Aboriginal archaeological excavation would be incorporated if required.
- Monitoring of all ground disturbance and bulk excavation within Sites CS 2 and CS 3 with the potential to uncover intact burial-related archaeological remains.
- Once the top of sand layers is exposed during bulk excavation in Site CS 3 archaeological testing would be undertaken to determine the potential for burial-related archaeological remains. Exhumation Policy would apply if human skeletal remains or burial-related archaeological is identified.
- Archaeological monitoring would be required where the AMS has demonstrated the construction work could potentially result in localised impacts or expose archaeological remains in Sites CS 4 and CS 6. If archaeological remains are identified the following would apply:
  - Investigation and salvage excavation of archaeological remains prior to impact.
- Test/Salvage would be required for Site CS 4 (north) prior to bulk excavation. Test/Salvage would also be required in areas where the AMS identifies constructions works with a greater potential to impact such as large areas of piling, landscaping or deep excavation in Site CS 6 for example.
- Unexpected finds procedure should apply for all other construction works.
- A preliminary results report would be written once archaeological fieldwork has been completed.
- Post-excavation analysis of fieldwork results, artefacts, samples and other archaeological data should be undertaken and included in a final archaeological investigation report.
- Significant archaeological findings would be included in heritage interpretation for Central Station.

### 9.6.2 Research Questions

Historical themes for the Central Station site is presented in Table 9-6.

**Table 9-6: Historical themes associated with the Central Station site**

| Australian theme | NSW theme | Explanatory Notes | Comments |
|---|---|---|---|
| 3. Developing local, regional and national economies | Environment – cultural landscapes | Activities associated with the interaction between humans, human societies and the shaping of their physical surroundings | The former sand dunes in the east of the study area were largely removed when the Devonshire Street cemetery was exhumed. The sloping land on the western side of the study area was built up to level the site for the construction of Redfern (now Central) station. |

| Australian theme | NSW theme | Explanatory Notes | Comments |
|---|---|---|---|
| 3. Developing local, regional and national economies | Industry | Activities associated with the manufacture, production and distribution of goods | Redfern (now Central) station was a significant industrial site for the manufacturing of locomotive engines, carriages and infrastructure throughout the 19th century. |
| 3. Developing local, regional and national economies | Technology | Activities and processes associated with the knowledge or use of mechanical arts and applied science | Redfern (now Central) station was the first locations for the introduction of steam locomotive and railway technology in New South Wales. |
| 3. Developing local, regional and national economies | Transport | Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements | Redfern (now Central) station was the terminus of New South Wales' first railway line. It remains the central hub of the New South Wales railway system. |
| 8. Developing Australia's cultural life | Religion | Activities associated with particular systems of faith and worship | A Wesleyan church was constructed in the study area in the 1840s and persisted in use as an ancillary hall for the Wesleyan church up until the late 19th century. |
| 9. Marking the phases of life | Birth and death | Activities associated with the initial stages of human life and the bearing of children, and with the final stages of human life and disposal of the dead | The Devonshire Street cemetery was the second public cemetery in the town of Sydney, consecrated in 1821. Intact archaeological remains would be of high research potential. |

The following research questions would guide archaeological investigations at the Central Station study area.

### *Devonshire Street Cemetery*

- Is the sand deposit located below the present rail corridor an in situ remnant of the former Devonshire Street Cemetery, or is it landscaping or infill?
- If it is infilled but still local Quaternary sand, does it bear artefacts or remains relating to the Devonshire Street Cemetery, even if they are potentially out of context?
- Did landscaping associated with the development of the third Central Station building remove all evidence of burials?
- Are remnants of the outer and denominational walls still extant?
- Are there any intact tombs and tombstones in the Cemetery?
- Were all the graves exhumed from the Devonshire Street Cemetery?
- If graves were not exhumed, who were the people who were interred in them?
- What was the health and diet like of individuals buried in the Cemetery?

Note: additional research questions would be developed if more intact burial and skeletal remains than expected are present. Refer to the Exhumation Policy.

### *Infrastructure of the First and Second Railway Station*

- How was the wagon turntable constructed, and is it still intact? How was it removed from use?

- Does the wagon turntable show evidence of alteration in use from its initial installation in 1855 to its eventual use in 1895?
- Is the wagon turntable similar to the one excavated at the first Parramatta station, or those still extant elsewhere in New South Wales?
- Can archaeological evidence of former structures from the first and second railway stations be discriminated from later post-1906 building adaptations?
- Is there archaeological evidence before 1906 of the changes in use of former carriage sheds and workshops if they were converted into other types of station buildings?
- Is there any evidence of former platforms located below or within the present-day station platforms?
- Are there remains of the original fabric of the Prince Alfred Sewer? To what extent has the 1850s-era drain been replaced with new infrastructure?

### *Wesleyan Chapel/Hall*

- Are the footings for the Wesleyan chapel/hall still intact?
- How much of the material from the former Wesleyan chapel/hall was recycled to construct the Co-Masonic Lodge? Did the deconstruction of the chapel/hall result in a poorer artefactual signature?
- Does artefactual evidence show the changing use of the chapel and hall over time?
- What can the artefactual evidence tell us regarding the composition of the Wesleyan religious community throughout the use of the site? For an austere and relatively impoverished congregation, what is their material archaeological signature?
- How much of the outer church and hall yard still remain archaeologically intact?
- Are cisterns or latrines preserved from former outhouses on the property before subdivision?

# 10.0 WATERLOO STATION

## 10.1 Site Location

Waterloo Station site is located approximately 1.7 kilometres south-west of Central Station, within the block bounded by Raglan Street, Cope Street, Wellington Street and Botany Road (Figure 10-1). The site is located in the Sydney LGA. The site currently contains commercial and residential buildings.

### 10.1.1 Land Parcels

The land parcels associated with the Waterloo Station site are presented in Table 10-1 below. All existing structures, excluding the Congregational Church, on these land parcels will be demolished.

**Table 10-1: Land parcels and contemporary land use in the Waterloo Station site**

| Site Code | Address | Lot | Existing Structures |
|---|---|---|---|
| **WL 1** | 49-57 Botany Road Waterloo | 4//DP215751 | Three-storey mid-20th century commercial building with brick façade |
| **WL 2** | 59-63 Botany Road Waterloo | 5//DP215751 | Single storey Art Deco brick façade warehouse |
| **WL 3** | 65 Botany Road Waterloo | 1//DP814205 | Two-storey mid-20th century car repair workshop |
| **WL 4** | 67 Botany Road Waterloo 2017 | 1//DP228641 | Two-storey 20th century commercial building |
| **WL 5** | 124-128 Cope Street Waterloo 2017 | 2//DP228641 | Two-storey mid-20th century commercial space with above ground garage |
| **WL 6** | 69-83 Botany Road Waterloo | //SP75492 | Four-storey late 20th century mixed use building with commercial premises on the ground floor, residential units above and basement parking |
| **WL 7** | 130-134 Cope Street Waterloo 2017 | 12//DP399757 | Two-storey mid-20th century brick façade commercial building with above ground garage |
| **WL 8** | 136-144 Cope Street Waterloo 2017 | A//DP108312<br>B//DP108312<br>C//DP108312<br>D//DP108312<br>E//DP108312 | Single storey Art Deco brick façade warehouse |
| **WL 9** | 85 Botany Road Waterloo 2017 | 1//DP27454 | Two-storey commercial building, used for motor repairs, with attached garage |
| **WL 10** | 87 Botany Road Waterloo | 2//DP27454 | Single storey mid-20th century commercial building |
| **WL 11** | 89-91 Botany Road Waterloo 2017 | 1//DP996765 | Two-storey late 20th century commercial building |
| **WL 12** | 93-101 Botany Road Waterloo | 1//DP433969<br>1//DP738891 | Single storey Art Deco brick façade warehouse |

| Site Code | Address | Lot | Existing Structures |
|---|---|---|---|
| **WL 13** | 156-160 Cope Street Waterloo 2017 | 31//DP805384 | Two-storey late 20th century commercial building |
| **WL 14** | 107-117a Botany Road Waterloo 2017 | 32//DP805384 | Two-storey mid-20th century rendered façade commercial buildings |
| **WL 15** | 119-121 Botany Road Waterloo 2017 | 1//DP205942<br>1//DP436831 | Two-storey mid-20th century brick façade commercial building |
| **WL 16** | NA | A//DP408116 | Two-storey building |
| **WL 17** | 170-174 Cope Street Waterloo 2017 | 2//DP205942 | Single storey and adjoined two-storey mechanical repair shop |

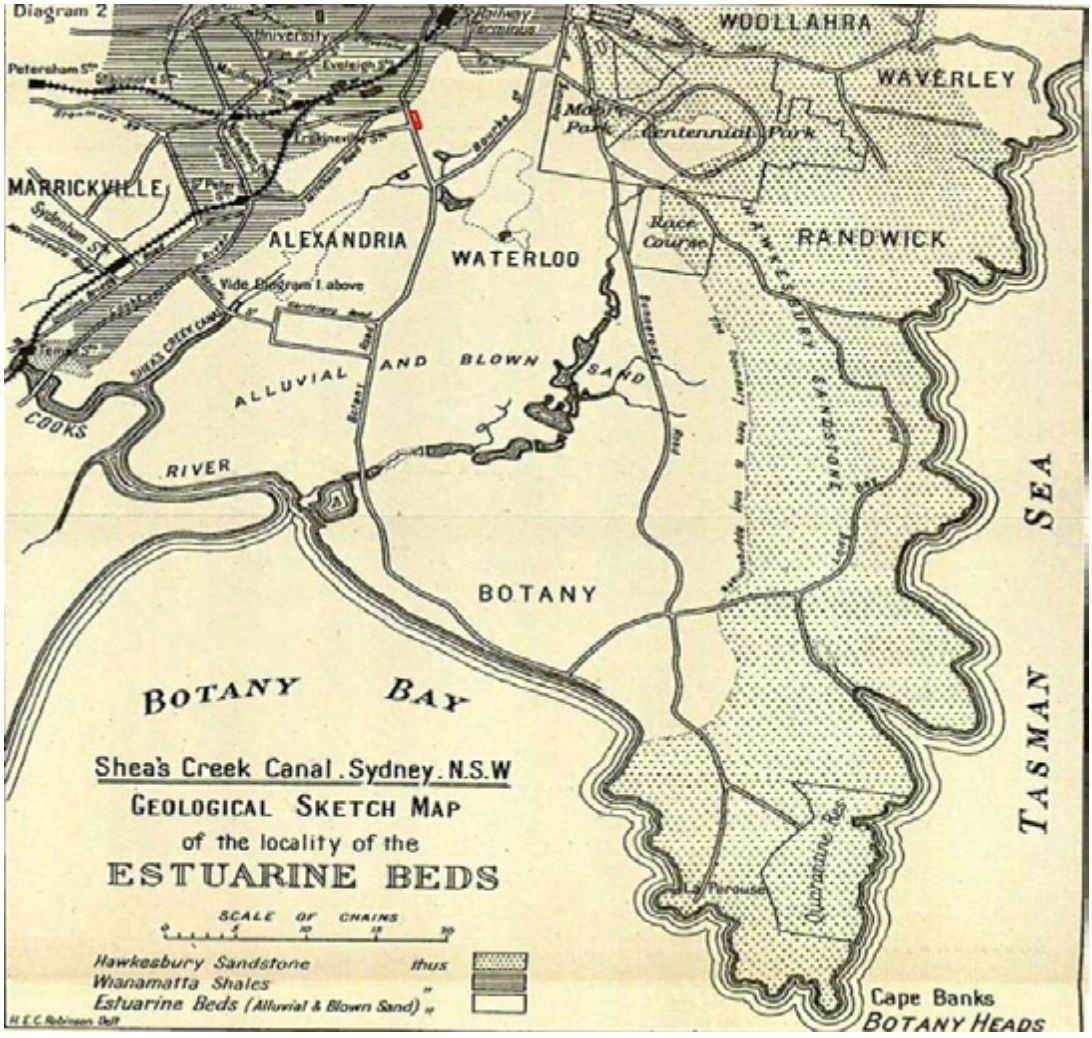
**Figure 10-1: Waterloo Station site showing existing modern development and site codes**

## 10.2 Historical Analysis

### 10.2.1 Early Land Grants and Establishment of Industry (1788 – 1882)

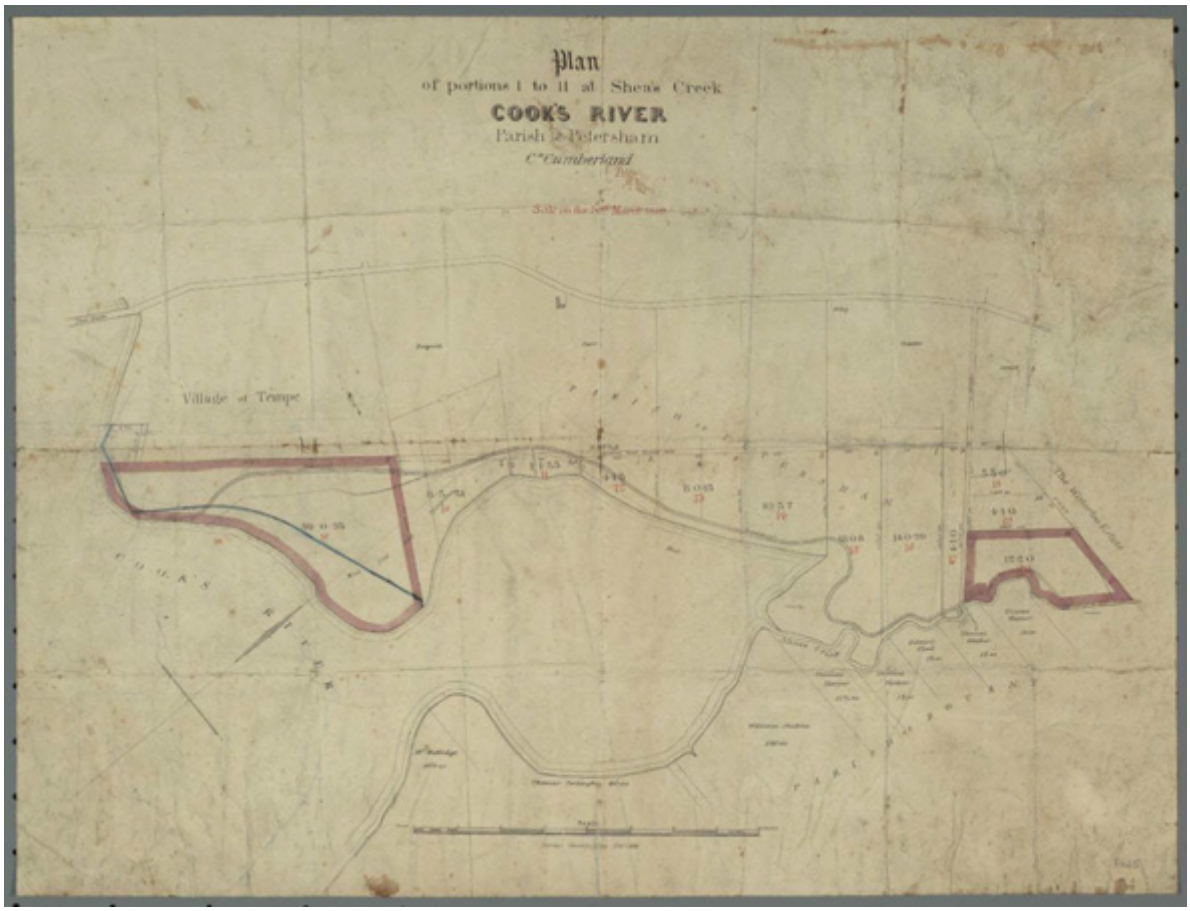
Prior to settlement, Waterloo and the surrounding suburbs were covered by dense heath and scrub. As part of the Botany Basin, many of the creeks and pools drained to Botany Bay. With a mixture of melaleuca and sedge swamps, as well as mangroves and saltmarsh lining Shea's Creek, a rich variety of shrubs covered the sand dunes (Figure 10-2, Figure 10-3). Paperbark would have thrived on the Waterloo Swamp.[162] The area was particularly important in the years immediately after 1788 as it linked Botany Bay and Sydney Cove, two key places associated with early settlement.[163]

**Figure 10-2: Geological sketch map of the Estuarine Beds, Shea's Creek Canal, Sydney, 1896. Indicative Waterloo Station site location shown in red**




[162] City of Sydney, *'The Streets of Green Square, The Past Shapes the Future'*: 2
[163] City of Sydney: 3

**Figure 10-3: Plan of portions 1 to 11 at Shea's Creek, Cook's River, Parish of Petersham, 1859**




One of the first land grants in the region was given to Elizabeth Needham (née Gore), a First Fleet convict who later became a successful Sydney businesswoman. She was transported to Australia on the Lady Penrhyn, arriving to Sydney in January 1788. In 1796, Elizabeth Needham's sentence expired and she received a 40-acre land grant on the site of today's Sydney Park.[164]

In 1808, Needham's land was sold to John and Gregory Blaxland. The land was purchased by convict turned businessman Daniel Cooper in 1822, and the land, together with the Lachlan Estate, became part of the Cooper family's extensive landholdings in the area, known as the Waterloo Estate. The area totalled approximately 1585 acres of land.[165] Several generations of the Cooper family preferred to lease rather than sell and subdivide their land in the nineteenth century.[166] However grants made to soldiers in the area were often considered worthless and they soon passed into other hands.[167]

The abundance of water in the Botany Basin has contributed to the establishment of industry. From as early as the 1810s, local capitalists searching for power sources for their mills turned to the Waterloo/Botany area. The water flow provided a source of power for grinding grain and milling cloth. Early use of the area included tanneries and wool preparation which had been forced out of the city by the Noxious Trades Act, 1848. The area was also used as a source of water for the growing city. The pure water was diverted into tunnels and dams, and a pumping station was built on Lords Dam, which had been built for one of the early mills.[168]

[164] City of Sydney, *'History of Sydney Park'*
[165] City of Sydney: 4
[166] City of Sydney, *'History of Sydney Park'*
[167] Evening News, '*The City's Growth – Waterloo: Large Industrial Centre'*, Sat 2nd Feb, 1918
[168] City of Sydney, 2004: 13

William Hutchinson came to New South Wales as a convict in 1799. In 1814 he was appointed Principal Superintendent of Convicts and Public Works. Hutchinson, Cooper and others established a water powered flour mill on Crown land in Waterloo around 1818. Botany Road was constructed by Governor Macquarie to access the flour mills (Figure 10-4). In 1823, 1400 acres of the surrounding district was granted to Hutchinson by Governor Brisbane in recognition of his public service.[169] By the 1850s, the Cooper Estate had flourished into an industrial suburb. By 1853, at least four publicans had been granted licenses in the Waterloo/Alexandria area to serve travellers and local workers.[170]

The Municipality of Waterloo was proclaimed on 16 May, 1860.[171] At this time, revenue was only about £200, and the value of rateable property about £10,250. In the year 1864-65 the revenue had increased to £3283.[172] The first meeting of the first Council was held at the residence of Mr William Brown, at the corner of Botany Road and Buckland Street (possibly where the Cauliflower Hotel now stands[173]). Edward Hawkesley was elected first chairman, and his immediate successors were Edward Byrnes, John Geddes, and William Bryant.[174]

The Cauliflower Hotel was built in 1862 on what is believed to have originally been market gardens where cauliflowers were grown. Oultram suggests that the operations started in October 1862 when the local council agreed to erect a horse trough in front of the hotel. The hotel was under the ownership and management of the Rolfe family until the late 1920s.[175]

The first houses erected in the area were part of the Zetland Lodge in 1874, a substantial house and training stable set back from the juncture of Bourke Street and Elizabeth Street. Built by the Governor of NSW, Sir Hercules Robinson, horse trainer Thomas Lamond lived at Zetland Lodge for nearly 25 years. The town hall was built between 1880-1882.[176] The Higginbotham & Robinson map of Waterloo, c.1885, shows a lightly settled area with extensive swamps and a number of industries. The map shows a branch of the Australian Joint Stock Bank and a Congregational Church within the current study area. The Church is still extant.

A number of Christian churches and missions had Chinese congregations or conducted services in the Waterloo/Alexandria area in the nineteenth and early twentieth century. As early as 1879 the Church of England engaged Soo Hoo Ten as a catechist. Ten, of the Church of England, was involved in conducting services at St Silas' Church in Waterloo.[177] Chinese market gardens once occupied an extensive portion of the Cooper Estate, mostly located along the route of Shea's Creek.[178]

**Figure 10-4: Old Botany Road, continuation of Bourke Street, May 1873**

[169] NSW Government Office of Environment and Heritage, *'Zetland Estate Heritage Conservation Area'*
[170] City of Sydney: 5
[171] New South Wales Government Gazette, '*Municipality of Waterloo'* Fri 22nd Nov 1861
[172] Evening News, 1918
[173] NSW Government Office of Environment and Heritage, *'Cauliflower Hotel including interior'*
[174] Evening News, 1918
[175] NSW Government Office of Environment and Heritage, *'Cauliflower Hotel including interior'*
[176] City of Sydney: 5
[177] City of Sydney, *'Histories of Green Square'*, 2004: 100
[178] City of Sydney, 2014: 49

### 10.2.2 Residential Subdivision (1880 – 1930)

The 1880s saw small residential subdivisions being established as workers' housing in Waterloo as Sydney's industry expanded from the inner city to occupy the cheaper lands to the south near the swamps in Alexandria and Waterloo. By 1886, there were 22 pubs within a two kilometre radius in Waterloo.[179] Between 1890 and 1917 the population had grown from 8,000 to 11,330. Australia's first Lebanese church, St Michael's Melkite Church, was built in Waterloo during this time.

Industries operating in the area included Sydney Hydraulic Company, Sydney Machines Company, the Industrial Brick Company Limited, the Waterloo Brick Company Limited, the cordial factory of McLean and Malcolm, and the NSW Canning Factory.[180] Work commenced on the Zetland Tramway line which ran along Elizabeth St, and terminated at the Zetland terminus at the corner of Bourke St and Elizabeth St. The double track electric line was officially opened on 11 February 1903 with trams based at the Fort Macquarie Depot. In 1909 the Zetland service was transferred to Dowling Street Depot.[181]

In the early part of the twentieth century, the Cooper Estate was subdivided, providing large areas for purpose-built factories. The Victoria Park Racecourse, located approximately one kilometre south-east of the current study area, was created on the former Waterloo swamp by Sir James Joynton Smith, a hotelier and newspaper owner (Figure 10-8). The 1930s photo is indicative of what the landscape of the current study area may have been similar to. Smith was to become Lord Mayor of Sydney in 1918. More than 6,000 people, including State Government MPs, attended the opening day at Victoria Park Racing Club on 15 January 1908. [182]

Many Chinese people had migrated into the area, and in 1909, a Chinese Temple was built in Retreat Street, Alexandria. Rosebery was sub-divided in 1911 and promoted as "Sydney's model residential and industrial suburb". The factories were separated from housing by parklands and no two adjacent houses were of the same design. Between 1912-1918 acreage value had quadrupled on freehold lands in the area. Most of the land, however, was leasehold. [183]

During the depression of the 1920s, working people in Alexandria and Waterloo formed strong communities in what were often unpleasant environments. Alexandria was the site of major steel engineering companies McPherson's Pty Ltd and Hadfields Steel Works, a heavy engineering steel works that operated on site until the 1970s.

[179] City of Sydney: 8
[180] Evening News, 1918
[181] NSW Government Office of Environment and Heritage, *'Former Zetland Tram Terminus (874 Elizabeth Street)'*
[182] City of Sydney: 11
[183] Evening News, 1918

**Figure 10-5: Higginbotham & Robinson map of Waterloo, c.1885**

**Figure 10-6: Higginbotham & Robinson map of Waterloo, 1885-1890**

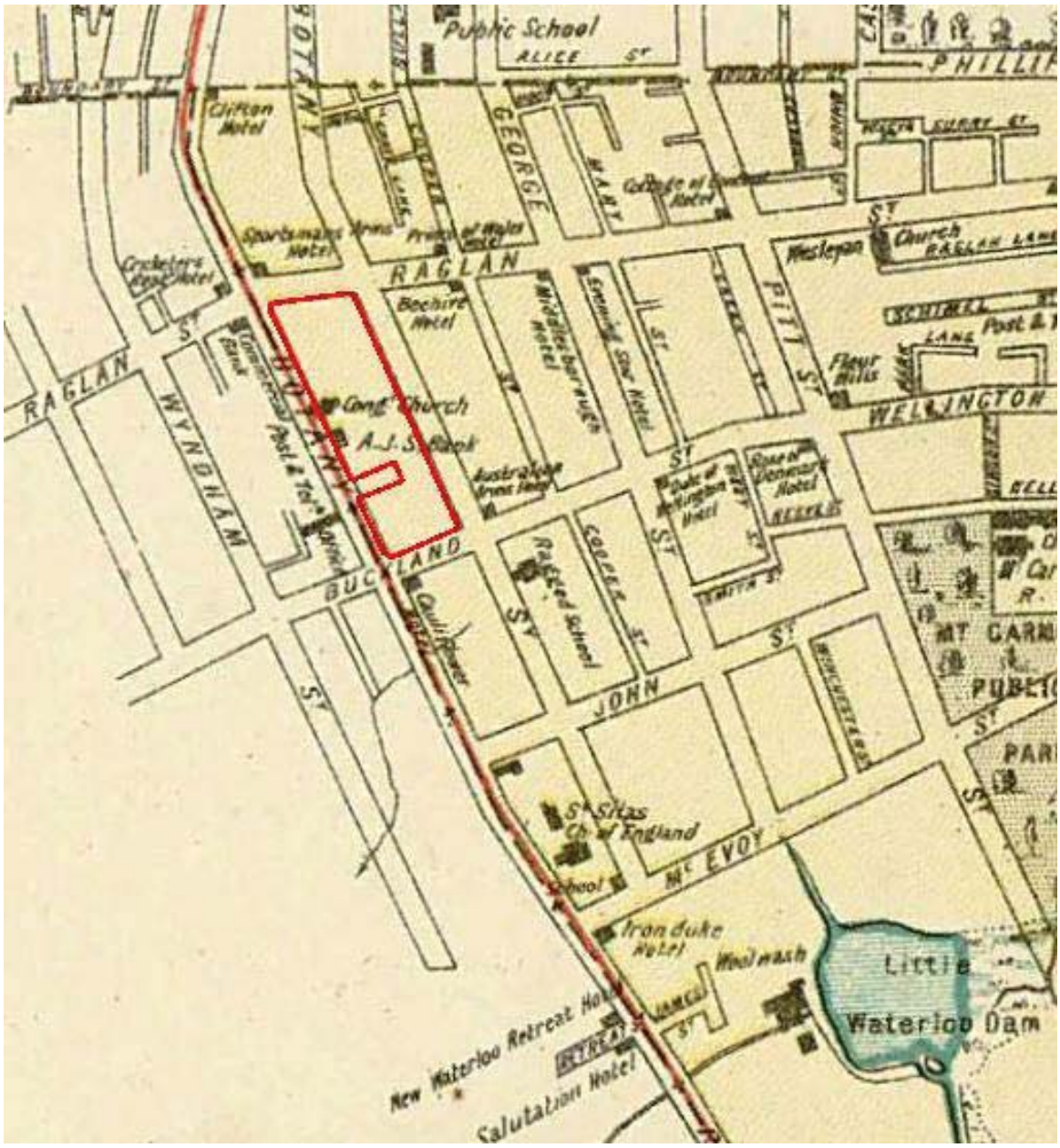


**Figure 10-7: 1895 Block plan showing residential and industrial/commercial structures**

**Figure 10-8: Victoria Park Racecourse, 1930s image via SLNSW**

### 10.2.3 Early Twentieth Century Manufacturing and Industry (1930 – 1950)

The Second World War led many major industries in Waterloo and Alexandria to change their primary business and support Australia in the war effort. Following 1945, all forms of manufacturing increased enormously for the next two decades.[184] The City of Sydney's boundaries were enlarged in 1948 to take in multiple surrounding municipalities, including Alexandria, Redfern and Waterloo.[185]

The Waterloo Municipality Garbage Destructor, erected for the Waterloo Council by the Goodrid Incinerator Company, was opened in December 1932. Built on the same site as the Waterloo Firebrick Company & Industrial Brick Co[186], the Incinerator featured a reinforced concrete ramp for the use of vehicles to tip their waste into the hoppers.[187] The destructor was no longer in use by 1949.

Reed Paper Products was a large factory that covered 5.2 hectares. By 1938 it was the largest manufacturer of paper products in Australia, employing 600 hands in its two factories at Redfern and Waterloo. They manufactured playing cards and cardboard containers in a variety of shapes and sizes.

Dunkerley Hat Mills, which moved to Waterloo in 1918, named its hats the Akubra, allegedly after an Aboriginal name for head covering (Figure 10-9). After being contracted to supply slouch hats to World War I diggers, the Waterloo millinery business continued to thrive. In the 1940s the factory employed 500 workers.

[184] City of Sydney, 2014: 28
[185] City of Sydney, 2014: 136
[186] City of Sydney, *'Report on City of Sydney Industrial & Warehouse Buildings Heritage Study'*, 2014
[187] The Sydney Morning Herald, *'Waterloo Incinerator'*, Tues 13th December 1932

**Figure 10-9: Dunkerley Hat Mills, Waterloo hat moulds and fabric rollers, 1963, image via SLNSW**

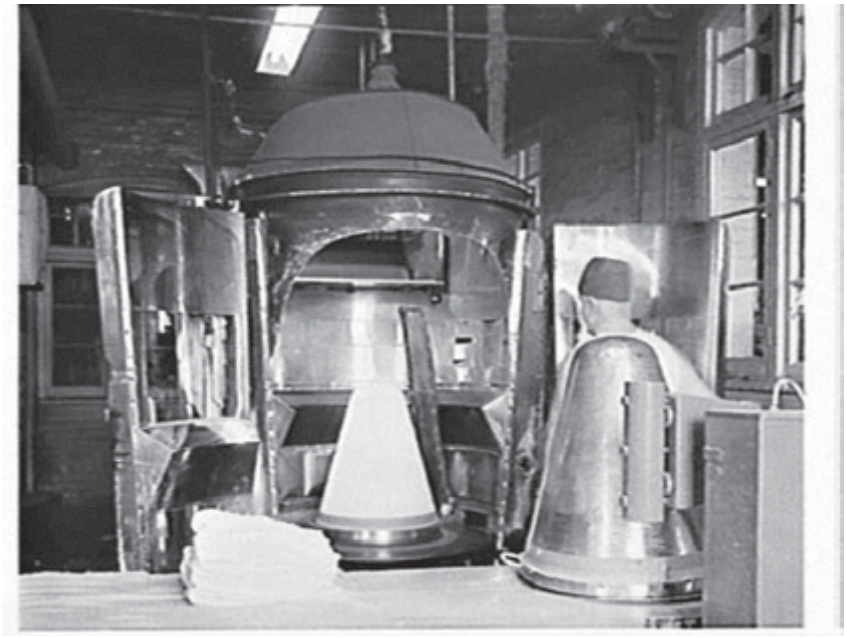
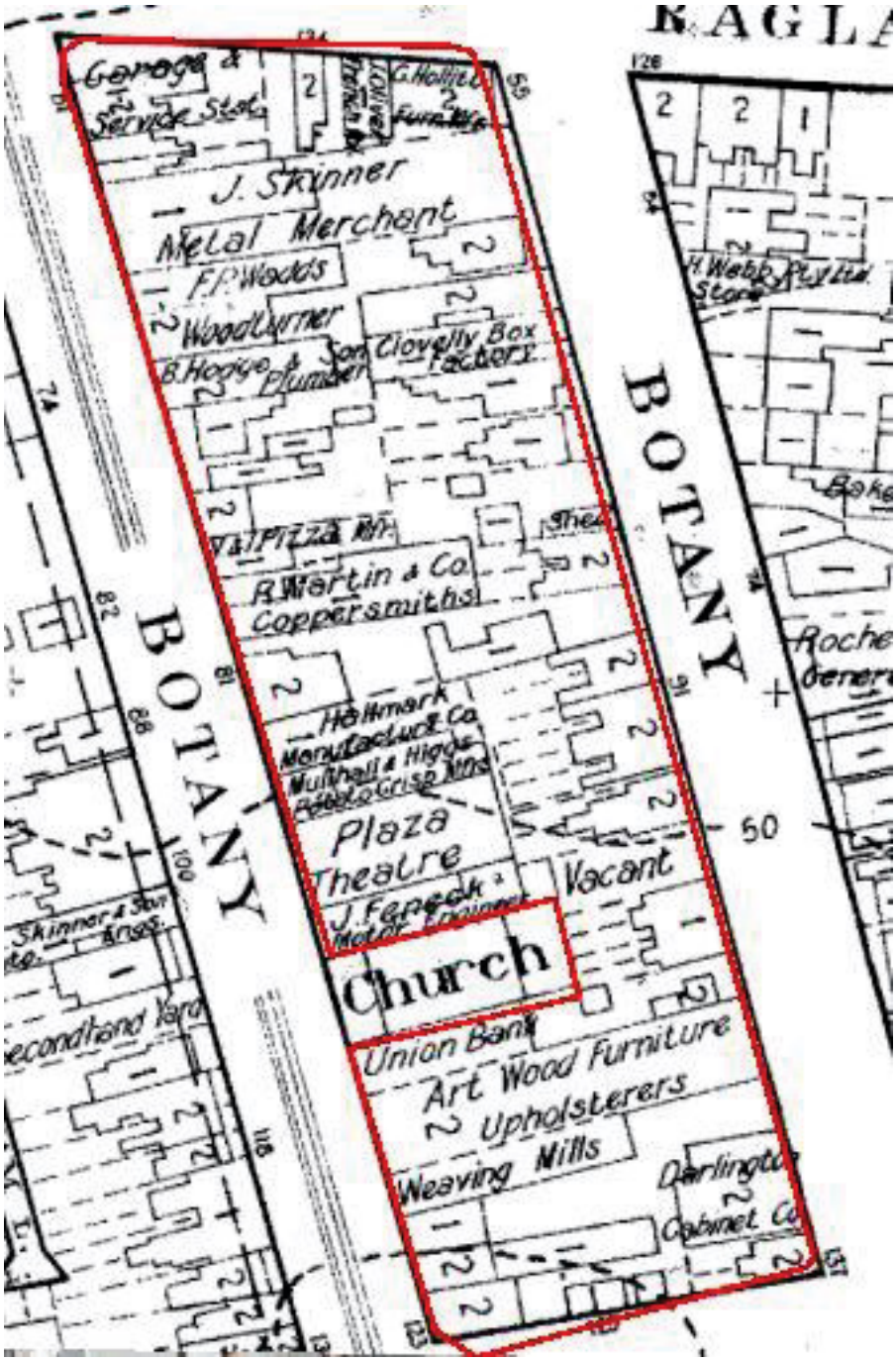


**Figure 10-10: Aerial view of Waterloo, 1943 image via sixmaps**

### 10.2.4 Post-War Commercial Decline and Modern Development (1950 – Present)

From the 1950s manufacturing either declined or decentralised to the western suburbs of Sydney leaving large areas of former industrial land for urban renewal. In 1948, the Victoria Park racecourse site was bought by William (Lord) Nuffield of the British Motor Corporation for industry, and today is the Victoria Park residential, retail and commercial development.[188] Figure 10-11 shows the following buildings located in the study area in 1951: car repair services and garages, metal merchant, furniture stores, plumber, coppersmith, Plaza Theatre, Church, Union Bank, Weaving Mills.

**Figure 10-11: 1951 Civic Survey of Sydney**




[188] City of Sydney, 2014: 143

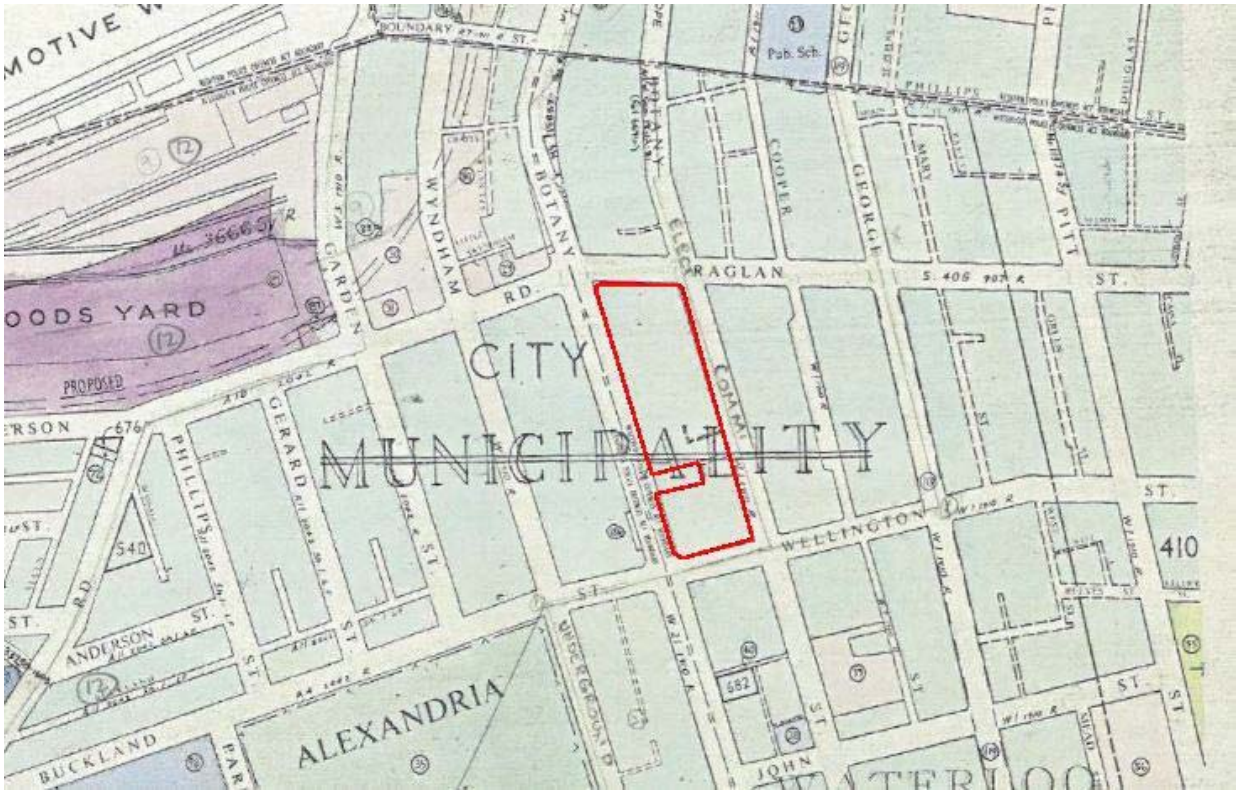
Waverley and Woollahra Councils purchased a site for the Waterloo Incinerator in 1966 on the site of the original Waterloo Mills, with construction completed in 1972. In 1991 the State Pollution Control Commission declared the pollution levels at Waterloo Incinerator unacceptable after community protest. Continued public outcry saw the Incinerator closed in 1997. The building was demolished in 2007.[189]

With the decline of secondary industry since the 1970s, the twentieth century industrial landscape was giving way to residential and commercial opportunities, with de-industrialisation introducing cleaner air and less pollution.

While the area still supports manufacturing, there has been an increasing influx of high-tech industries, offices, commercial businesses, showrooms and storage facilities replacing the old heavy industries of car manufacturing, foundries, chemicals and brewing. As workers moved out of the area, young families and urban professionals moved in.

In the 1990s, 'Green Square' was adopted as a kind of rebadging strategy for an area of South Sydney comprising Zetland and parts of Alexandria, Waterloo, Beaconsfield and Rosebery.[190] The Green Square development is seeking to revitalise the area with residential and commercial development, as well as new street and place names paying homage to the heritage of the area.

**Figure 10-12: Regional map of Waterloo, 1968**




## 10.3 Archaeological Potential

### 10.3.1 Previous Archaeological Studies

A number of previous archaeological studies in the south Sydney region relate to the current development of Green Square, located across multiple suburbs including Zetland, Alexandria,

[189] City of Sydney, 2014: 171
[190] City of Sydney, 2004: 9

Waterloo, Rosebery and Beaconsfield. Green Square train station is located less than one kilometre south of the current study area.

AHMS *Archaeological Management Plan, Green Square Town Centre* for Green Square Consortium (August 2013)[191]. AHMS found that the remains of the Waterloo Mill and twentieth century industrial and storage structures were likely to be present in the Green Square study area. The remains of the Waterloo Mill were considered likely to be able to provide information that is not available from other resources and is a significant potential archaeological resource. The later features were considered a lower level of archaeological significance than that of the Waterloo Mill due to the fact that they are not a rare example of twentieth century development.

GML *Green Square Library and Plaza Archaeological Assessment* (2014)[192]. The site has been subject to a high degree of disturbance and previous development impacts; however, the south part of the site may not have been subject to such extensive impacts. Therefore, GML rated this area as having moderate to high potential to contain archaeological remains associated with the c.1911 brickworks.

AMAC *Baseline Archaeological Assessment Green Square Town Centre Zetland* report prepared for Landcom (2008).[193] AMAC found that archaeological evidence of earlier activity in the region, such as the former Dam and woolwashing works and brickworks, may survive. Archaeological remains of later uses of the site, such as footings of houses and factories, may also exist. The site was considered significant at a State level because of the creation and use of the Waterloo Dam, and the operation of the Waterloo flour mill. The woolwashing works were considered significant at a local level.

### 10.3.2 Land Use Summary

European occupation of the Waterloo Station site has been divided into four phases of historical activity, which are discussed below.

- Phase 1 (1788-1880s) early land grants and establishment of industry: Transformation of wetland into mills, noxious trades, market gardens and horse training
- Phase 2 (1880s-1930s) subdivision: Residential development and occupation, commercial, light industry and trades
- Phase 3 (1930s-1950s) commercial and industrial: Continued residential occupation, commercial and industrial development and activity
- Phase 4 (1950s-present) post war commercial decline and modern development: Commercial redevelopment and activity and infrastructure development.

### 10.3.3 Previous Impacts

Post war development has seen the influx of industrial and commercial business, and residential housing in the south Sydney region. Small residential lots have given way to large motor repair buildings, warehouses and commercial structures. Several modern premises have been subject to subdivision and redevelopment. Site WL 6 has a sub-surface car park. This level of modern

[191] AHMS, 2013. *Archaeological Management Plan, Green Square Town Centre.*Report prepared for Green Square Consortium.
[192] GML Heritage, 2014. *Green Square Library and Plaza Archaeological Assessment*. Report prepared for Stewart Hollenstein and Colin Stewart Architects.
[193] AMAC, 2008. *Baseline Archaeological Assessment Green Square Town Centre, Zetland.* Report prepared for Landcom.

excavation has reduced the potential to recover archaeological remains from former structures in the northern section of the study area.

Few buildings remain from prior to 1943 within the study area, the Congregational Church outside the study area and the group of buildings to the south of the church are an exception. The remaining buildings have been largely repurposed and are currently utilised for commercial purposes.

### 10.3.4 Potential Archaeological Remains

In an area of concentrated industrial expansion, the station site appears to have remained a smaller scale development compared to its surroundings. This may be due to the central location between the Eveleigh Locomotive Workshops to the north-west and the Waterloo Dam, Mill and swamps to the south-east, where much of the industrial settlement in Waterloo occurred in order to utilise the water. The station site was a prime location for workers' housing and smaller commercial pursuits such as furniture making and motor vehicle repairs.

***Phase 1 (1788-1880)***
Archaeological remains associated with the initial phase of European settlement in the Waterloo area are likely to be ephemeral in nature. These may be limited to the harnessing of water supply in the area, such as drainage lines and lot fencing, as well as the introduction of industrialisation. Remains dating to an earlier phase than these are unlikely, due to the area being mostly swampland.

There is no recorded industrial development within the study area. There may be some potential for unrecorded activities within the site, however their nature is unknown. Market gardens were also established during this time. Archaeological evidence relating to the market gardens may include furrows, irrigation systems and archaeo-botanical pollens. Night soil used in the area may be evidence of ex situ artefacts not associated with the occupation on site.

***Phase 2 (1880-1930)***
Multiple structures within the station site are recorded in the late nineteenth century plans. The area was subdivided and development for residential, light industrial and commercial development. Archaeological evidence of residential terraces, workshops, trades and crafts, and retail activity from this phase may survive within the site. Remains could include brick or stone footings of buildings, outhouses and workshops, yard surfaces, cisterns and drainage systems, features and artefacts related to both residential and industrial activities.

It is likely that reticulated water supply and sewerage networks, as well as municipally organised garbage collection, was in place at this time. However, there is some potential for artefact-rich deposits such as rubbish dumps or backfills within disused cisterns or other sub-surface features. There have been few archaeological excavations in the area (at least no available results yet) to inform the model for archaeological survival in suburbs such as Waterloo.

***Phase 3 (1930-1950)***
Between 1930-1950 industrialisation increased, and archaeological remains dating from this time period are likely to be similar to remains dating from Phase 2. However, it is unlikely that artefacts would be present in legible occupation or industrial related features.

***Phase 4 (1950-present)***
Commercial development in the Waterloo Station site after 1950 varies between renovation of pre-existing structures for modern commercial use and the demolition of earlier structures for new commercial premises. Ground levelling and the construction of basement car parks has increased the degree of subsurface disturbance during construction activities compared to previous phases of building.

### 10.3.5 Summary of Archaeological Potential

Based on historical information, land use data and evidence of sub-surface impacts, a summary of the potential archaeological remains in the Waterloo Station site is provided in Table 10-2 below.

**Table 10-2: Summary of potential archaeological remains at the Waterloo Station site**

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| WL 1 | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Garage and service station, residential buildings and furniture workshops constructed prior to 1951 across the land parcel. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of mixed use commercial building across whole lot after 1951. | Nil - Low |
| WL 2 | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Metal merchant in north of parcel and residential building in south of parcel constructed prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of single storey Art Deco brick building with mezzanine offices after 1951. | Nil - Low |
| WL 3 | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Woodturning workshops constructed prior to 1951 in west of parcel. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of two-storey building after 1951. | Nil - Low |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| WL 4 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | 3 (1930 – 1950) | B. Hodge and Son Plumber workshop constructed in west of parcel and Clovelly Box Factory constructed in east of parcel prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | 4 (1950 – Present) | Construction of two-storey building after 1951. | Nil - Low |
| WL 5 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) / 3 (1930 – 1950) | No documentary evidence for built structures in this area prior to 1950. Potential for informal land uses, fence postholes, drains, isolated artefacts for Phase 3. | Nil - Low |
| | 4 (1950 – Present) | Construction of two-storey building after 1951. | Nil - Low |
| WL 6 | All | Present commercial and residential structure basement car park likely removed all archaeological remains of previous phases. | Nil |
| WL 7 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | 3 (1930 – 1950) | Residential buildings and a coppersmith constructed in the west of the parcel extend from WL 6 into WL 7, a shed constructed in the east of the parcel prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | 4 (1950 – Present) | Construction of two-storey building after 1951. | Nil - Low |
| WL 8 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil – Low |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **2 (1880 – 1930) / 3 (1930 – 1950)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of single storey Art Deco brick building with mezzanine offices after 1951. | Nil - Low |
| **WL 9** | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Hallmark Manufacturer constructed in the south of the parcel extends from WL 10 into WL 9, constructed prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of two-storey building and adjoined garage after 1951. | Nil - Low |
| **WL 10** | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Hallmark Manufacturer constructed across the parcel extends from WL 9 into WL 10, constructed prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of single storey Art Deco brick building with mezzanine offices after 1951. | Nil - Low |
| **WL 11** | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Potato crisp factory across the parcel constructed prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of two-storey building with above ground garage after 1951. | Nil - Low |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| WL 12 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | 3 (1930 – 1950) | Plaza Theatre and J. Feneck Motor Engineer workshop in the west of the parcel and a vacant lot in the east of the parcel constructed prior to 1951. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | 4 (1950 – Present) | Construction of single storey Art Deco brick building with mezzanine offices after 1951. | Nil - Low |
| WL 13 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | 3 (1930 – 1950) | No documentary evidence for built structures in this area prior to 1950. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | 4 (1950 – Present) | Construction of two-storey building with above ground garage after 1951. | Nil - Low |
| WL 14 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | 3 (1930 – 1950) | Union Bank, furniture upholsterer, and weaving mills were constructed across the parcel prior to 1950. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | 4 (1950 – Present) | Repurposing of buildings after 1951 into current commercial premises. | Nil - Low |
| WL 15 | 1 (1788 – 1880) | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | 2 (1880 – 1930) | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |

| Site Code | Phase | Likely archaeological remains | Potential |
|---|---|---|---|
| | **3 (1930 – 1950)** | No documentary evidence for built structures in this area prior to 1950. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Construction of two-storey building after 1951. | Nil - Low |
| **WL 16** | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Darlington Cabinet Company constructed across the parcel prior to 1950. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Low - Moderate |
| | **4 (1950 – Present)** | Repurposing of buildings after 1951 into current commercial premises. | Nil - Low |
| **WL 17** | **1 (1788 – 1880)** | No documentary evidence of former structures located in this area prior to 1882. Potential for tree boles, field drains, fence postholes, isolated artefact scatters for Phase 1. | Nil - Low |
| | **2 (1880 – 1930)** | Subdivision for residential and commercial development from 1880s. Potential for footings, drains, cisterns, evidence of industrial and residential occupation. | Low - Moderate |
| | **3 (1930 – 1950)** | Darlington Cabinet Company constructed across the parcel prior to 1950. Archaeological remains consisting of postholes, footing (brick, stone or concrete), drains and services (ceramic and metal), path or yard surfaces (cobbles, tiles, concrete, kerbing) for Phase 3. | Moderate |
| | **4 (1950 – Present)** | Repurposing of buildings after 1951 into current commercial premises. | Nil - Low |

## 10.4 Archaeological Significance

### 10.4.1 Assessment of Archaeological Significance

***Research Potential (Criterion E)***

The Waterloo Station site has low to moderate potential for archaeological remains associated with late nineteenth and early twentieth century residential, industrial and commercial development and activities. Historical research has not been exhaustive, however there is generally a lack of available records illustrating this period of development in Waterloo or similar suburbs. The Waterloo Station site has potential for archaeological remains associated with light industrial activity, trades and other commercial activities which may provide an archaeological remains with some research potential and provide knowledge regarding technology and working life.

***Association with Individuals, Events or Groups of Historical Importance (Criteria A, B and D)***

The potential archaeological resources are not associated with any particular individual of importance. However, the remains are associated with the historical development and evolution of Waterloo. They are also associated with working class residences and work places in the late nineteenth and early twentieth century. Additional historical research or archaeological investigation could provide evidence of different ethnic backgrounds, such as Chinese. The potential archaeological resources are associated with a period of intense development of inner suburbs and marginal land for industry in Sydney and the local area.

***Aesthetic or Technical Significance (Criterion C)***

The archaeological remains have potential to provide evidence of technology, engineering and industrial practices in the late nineteenth and early twentieth century.

***Ability to Demonstrate the Past through Archaeological Remains (Criteria A, C, F and G)***

Depending on the nature of the remains and whether there are distinct and legible features and artefacts relating to the various industrial and commercial activities on the site, the potential archaeological resource has the ability to demonstrate this part of Sydney's historical and commercial development.

### 10.4.2 Statement of Archaeological Significance

Archaeological remains associated with the former residential housing across the study area are unlikely to provide unique or important research resources. However, the potential for evidence of light industry and commercial activity from the 1880s to the early twentieth century may have research value and provide knowledge regarding technology, engineering and working life. The potential remains are associated with a rapid phase of suburban and industrial development in the area. Such archaeological remains would be locally significant under Criteria A and E.

Archaeological resources from the later commercial developments along Botany Road are well documented historically. These archaeological resources are also relatively common. They would not provide significant new information for research, and as such would not meet the threshold for local heritage significance.

**Table 10-3: Summary of areas with potential for significant archaeology at the Waterloo Station site**

| Site Code | Phase | Archaeological remains | Potential | Significance |
|---|---|---|---|---|
| **WL 1 – 4**<br>**WL 7 – 15**<br>**WL 16 - 17** | **2**<br>**(1880s – 1930s)** | Evidence of post 1880s residential, commercial and light industrial development. Potential for footings, work areas, features and artefacts associated with occupation, trade and technology. | Low - Moderate | Local |

**Figure 10-13: Archaeological potential of Waterloo Station site**


## 10.5 Archaeological Impacts

### 10.5.1 Proposed Works

Waterloo Station will be constructed with a cut-and-cover excavation. This would involve an open cut excavation down to the level of the base of the rail tunnel. Ground excavation would proceed to an approximate depth of 25 metres below street level, to the bottom of the rail tunnel. Site offices, workshops, water treatment facilities and storage areas would be established during construction on a temporary working platform constructed at street level over the open excavation area.

Works within the Waterloo Station site with the potential to impact on archaeological remains include:

- Demolition including ground slab and footing removal
- Construction of staff amenities and site facilities
- Bulk excavation of the eastern half of the construction site.

### 10.5.2 Potential Archaeological Impacts

Bulk excavation of the cut-and-cover station would result in the complete removal of archaeological remains within the eastern half of the site (Figure 10-14). Ground works and excavation associated with the construction of the site facilities in the western half of the site could result in impacts to archaeological remains, however the extent of these works is not known at this state.

There is generally low-moderate potential for archaeological remains associated with the later nineteenth century and early twentieth century residential occupation and industrial activity (Phase 2). Should the remains contain artefacts and other evidence which can clearly be associated with light industry and within residential context they would be of local significance, and therefore the bulk excavation would result in impacts to significant archaeological remains.

**Figure 10-14: Potential archaeological impacts - Waterloo Station site**

## 10.6 Archaeological Management

Archaeological test excavation at the Waterloo Station construction site would be required to clarify the significance of the archaeological remains (Table 10-4). The testing program should be undertaken following demolition and prior to construction work.

**Table 10-4: Summary of archaeological mitigation for the Waterloo Station site**

| Site Code | Potential archaeology | Impact | Mitigation |
|---|---|---|---|
| WL 1 – 5<br>WL 7 – 8<br>WL 12 – 14<br>WL 16 - 17<br>(east half of site) | Evidence of c.1880s residential, commercial and light industrial development. | Direct impact – bulk excavation | • AMS<br>• Testing (clarify significance)<br>• Salvage if significant |
| Rest<br>(west half of site) | Evidence of c.1880s residential, commercial and light industrial development. | Potential direct impacts – ground works and construction of site facilities | • AMS<br>• Monitoring/Test/Salvage depending on results from east half of site |

### 10.6.1 Archaeological Methodology

The following archaeological methodology for the Waterloo Station construction sites is based on impacts known at EIS stage. Explanation and further details regarding the archaeological process and methodologies identified below are provided in Section 12.0.

- An AMS would be prepared prior to the commencement of construction. This would:
  - Review the construction program, methodology and other available information to refine the archaeological investigation program
  - Provide details regarding the archaeological test excavation to clarify significance of the potential resource. There may be a staged approach to archaeological test excavation across the site depending on the construction program
  - Confirm the archaeological salvage or other mitigation requirements (such as a sample salvage strategy) for the eastern half (bulk excavation area) and the western half (site facilities and construction support area) of the site
  - Outline how Aboriginal archaeological excavation would be included in the archaeological program if it is required.
- Archaeological test excavation would be undertaken within the eastern half of the Waterloo Station construction site following demolition and prior to bulk excavation. This will determine if the potential remains are locally significant.
  - If the remains are locally significant then archaeological salvage excavation would be required.
  - If the remains are not significant work can proceed with an Unexpected Finds Procedure.
- Archaeological monitoring or test/salvage may be required in the western part of the site. If significant archaeological remains are identified the following would apply:
  - Salvage excavation prior to impact.
- Unexpected finds procedure would apply for all other construction works.

- A preliminary results report would be written once archaeological fieldwork has been completed.
- Post-excavation analysis of fieldwork results, artefacts, samples and other archaeological data would be undertaken and included in a final archaeological investigation report.
- Significant archaeological findings would be considered for inclusion in heritage interpretation for the project.

### 10.6.2 Research Questions

Historical themes for the Waterloo Station construction site is presented in Table 10-5.

**Table 10-5: Historical themes associated with the Waterloo Station site**

| Australian theme | NSW theme | Explanatory Notes | Comments |
|---|---|---|---|
| 3. Developing local, regional and national economies | Agriculture | Activities related to the cultivation and rearing of plant and animal species, usually for commercial purposes | The study area was the location of mid- to late 19th century farms and market gardens. |
| 3. Developing local, regional and national economies | Industry | Activities associated with the manufacture, production and distribution of goods | Noxious industries (e.g. tanning, leather working, soap making) were established outside the boundaries of the township of Sydney by the 1850s. These industries operated in the study area during the late 19th and early 20th centuries.<br><br>Manufacturing industries were established in the study area by the early 20th century and continue in use until today. |
| 8. Developing Australia's cultural life | Domestic life | Activities associated with creating, maintaining, living in and working around houses and institutions | Residential development in the study area had been substantial by the end of the 19th century. Early residential development may have archaeological resources which could demonstrate past living and working practices. |

The following research questions would guide investigations at the Waterloo Station construction site.

- To what extent do intact archaeological deposits relating to pre-1890s development remain within the study area?
- Are there archaeological remains relating to the development of noxious industries (tanning, soap making, etc.) in the study area?
- Are there archaeological remains related to early farms and market gardens in the study area?
- To what extent does residential development in the study area represent late nineteenth century inner-suburb housing construction, or are there earlier phases of residential occupation in the Waterloo area which have not been identified?
- Do archaeological resources relate to residential buildings in the study area date from an earlier period when public utilities (water, sewerage and rubbish collection) were not available? If so, do

cisterns, wells, cesspits and underfloor artefactual deposits provide archaeological intact archaeological remains?

- To what extent do intact archaeological remains demonstrate the working and industrial practices within the study area before the beginning of the twentieth century?
- Is there evidence of different ethnicities, such as Chinese?

Note: further research questions may need to be developed should the site be found to contain more significant archaeological resources than anticipated.

# 11.0 POWER SUPPLY ROUTES

## 11.1 Site Locations

A number of new power supply conduits would be required as part of the Sydney Metro project which would connect new stations and dive sites with existing electricity substations. These conduits would be predominantly installed along existing road and service corridors. This chapter assesses possible archaeological impacts as a result of construction of the new power supply routes.

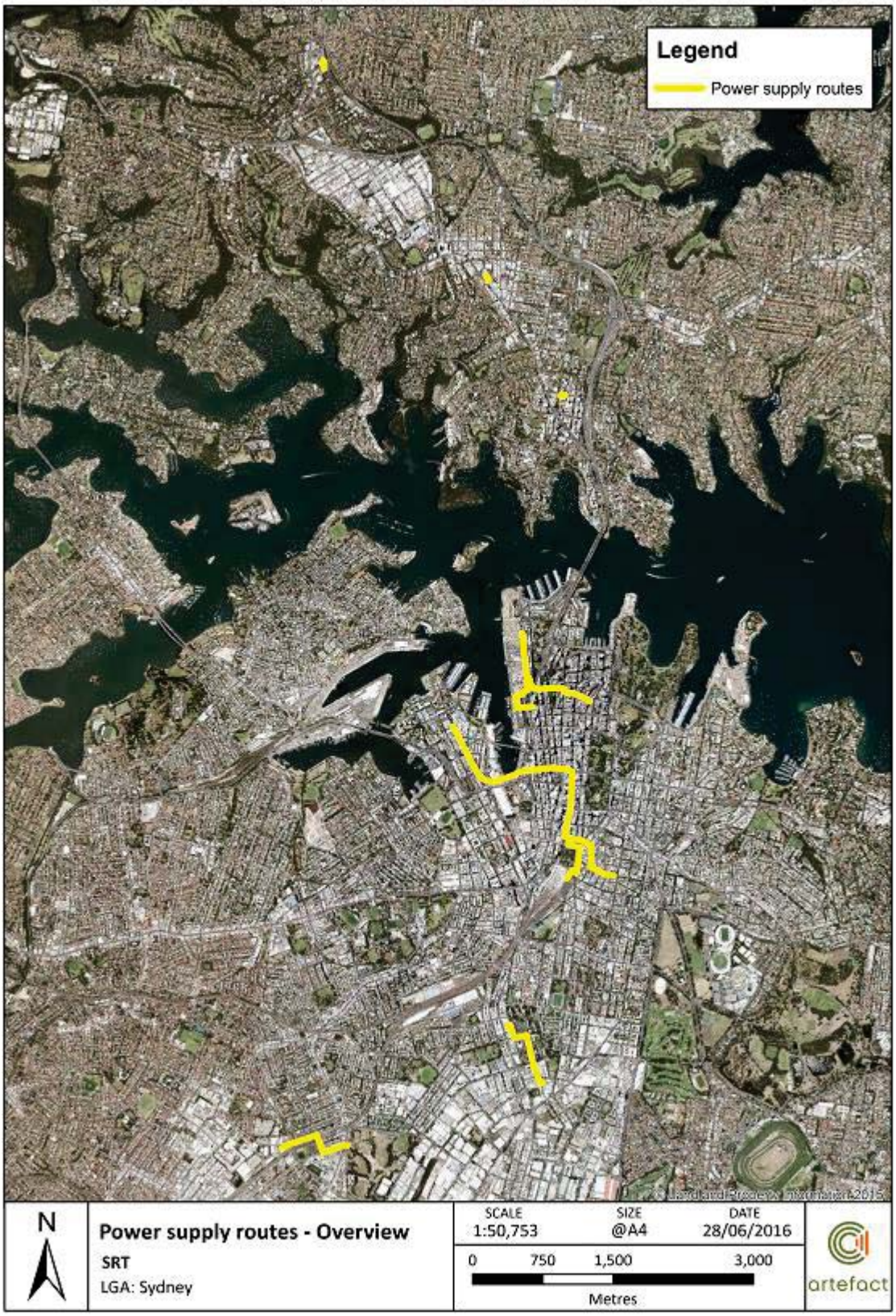
### 11.1.1 Land Parcels

The power supply routes have been separated into different location areas for this assessment. The different supply routes are listed in Table 11-1 below.

**Table 11-1: Description of power supply routes**

| Site Code | Site | Description of Route |
|---|---|---|
| **PSR 1** | Chatswood Dive Site Supply | Hampden Road and Mowbray Road, Chatswood |
| **PSR 2** | Crows Nest Site Supply | Clarke Lane, Crows Nest |
| **PSR 3** | Victoria Cross Site Supply | Berry Street, North Sydney |
| **PSR 4** | Barangaroo/Hickson Road Site Supply | Hickson Road, Barangaroo, and Shelley Street, Lime Street, Erskine Street, Sydney. |
| **PSR 5** | Martin Place Site Supply | Napoleon Street, Margaret Street, George Street, Hunter Street, Castlereagh Street, Sydney. |
| **PSR 6** | Central Station Site Supply | Hay Street, Elizabeth Street, Eddy Avenue, Haymarket. |
| **PSR 7** | Marrickville Dive Site Supply | May Street, Council Street, St Peters and Lord Street, Newtown. |
| **PSR 8** | Pitt Street Site Supply | Pyrmont Street, Pyrmont; Western Distributor, Blackwattle Place, Druitt Street, Park Street, Pitt Street, Campbell Street Sydney; Mary Street and Albion Street, Surry Hills. |

**Figure 11-1: Power supply routes overview**



## 11.2 Archaeological Potential

### 11.2.1 Introduction

Each power supply route section is analysed for its archaeological potential. In general, the location of the power supply routes within existing road and service corridors decreases the likelihood of archaeological remains being present. Roads were mostly laid out prior to major development. Where roads were widened or built through resumed urban allotments, the archaeological potential is higher. However frequent road upgrades and services installation would have resulted in a high level of impact and disturbance.

Key historic maps were reviewed in the assessment of archaeological potential for the power supply routes. Results of recent archaeological monitoring and unexpected finds call-outs during construction work, road and utility upgrades in the CBD have also informed the assessment.

### 11.2.2 Chatswood Dive Site Supply (PSR 1)

The power supply route for the Chatswood Dive Site is located in the Hampden Road and Mowbray Road corridors (Figure 11-2). Mowbray Road was laid out during the late 1800s, while Hampden Road was laid out during the early 1900s when the nearby agricultural land was subdivided for residential sale. These roads have been in use since that time. Prior to the laying out of these roads, the area was partially cleared farming and grazing land belonging to Isaac Nicholls (see Section 2.2 for a discussion on this estate). There were no known structures in this area.

**Figure 11-2: Chatswood Dive Site power supply route**

**Table 11-2: Archaeological potential and significance in the Chatswood Dive Site power supply route (PSR 1)**

| PSR 1 Chatswood Dive Site Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Hampden Road and Mowbray Road | Nil – Low archaeological potential for deposits relating to early agricultural development in this area: post-holes, field drains, isolated artefact deposits. | Unlikely to reach local significance threshold |
| | Low archaeological potential for deposits relating to Mowbray Road and Hampden Road. Archaeological remains associated with former infrastructure such as drains, road surfaces and kerbing. | Unlikely to reach local significance threshold |

### 11.2.3 Crows Nest Station Supply (PSR 2)

The power supply route for Crows Nest Station is located in Clarke Lane road corridor (Figure 11-3). Clarke Lane was laid out during the 1880s during the first subdivisions of Berry's Estate. Clarke Lane has since been used as an access road and rear lane for properties on the Pacific Highway since that time. Prior to the laying out of Clarke Lane, the area was partially cleared farming and orchard belonging to the Wollstonecraft/Berry Estate (see Section 3.2 for a discussion on this estate). There were no known structures in this area.

**Figure 11-3: Crows Nest Station power supply route**

**Table 11-3: Archaeological potential and significance in the Crows Nest Station power supply route (PSR 2)**

| PSR 2 Crows Nest Station Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Clarke Lane | Nil – Low archaeological potential for deposits relating to early agricultural development on Wollstonecraft / Berry's: postholes, field drains, isolated artefact deposits. | Unlikely to reach local significance threshold |
| | Nil – Low archaeological potential for deposits relating to Clarke Lane, former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold |

### 11.2.4 Victoria Cross Station Supply (PSR 3)

The power supply route for the Victoria Cross Station supply runs for a short distance down Berry Street in North Sydney. Berry Street was laid out in the 1830s during the subdivision of the then-called St Leonards township. St Leonards developed slowly however, with no substantial construction taking place along Berry Street until the 1860s (see Section 4.2 for a discussion on the St Leonards township). Prior to the laying out of Berry Street, the area had not been alienated by the colonial government. There have been no known structures located in this area.

**Figure 11-4: Victoria Cross Station power supply route**

**Table 11-4: Archaeological potential and significance in the Victoria Cross Station power supply route (PSR 3)**

| PSR 3 Victoria Cross Station Power Supply | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Berry Street | Low archaeological potential for deposits relating to Berry Street. Former early-mid nineteenth century infrastructure such as drains, surfaces and kerbing. | Local |

### 11.2.5 Barangaroo Station/Hickson Road Supply (PSR 4)

The power supply route for the Barangaroo Station runs down Hickson Road from the station in the north, until deviating to the west down Lime Street, before running onto Shelley Street to the south and turning onto Erskine Street to the east (Figure 11-5).

Archaeological potential in the northern part of Hickson Road corridor is likely to be nil due to the deep excavation required for the construction of Hickson Road in the 1900s. This excavation would have removed archaeological remains.

Archaeological remains in the southern section of the Hickson Road corridor are likely to include deposits relating to the Australian Gas Works and a variety of foreshore warehouses and workshops. Plans from 1865 show that the modern road corridor intersects with a number of stone, brick and timber commercial buildings, as well as through areas of former storage tanks for the Australian Gas Works. The construction of Hickson Road in this area involved the levelling of previous structures but would not have resulted in significant ground excavation. Archaeological potential in this area would be moderate to high. Archaeological significance would be related to its intactness. Remains relating to the Australian Gas Works, if intact, would be meet the threshold for State significance. Intact remains relating to Girard's Flour Mill (later the Sydney Flour Mill), would meet the threshold for local significance.

The northern section of Sussex Street, where it links to Hickson Road, was constructed on reclaimed land by the 1860s. The original road alignment for Sussex Street in the northern area does not follow the modern alignment of the street, and plans from 1865 show that a large sandstone building, likely a warehouse, existed in the location of the present road alignment. Plans from 1900 show that this building was the workshop of one of two steamship navigation companies. Archaeological remains associated with this building would be unlikely to meet the threshold for local significance.

The remaining Barangaroo/Hickson Supply Route is located within existing road corridors. The Lime and Shelley Street road corridors were partially constructed on reclaimed land. The Erskine Street road corridor was laid out prior to substantial settlement in the area. Road corridors for these streets have not diverged since they were laid out.

A summary of the archaeological potential and significance for the Barangaroo Station/Hickson Road power supply route is presented in Table 11-5 below.

**Figure 11-5: Barangaroo Station/Hickson Road power supply route**


**Table 11-5: Archaeological potential and significance in the Barangaroo station / Hickson Road power supply route (PSR 4)**

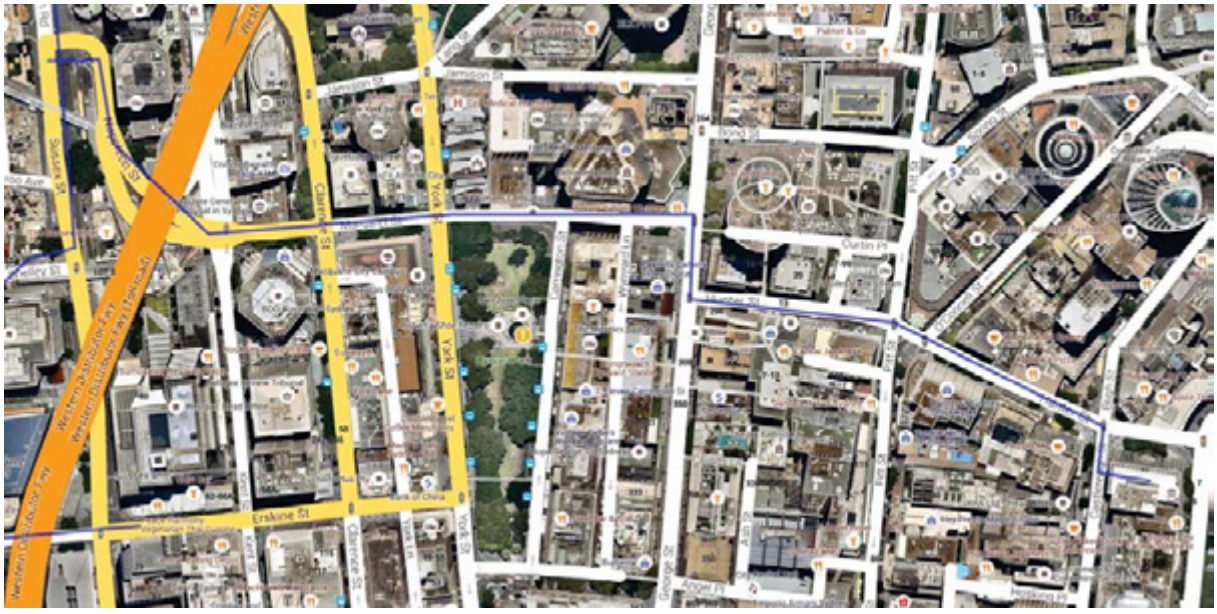
| PSR 4 Barangaroo Station / Hickson Road Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Northern part of Hickson Road, Barangaroo | Nil potential for archaeological deposits. Hickson Road was constructed in the early 1900s by excavating through sandstone bedrock to create a water-level dock surface on Darling Harbour. | Nil |

| PSR 4 Barangaroo Station / Hickson Road Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Southern part of Hickson Road, Barangaroo | Low – Moderate potential for truncated archaeological remains relating to the Australian Gas Works, Girard's Flour Mill, and a number of mercantile warehouse structures along the foreshore. Potential for uncovering stone and brick footings, artefacts, industrial plant, workshop and yard surfaces. | Archaeological remains related to the Australian Gas Works would be potentially State significant.<br><br>Archaeological remains related to Girard's Flour Mill would be potentially locally significant. |
| Sussex Street Barangaroo | Low – Moderate potential for truncated archaeological remains relating to the former alignment of Sussex Street (early 1800s to early 1900s). Stone warehouse and/or workshop present on site by 1865. Potential for encountering stone footings, yard surfaces, industrial plant, artefact deposits, former infrastructure such as drains and pipes. | Local |
| Shelley and Lime Streets, Sydney | Nil - Low potential for archaeological for archaeological remains associated with former infrastructure. | Unlikely to reach local significance threshold |
| Erskine Street, Sydney | Nil potential for archaeological deposits. | Unlikely to reach local significance threshold |

### 11.2.6 Martin Place Station Supply (PSR 5)

The power supply route for the Martin Place Station starts on Napoleon Street, after deviating from the Hickson Road power supply route. It then follows Margaret Street east until it intersects with George Street. After following George Street south for less than fifty metres, it turns eastward onto Hunter Street, until turning south on Castlereagh Street (Figure 11-6).

**Figure 11-6: Martin Place Station power supply route**

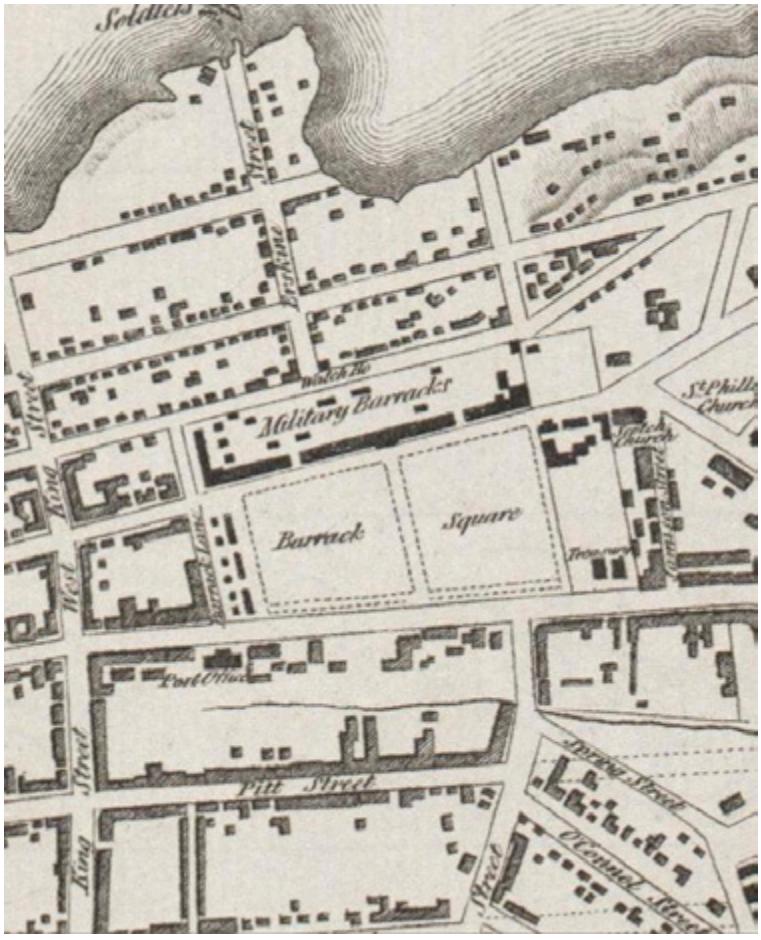


Napoleon Street and Margaret Street were laid out in the by 1855. Napoleon Street was laid out in an area of steep topography, while Margaret Street was laid out through an area already partially built upon. Up until the 1840s the military barracks was located between Clarence Street and George Street with what later became Margaret Street to the north. There may be truncated archaeological remains associated with the c.1818 Barracks in Margaret Street between Clarence Street and George Street.  It should be noted there is some limited potential for unrecorded burial sites in the general area of Margaret Street. In the first years of the colony a burial ground was opened near the military barracks at the corner of present day Clarence and Margaret Streets.

The Tank Stream, the first water supply for the colony of Sydney, is located underneath Hunter Street between George Street and Pitt Street. The Tank Stream is a State heritage listed built and archaeological item. The Tank Stream is a historic stone and brick, with a more recent concrete, stormwater drain running the course of the original freshwater stream. The section crossing Hunter Street is an historic sandstone structure. The physical curtilage of the item is listed as three metres with a ten metre buffer for potential archaeology. These archaeological remains could include environmental data (soil deposits, paleo-botanical microfossils), structures related to former creek banks and deposited rubbish.

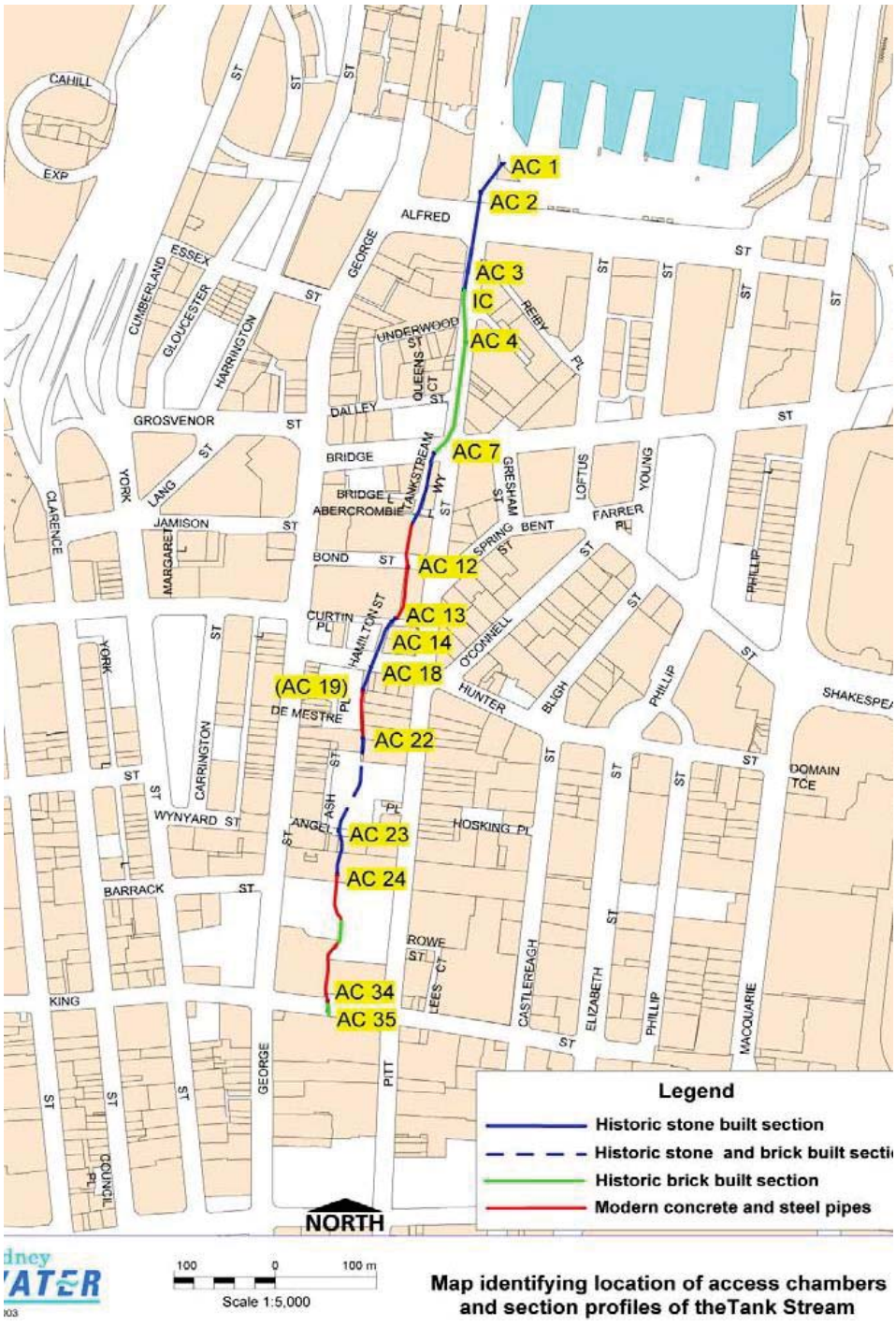
The Bennelong Sewer system was constructed in the 1850s as the first organised attempt to improve public sanitation in the city of Sydney. These sewer lines are located below the north-south aligned roads in the eastern part of the city and cross over Hunter Street at Pitt Street and run along Castlereagh Street.

**Figure 11-7: Military barracks on an 1837 map of Sydney[194]**




[194] http://dictionaryofsydney.org/image/110836

**Figure 11-8: Map showing the Tank Stream[195]**




Map identifying location of access chambers and section profiles of theTank Stream

[195] Sydney Water, Tank Stream CMP 2005: 32

**Table 11-6: Archaeological potential and significance for the Martin Place Station power supply route (PSR 5)**

| PSR 5 Martin Place Site Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Napoleon and Margaret Streets, Sydney | Low potential for archaeological remains such as footings and other features associated with the c1818-1840s military barracks. Nil-low potential for early colonial burial remains (corner of Clarence and Margaret) | State |
| | Low potential for former 19th century infrastructure such as brick or stone drains, surfaces and kerbing. | Local |
| George and Hunter Streets, Sydney | Low potential for archaeological remains relating to the Tank Stream (1788-1850s) within approximately ten metres of the outer boundary of the physical drain structure. | State |
| | Low potential for former 19th century infrastructure such as brick or stone drains, surfaces and kerbing. | Local |
| Castlereagh Street, Sydney | Low potential for former 19th century infrastructure such as brick or stone drains, surfaces and kerbing. | Local |

### 11.2.7 Central Station Site Supply (PSR 6)

The power supply route for the Central Station site starts on Hay Street heading east, before turning south on Elizabeth Street. The line then diverts to the west underneath Eddy Avenue before terminating inside the Central Station site (Figure 11-9).

Hay Street and the southern extent of Elizabeth Street were both laid out in the 1830s. Hay Street was the southern boundary of the Hay Market which gave the locality its name. Elizabeth Street was extended to the south by the 1830s, linking the Hyde Park area through Brickfield Hill with the Cleveland Estate and the Government Paddocks. The road alignment has not changed since they were laid out and there is no evidence of prior structures in these road corridors before they were established.

Eddy Avenue was built in the early 1900s to provide vehicle and pedestrian access to the third expansion of Central Railway Station. In order to extend Central Station to the north, the former Devonshire Street Cemetery was exhumed and the sand dunes removed. While much of the sand dune in which the cemetery was located was removed during the construction of Eddy Avenue, it is possible that subsurface deposits relating to burials, tombs, tombstones and former walls could remain. See Section 9.3 and 9.4 for a complete discussion of the archaeological potential and significance of the Devonshire Street Cemetery.

**Figure 11-9: Central Station site power supply route**

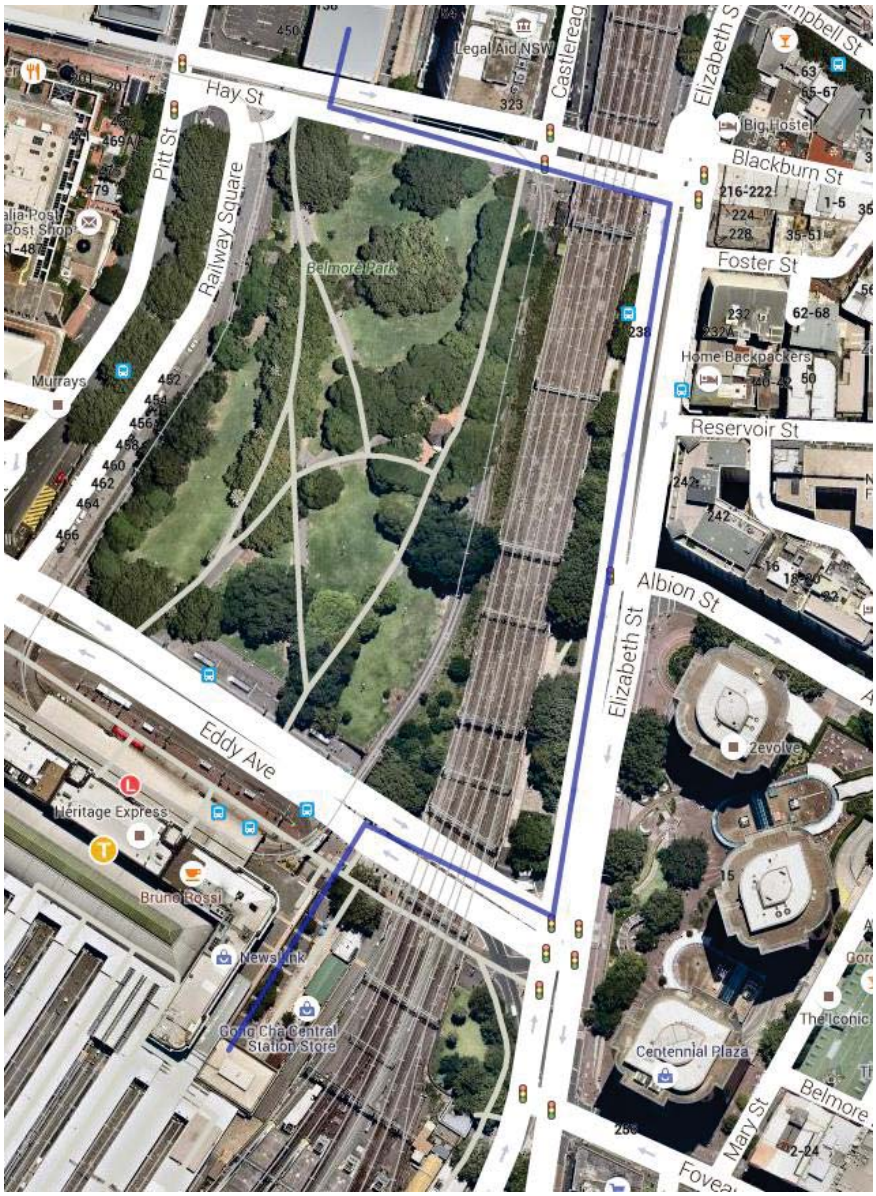



**Table 11-7: Archaeological potential and significance for the Central Station site power supply route (PSR 6)**

| PSR 6 Central Station Site Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Hay Street | Low potential for archaeological remains of former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold |
| Elizabeth Street | Low – Moderate potential for archaeological remains of former tram line, drains, surfaces and kerbing. | Local |
| Eddy Avenue | Low potential for archaeological remains associated with the former Devonshire Street Cemetery. | State |

### 11.2.8 Marrickville Dive Site Supply (PSR 7)

The power supply route for the Marrickville dive site commences at the intersection of May Street and the Princes Highway in St Peters, continuing west down May Street. It then turns north onto Council Street, before crossing the rail corridor and connecting with John Street in Newtown. The route turns west onto Lord Street in Newtown before crossing Edgeware Road and Railway Parade at its termination (Figure 11-10).

May Street appears in plans in the 1880s, following the subdivision of the Goodsell Estate in the 1870s. Late Victorian and Federation row houses were constructed along May and Council Streets during the late nineteenth and early twentieth centuries. To the west of Council Street (originally John Street), Goodsell's brickworks were in operation since the 1870s. The current alignment of May and Council Streets has remained the same since they were laid out.

John Street and Lord Street were laid out when the Bello Retiro estate, originally owned by John Lord in the 1840s, was subdivided in the 1880s. While properties were slow to be established on the new allotments, John and Lord Streets have remained in their present alignments since that time.

Parish maps from prior to the subdivision of these estates show that the study area is open farmland. There are no records of structures located within the road corridors of the Marrickville Dive Supply Route prior to the laying out of the roads.

**Figure 11-10: Marrickville Dive Site power supply route**


**Table 11-8: Archaeological potential and significance for the Marrickville Dive Site power supply route (PSR 7)**

| PSR 7 Marrickville Dive Site Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| May and Council Streets, St Peters | Low potential for archaeological remains of former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold |

| PSR 7 Marrickville Dive Site Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| John and Lord Streets, Newtown | Low potential for archaeological remains of former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold |
| Edgeware Road and Railway Parade, Newtown | Low potential for archaeological remains of former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold |

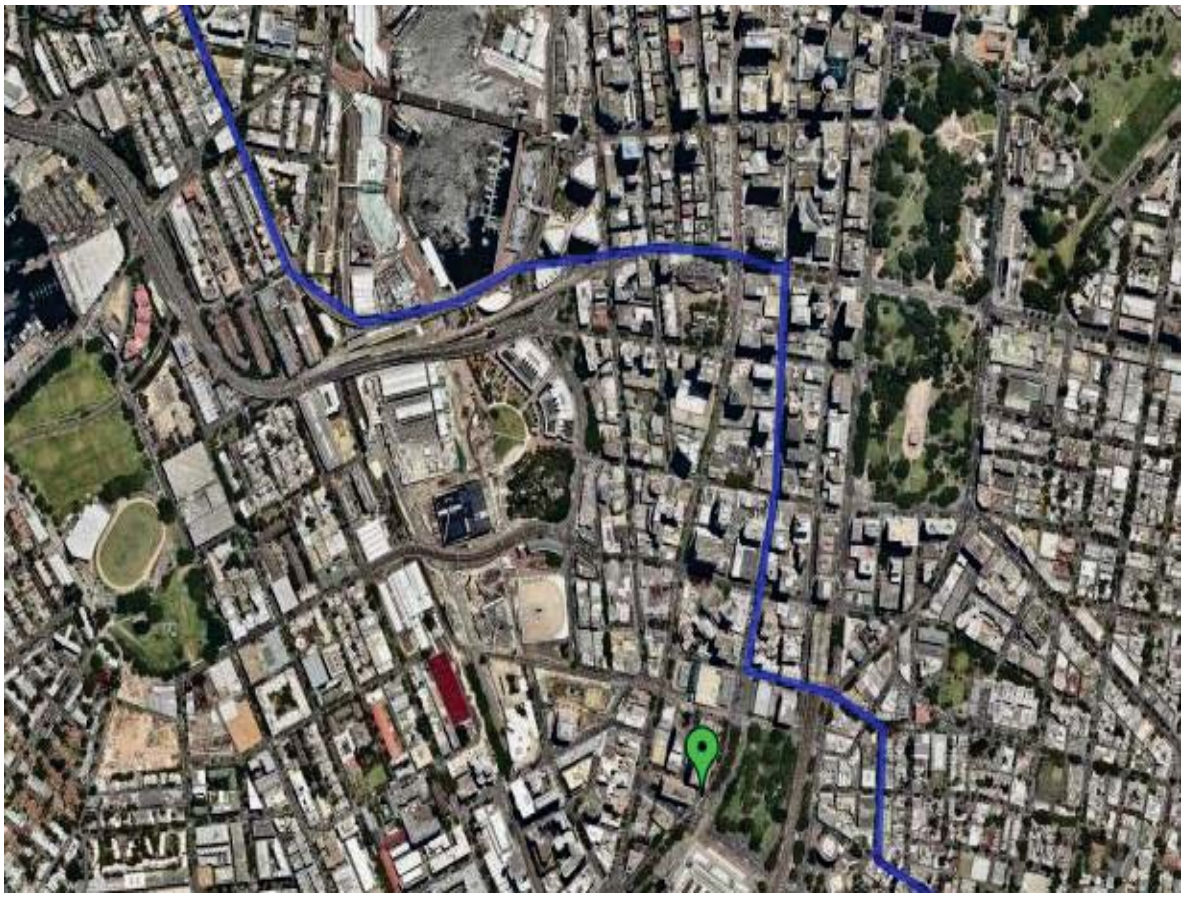
### 11.2.9 Pitt Street Site Supply (PSR 8)

The Pitt Street Site power supply route currently has two route options – either from Pyrmont or from Surry Hills. Both routes will be assessed for archaeological potential in this section. The combined power supply routes are illustrated in Figure 11-11.

The Pyrmont route follows Pyrmont Street south-east before turning east at the southern extent of Darling Harbour (below the alignment of the Western Distributor Motorway). It continues east underneath Blackwattle Place, Druitt Street and Park Street before turning south down Pitt Street.

The Surry Hills route follows Albion Street westwards, before turning north onto Mary Street. The route then diverts west onto Campbell Street before turning north onto Pitt Street.

**Figure 11-11: Pitt Street Station site power supply route**



The northern portion of Pyrmont Street was laid out by the 1850s and extended in the 1880s as the southern part of Darling Harbour was reclaimed. There are several small buildings present along the shoreline in this area on plans from the 1850s.

The modern southern Darling Harbour foreshore consists of land reclaimed since the beginning of European settlement. Blackwattle Place was also constructed on reclaimed land from Darling Harbour. What is now the southern foreshore was originally a tidal flat and the mouth of freshwater streams which opened into Port Jackson up to 500 metres to the south of the present shoreline. As such, archaeological deposits relating to reclamation fills (imported spoil, rubble and demolition fills) have a high potential to be located in this area.

The Pyrmont goods railway line was established shortly after the construction of the first railway station in Sydney in 1855. Its alignment ran parallel to Pyrmont Street to the east. The power supply route will cross over the former rail corridor. As a result of impacts to the Pyrmont foreshore and a long history of road building and re-alignment in the area the potential for archaeological remains relating to the goods line to be present is low to moderate.

Druitt Street and Park Street have followed their present alignment since they were laid out by the 1820s. Prior to this time there were no recorded structures located along their alignments. Sydney's first burial ground (located on the current site of the Sydney Town Hall) did not extend northwards into Druitt Street, and the dog-leg turn at the intersection of Druitt Street and George Street is present on plans dating from the 1820s.

Albion Street was laid out during the 1830s after the construction of the Albion Brewery at that time. The majority of the streets of Surry Hills had been laid out by this time, however substantial residential development in the area did not pick up until the 1850s. The present-day intersection of Albion and Mary Streets has a different alignment from the intersection up until the early 1900s. By the 1880s a brick residential row house was located in what is now the Mary Street road corridor, and archaeological deposits associated with this former structure may remain.

The western extent of Campbell Street is present on plans of Sydney as early as 1837, however the eastern extent of Campbell Street, from Castlereagh Street up to Taylor Square, was not laid out until the 1850s. Plans from the 1830s and 1840s show that a number of brick buildings were located on the eastern side of Elizabeth Street, in the area of the junction of Campbell Street, Elizabeth Street and Wentworth Avenue. These buildings would have represented the earliest agricultural or workshop structures in the area, and any archaeological remains relating to them would meet the threshold for local significance. However, the large number of successive impacts involving the landscaping of the steep incline to the north, the construction of Central Station, the construction of underground tunnels for the Eastern Suburbs railway line, and a series of road re-alignments and excavations, means that the archaeological potential of recovering remains related to the 1840s structures in this area would be nil to low.

The power supply route would also run through the centre of the Pitt Street road corridor. Depending on the configuration of the power supply route, a section of road from the Park Street intersection to the Campbell Street intersection may be used.

The section of Pitt Street between Park Street and Campbell Street is marked as "Upper Pitt Street" in a plan of Sydney from 1837. In 1822 this area of Pitt Street was not marked out at all, and it is likely that the area was partially cleared land up until the 1830s. The southern extent of Pitt Street, near the junction of Goulbourn Street, is likely to have run through the original site of the Brickfields, an early settlement located a distance away from town for noxious and polluting industries, particularly for the construction of bricks. Plans from 1822 show that a number of isolated cottages and land allotments were located in the future road corridor at this time.

However, the settlement of the Brickfields was the location of a large amount of landscaping when the steep grade of the top of Brickfield Hill (to the north) was removed to infill the low-lying valley where the village was originally located. This level of ground disturbance, combined with the successive phases of road building and construction, is likely to have removed all potential for the recovery of archaeological remains associated with the first European buildings in this area.

The Bennelong Drain runs down the length of Pitt Street as far south as the intersection with Bathurst Street. There is a potential for impacting this 1850s drain located in the Pitt Street road corridor.

**Table 11-9: Archaeological potential and significance for the Pitt Street Station site power supply route (PSR 8)**

| PSR 8 Pitt Street Site Power Supply Route | | |
|---|---|---|
| **Section of Route** | **Archaeological remains** | **Archaeological significance** |
| Pyrmont Street, Pyrmont | Low potential for archaeological remains relating to 19th century structures and yards. Former 19th century infrastructure such as drains, surfaces and kerbing. | Local |
| Southern Foreshore of Darling Harbour and Blackwattle Place, Sydney | High potential for reclamation fills along the Darling Harbour area. | Unlikely to reach local significance threshold |
| | Low potential for archaeological remains relating to the goods railway line to Pyrmont, located between Pyrmont Street and the Darling Harbour foreshore. Former 19th century infrastructure such as drains, surfaces and kerbing. | Local |
| Druitt Street and Park Street, Sydney | High potential for reclamation fills at the western end of Druitt Street. | Unlikely to reach local significance threshold |
| | Low potential for archaeological remains relating to former 19th century infrastructure such as drains, surfaces and kerbing. | Local |
| Albion and Mary Streets, Surry Hills | Low potential for brick footings associated with late 1800s housing on former Albion and Mary Street intersection. Former 19th century infrastructure such as drains, surfaces and kerbing. | Local |
| Campbell Street, Surry Hills and Haymarket | Low potential for brick footings, cisterns and wells, isolated artefact deposits associated with 1830s and 1840s structures located at the Elizabeth Street and Campbell Street intersection. Former 19th century infrastructure such as drains, surfaces and kerbing. | Local |
| Pitt Street, Sydney | Nil - Low potential for archaeological remains relating to residences and workshops related to the first Brickfields settlement prior to the 1830s. | Local |
| | Low potential for former 19th century infrastructure such as drains, surfaces and kerbing. | |

## 11.3 Archaeological Impacts

### 11.3.1 Proposed Works

The construction of the power supply routes for the dive sites and metro stations involves excavation work to install new power supply conduits to these sites.

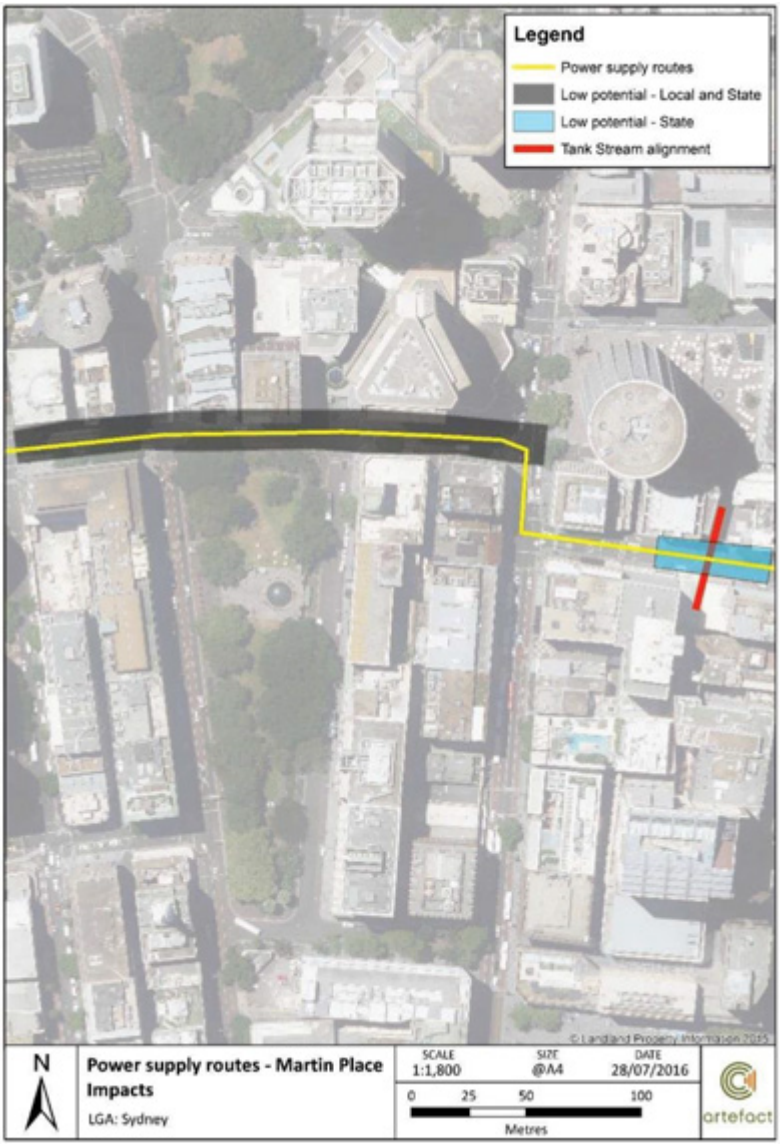
The majority of the power supply routes would be constructed by trenching within the road reserve. Where major roads are crossed by the route, alternative construction methods such as under-boring would be explored to avoid major impacts to the road network. Alternative construction methods such as under-boring may be used to avoid other constraints such as services or areas of environmental sensitivity.

### 11.3.2 Archaeological Impacts

Trenches are expected to be around one metre wide and 1.5 to two metres deep. It is therefore likely that any subsurface archaeological remains existing within the trench alignments would be impacted. Where previous disturbance, primarily from utilities service installation, has occurred, the archaeological potential would be low.

**Figure 11-12: Potential archaeological impacts Hickson Road and Sussex Street power supply routes**

**Figure 11-13: Potential archaeological impacts Margaret to Hunter Street power supply routes**




## 11.4 Archaeological Methodology

The archaeological methodology for the power supply routes is presented in Table 11-10.

**Table 11-10: Summary of archaeological mitigation for the power supply routes**

| Route | Section of Route | Potential Archaeological Remains | Significance | Archaeological Management |
|---|---|---|---|---|
| **PSR 1** | All | Low potential for archaeological remains associated with former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold | Unexpected Finds |
| **PSR 2** | All | Nil – Low archaeological potential for deposits relating to Berry's estate. Low potential for former infrastructure such as drains, surfaces and kerbing. | Nil - Local | Unexpected Finds |

| Route | Section of Route | Potential Archaeological Remains | Significance | Archaeological Management |
|---|---|---|---|---|
| **PSR 3** | All | Nil – Low archaeological potential for deposits relating to 19th century Berry Street. Low potential for former infrastructure such as drains, surfaces and kerbing. | Nil - Local | Unexpected Finds |
| **PSR 4** | Hickson Road (south) | Low – Moderate potential for truncated archaeological remains relating to the Australian Gas Works, Girard's Flour Mill, and a number of mercantile warehouse structures along the foreshore. Potential stone and brick footings, artefacts, industrial plant, workshop and yard surfaces. | Local - State | AMS<br>Monitoring if required |
| | Sussex Street | Low – Moderate potential for truncated archaeological remains relating to the former alignment of Sussex Street (1800s-1900s). Stone warehouse present on site by 1865. Potential for encountering stone footings, yard surfaces, industrial plant, artefact deposits, former infrastructure such as drains and pipes. | Local | AMS<br>Monitoring if required |
| | Rest | Nil - Low potential for archaeological for archaeological remains associated with former infrastructure. | Nil - Local | Unexpected Finds |
| **PSR 5** | Margaret Street | Low potential for archaeological remains such as footings and other features associated with the c.1818-1840s military barracks. | State | AMS<br>Monitoring |
| | Hunter Street | Low potential for archaeological remains relating to the Tank Stream (1788-1850s) within approximately ten metres of the outer boundary of the physical drain structure. | State | AMS<br>Monitoring |
| | Castlereagh Street | Low potential for former 19th century infrastructure such as brick or stone drains, surfaces and kerbing. | Local | Unexpected Finds |
| **PSR 6** | Hay Street | Low potential for archaeological remains of former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold | Unexpected Finds |
| | Elizabeth Street | Low – Moderate potential for archaeological remains of former tram line, drains, surfaces and kerbing. | Nil - Local | Unexpected Finds |
| | Eddy Avenue | Nil - Low potential to impact archaeology associated with the former Devonshire Street Cemetery. | State | AMS<br>Monitoring |

| Route | Section of Route | Potential Archaeological Remains | Significance | Archaeological Management |
|---|---|---|---|---|
| **PSR 7** | All | Low potential for archaeological remains of former infrastructure such as drains, surfaces and kerbing. | Unlikely to reach local significance threshold | Unexpected Finds |
| **PSR 8** | Campbell Street | Low potential for brick footings, cisterns and wells, isolated artefact deposits associated with 1830s and 1840s structures located at the Elizabeth / Campbell Street intersection. Former 19th century infrastructure such as drains, surfaces and kerbing. | Local | AMS<br>Monitoring if required |
| | Rest | Low potential for archaeological remains of former late 19th century terraces, infrastructure such as drains, surfaces and kerbing. | Nil - Local | Unexpected Finds |

### 11.4.1 Archaeological Methodology

- An AMS would be prepared prior to commencement of PSR construction. This document would:
  - Review detailed design, scope of works, construction program and methodology
  - Update site specific archaeological methodology to mitigate impacts of the PSR works.
- Archaeological monitoring would be undertaken for PSR 5 ground disturbance work (including NDD) in the location and vicinity (10m) of the State Significant Tank Stream (Hunter Street).
- Archaeological monitoring would be undertaken for PSR 6 ground disturbance works (including NDD) within Central Station and Eddy Avenue where there is potential to encounter State significant burial-related remains.
- Archaeological monitoring of the following activities would also be undertaken:
  - PSR 4 ground disturbance work would be undertaken in areas with potential for locally significant archaeology (Hickson Road south, Sussex Street, Campbell Street)
  - PSR 5 ground disturbance work would be undertaken in areas with potential for State significant archaeology associated with the former Military Barracks on Margaret Street.
- Unexpected Finds Procedure for all other areas and works.

# 12.0 ARCHAEOLOGICAL METHODOLOGIES

The following provides explanation and details regarding the archaeological methodologies to be applied for the project.

## 12.1 Heritage Induction

Archaeological heritage would be included in the general project induction for all personnel. At a minimum this would include an overview of the project obligations and archaeological management zones, the role of the archaeological team, and the unexpected finds procedure including typical potential archaeological remains encountered in urban contexts.

## 12.2 Archaeological Investigation

Archaeological investigation refers to active archaeological involvement in the construction program. It is undertaken to manage and mitigate archaeological impacts. It refers to:

- Monitoring and recording
- Test excavation
- Test/Salvage excavation
- Salvage excavation

Each construction site has specific, or a combination of, archaeological investigation methods appropriate to the level of impacts and construction methodology known at EIS stage.

### 12.2.1 Excavation Director

Archaeological investigations would be managed by a suitably qualified Excavation Director with experience in the historical archaeology of Sydney.

- For sites with potential for locally significant remains the Excavation Director should meet the NSW Heritage Division criteria for locally significant archaeological sites.
- For site with potential for State significant archaeology the Excavation Director should meet the NSW Heritage Division criteria for State significant archaeological sites. Archaeological investigations at the following site would be directed by a State significant qualified Excavation Director:
  - Blues Point
  - Barangaroo
  - Martin Place
  - Pitt Street
  - Central Station
- As there is potential for human skeletal remains at Central Station it is recommended the Excavation Director and/or monitoring/supervising archaeologist has some experience in human skeletal remains in archaeological contexts.

### 12.2.2 Specialists

Archaeological investigation teams would include a number of specialists in addition to experienced field archaeologists. These include an artefact specialist with experience in historical archaeological assemblages in NSW, qualified surveyor and archaeological illustrator, consultant historian for any additional research required, consultant osteoarchaeologist and/or forensic anthropologist where human skeletal remains are found, and other specialists as required.

## 12.3 Work Stage Specific Archaeological Method Statements

Information on the full extent of construction impacts was not available for the NAHIA and EIS stage of the project. A Work Stage Specific Archaeological Method Statement (AMS) is a brief document intended to clarify archaeological management requirements once the construction methodology is known. An AMS would be prepared for prior to construction works with potential to impact archaeological resources. Staged construction programs may require more than one AMS to be prepared for each site. An AMS would generally include all archaeological management requirements including Aboriginal archaeology and its relationship to historical archaeology.

Detailed site-specific AMS requirements are provided in the Archaeological Management section in each construction site chapters of this report. In regard to historical archaeology the AMS preparation generally would include the following:

- Review available basement and geotechnical data, and existing services surveys if required
- Review detailed design, scope of works, construction program and methodology
- Reassessment of potential for impacts to significant archaeological resources based on construction methodology and program
- Review of contamination reports and archaeological mitigation requirements during any remediation program
- Identify opportunity for in situ conservation of archaeological remains, such as altering construction methodology to avoid impacts, where possible
- Confirm appropriate archaeological investigation methodology to mitigate various impacts
- Provide additional archival information and archaeological research questions if required
- Provide environmental sampling and sieving strategies where appropriate (in particular Barangaroo and Pitt Street)
- Outline opportunities to provide information regarding the archaeological investigations to the public (in particular where there would be strong public interest such as at Chatswood dive site, Blues Point, Pitt Street and Central Station)
- Additional requirements arising from the Exhumation Policy
- Provide details of Aboriginal archaeological investigation if required at a particular construction site.

## 12.4 In-Situ Conservation

In situ conservation is the considered the most appropriate approach for highly intact State significant archaeological resources. State significant resources are likely at the Pitt Street Station site. However, this site is subject to bulk excavation for the station construction.

Other intact State significant archaeological remains which may be identified outside the bulk excavation areas, such as at Blues Point, should be retained in situ, and modification to the design would need to be considered. If conservation in situ is not feasible then appropriate archaeological investigation would be undertaken. Opportunity for conservation in situ would be identified in the AMS.

## 12.5 Research Questions

Archaeological investigations would be undertaken within a research framework. The research framework is based on the potential significance of the archaeological resource. Research questions have been developed for sites where the construction activities have potential to impact significant archaeological remains and archaeological investigation is required.

The research questions are included in the construction site sections (Sections 2.0 to 10.0). These are not exhaustive and additional research questions could be developed depending on further archaeological research, archaeological findings, theoretical approaches, or particular research interests of the Excavation Director. Additional research questions could be prepared as part of the AMS for the work stage.

## 12.6 Test Excavation

Archaeological test excavation involves excavation of small sample trenches within a potential archaeological site. Testing is usually undertaken prior to construction to clarify the extent of the potential remains, archaeological significance, potential of a construction task to impact significant archaeology and inform requirements for further archaeological investigation, such as salvage excavation or monitoring.

## 12.7 Test/Salvage Excavation

Archaeological test/salvage refers to a staged archaeological program where testing is undertaken to refine the archaeological impacts and the extent of any salvage excavation. It generally applies to areas of moderate potential to impact locally significant archaeology and low-moderate or moderate potential to impact State significant archaeology.

Following the testing stage, trenches would be expanded to open areas for salvage excavation as required. Areas would only be handed back to the construction team once the Excavation Director has given clearance.

Test/salvage is generally undertaken following demolition and prior to excavation.

## 12.8 Salvage Excavation

Archaeological salvage generally refers to open-area archaeological excavation under the control of the Excavation Director. Salvage includes the archaeological excavation of the entire historical archaeological site. It is undertaken following demolition and prior to bulk excavation.

It involves removal of modern fills and disturbance to the top of archaeological layers by machine under archaeological supervision. The archaeological remains are then cleaned by hand, investigated (excavated) and recorded in detail by the archaeological team. In urban archaeological sites careful machine excavation may also be employed to assist the detailed archaeological excavation process.

Salvage excavation would be undertaken prior to construction impacts where there is moderate-high potential for archaeological remains, such as at Pitt Street, Blues Point and Barangaroo. Salvage

excavation would also be undertaken if archaeological testing or monitoring at other construction sites identifies substantial and intact significant archaeological remains in areas of construction impact.

Construction works would not proceed until the salvage excavation is completed and the Excavation Director has provided clearance.

## 12.9 Monitoring

Archaeological monitoring is where an archaeologist is in attendance and supervising construction excavation work with potential to expose or impact archaeological remains. Monitoring is generally undertaken where there is lower potential for significant archaeological remains and/or where minor excavation work is in an area of archaeological sensitivity.

Archaeological monitoring is required for works affecting or in the vicinity of, the Tank Stream (PSR 5) and for excavation works in Central Station within the former cemetery area (Sites C2 and C3, and PSR 6).

Monitoring would also be undertaken during footing and slab removal at Pitt Street and in sections of the PSR works. Historical archaeological monitoring may also be undertaken in conjunction with Aboriginal heritage testing and salvage programs.

If archaeological remains are identified during archaeological monitoring, they would be recorded and assessed to determine if further investigation is required. Localised stoppages in the construction work would be required to facilitate this process. Works would not recommence until the monitoring archaeologist has completed the recording and is satisfied that further investigation is not required.

If significant archaeological remains are identified, then further investigation such as salvage would be required prior to construction impacts.

## 12.10 Archaeological Recording

The archaeological archival recording would be undertaken in accordance with best practice and NSW Heritage Division guidelines. The level of recording detail would be in accordance with the significance of the archaeological remains. State significant remains would require more detailed recording, in particular photographic, survey and photogrammetry.

The recording methodology includes the following:

- Significant archaeological structural remains, deposits and features would be recorded on context sheets
- A photographic record of the archaeological works and details of significant archaeological remains made
- Detailed survey and/or measured drawings would be prepared and include location of remains within the overall site
- Significant artefacts would be collected by context for later analysis
- Building material, soil and pollen samples would be collected for further analysis (as appropriate)
- Registers of contexts, photos, samples and drawings would be kept.

## 12.11 Underfloor and Cesspit / Well Deposits

### 12.11.1 Underfloor Deposits

Underfloor deposits may be present in a number of the sites including Pitt Street. Underfloor deposits may provide particularly useful archaeological information in the context of domestic or industrial / manufacturing spaces.

Intact underfloor deposits would be excavated in a grid system, either 50 centimetre or 1 metre depending on extent of deposit. Excavation would be by context if stratigraphic layers are identifiable. If the deposit is homogenised excavation would proceed in 5 or 10 centimetre spits. Excavated material would be wet sieved, or dry sieved if possible.

### 12.11.2 Cesspit / Well Deposits

Accumulated material at the base of cesspits, wells and even drains can also contain archaeological material of high research value. Stratified well and cesspit backfills or deposits would be excavated by context. Homogenised deposits and fills would be excavated in spits (10 or 20 centimetre spits for example). The material would be sample sieved or 100% sieved depending on the significance of the deposit. Excavated material would be wet sieved, or dry sieved if possible.

It is noted that the excavation of wells may pose safety risks due to the depths required. Normal archaeological excavation techniques may need to be altered to include staged mechanical excavation and benching.

### 12.11.3 Sieving Strategy

The range and percentage of archaeological material collected from sieving would be in accordance with a sieving strategy developed by the Excavation Director and artefact specialist. The strategy would consider research agendas and potential interpretation outcomes.

## 12.12 Environmental Samples

There is potential for late eighteenth and early nineteenth century soil layers and sediments to be present at a number of the construction sites, such as Pitt Street. These archaeological deposits may contain ecofacts (fossil pollens, plant seeds etc) and can have high research value and could contribute to current research regarding environmental change.

Other archaeological remains such as primary fills or accumulated deposits in underfloor spaces, wells, cesspits and drains could also contain ecofacts of high research potential regarding environmental conditions, diet and disease.

### 12.12.1 Sampling Strategy

Salvage excavations would include an environmental sampling strategy developed by the Excavation Director in consultation with a geomorphologist and palynologist, and other relevant specialists. Retention of environmental samples should focus on those which would contribute to research questions and for archiving of significance deposits.

## 12.13 Artefacts

Artefacts are likely to be uncovered during excavations and are an integral part of archaeological investigations and datasets. The archaeological team would include an artefact specialist to advise the excavation team on artefact retention strategies.

Artefacts from significant and *in situ* contexts would be collected and recorded (by context). Retrieval of artefacts should focus on those whose analysis would contribute to research agendas, or would be representative of the site, which warrant archiving or consideration for interpretative displays or similar heritage interpretation.

Retention of all artefacts from archaeological investigations in urban contexts is neither possible nor expected in current historical archaeological practice. Large amounts of fill and disturbed material is common on urban sites. Whilst these layers can provide important archaeological information regarding site formation and phasing, the material often contains artefacts of unknown provenance and limited research value. Potentially significant deposits such as occupation-related material within former structures could contain numerous artefacts of varying levels of significance or value.

Should diagnostic or significant artefacts be present within the fill layers (out-of-context), a sample would be retained to inform the research agenda, consideration in interpretation and as part of the archaeological record.

Retained artefacts would be cleaned processed, catalogued and analysed by an archaeologist experienced in historical artefact assemblages. Artefact analysis would include production of a database in accordance with best practice archaeological data recording. The resulting information would be included in the final excavation report.

Artefacts recovered from the archaeological investigations would be the property of TfNSW and would be securely stored by them following completion of post-excavation analysis.

## 12.14 Unexpected Finds Procedure

Unexpected archaeological finds would be managed under the project Unexpected Finds Procedure. The procedure if included as an Appendix to this document.

## 12.15 Human Skeletal Remains

If human skeletal remains are found during the project, works would cease immediately in that area. The NSW Coroner's Office and the NSW Police would be notified. A forensic anthropologist would be consulted to determine the nature of the remains.

Certain construction works for Central Station are within the former Devonshire Cemetery. Though exhumed in the early 1900s there is some potential for skeletal remains. If human skeletal remains are identified any archaeological investigation would be undertaken in accordance with the *Skeletal Remains: Guidelines for Management of Human Skeletal Remains* (Heritage Council of NSW, 1998).

An Exhumation Policy for the project will be developed (mitigation measure NAH3) and will be adhered to where necessary.

## 12.16 Aboriginal Heritage

Archaeological management for historical archaeology would be completed where necessary in combination with Aboriginal archaeological management requirements. The requirements outlined in

the Aboriginal Cultural Heritage Assessment Report (CHAR) would be considered during preparation of the AMS and prior to any historical archaeological investigation works.

## 12.17 Preliminary Results Reporting

Interim or preliminary archaeological findings reports would be prepared following completion of archaeological investigation stages. This report would outline the main archaeological findings, post-excavation and analysis requirements, and would also include any further archaeological investigation requirements for a particular site or future construction task. The preliminary results report would also identify if the findings should be considered for public interpretation.

## 12.18 Post-Excavation Analysis and Final Report

Following the completion of on-site archaeological works, post-excavation analysis of the findings would be undertaken. This would include artefact analysis, environmental and building material sample analysis, stratigraphic reporting and production of Harris Matrices, production of detailed site survey plans, illustrations and interpretative drawings, generation of catalogues, data records and site registers.

A final excavation report detailing the archaeological program and results would be prepared. The report would be prepared in accordance with the standard conditions of archaeological permits issued under the Heritage Act. It would include the results of the archaeological excavation and analysis, additional historical information if needed, photographs, illustrations and plans, catalogue and analysis of artefacts, and also respond to the research questions. The report would also include a reassessment of archaeological significance based on the investigation results. Opportunities for archaeological interpretation would also be included in the final report.

## 12.19 Public Interpretation

There is potential for significant archaeological remains within the project sites, in particular Blues Point, Barangaroo, Pitt Street and Central Station. There is opportunity to interpret the archaeology and engage the public with the significance and stories of Sydney's past.

Significant findings from the archaeological investigation program would be included in heritage interpretation for the project (mitigation measure NAH8 and NAH9). Preliminary results reporting and final reporting would identify significant findings which should be considered as part of heritage interpretation.

There may also be opportunity for public engagement such as open days or media releases during archaeological investigations. Information regarding State significant archaeological remains, such as at Pitt Street, would be provided to the public. This could include hoarding signage, pamphlets, media releases, information on the project website, social media and blog content during the excavation process.

# 13.0 ARCHAEOLOGICAL MANAGEMENT SUMMARY

## 13.1 Introduction

Detailed archaeological management strategies have been prepared for each project site which was assessed to have archaeological potential in the NAHIA based on the design and understanding of potential impacts submitted with the EIS. These are presented in Sections 2.0 to 11.0 (Section 2.6, 3.5, 4.5 and so on) of this report. This section provides a summary of the archaeological management requirements (Section 13.2) and provides management zone mapping (Section 13.3) for each construction site and the PSRs

### 13.1.1 Archaeological Management Zones

The station and construction sites have been divided into archaeological management zones based on archaeological potential and current construction impacts (as submitted with the EIS). Archaeological management zone mapping (Section 13.3) is based on a traffic light code:

- **Red** (Zone 1): Direct impact to significant archaeology. Archaeological investigation required prior to any construction impacts (bulk excavation etc.)
- **Amber** (Zone 2): Potential impact to significant archaeology. Prepare Archaeological Method Statement (AMS) once construction methodology and impacts are known. Archaeological investigation is likely required
- **Green** (Zone 3): Unlikely to contain significant archaeology. Construction to proceed with Unexpected Finds Procedure as nil-low potential for significant archaeological remains.

## 13.2 Summary of Site Specific Archaeological Management

### 13.2.1 Chatswood Dive Site

Archaeological test/salvage during the construction program is required for Chatswood dive site in NC 6. Archaeological investigation, potentially monitoring or test/salvage would be required in Site NC 3 and NC 5 depending on the level of construction impact (not known at EIS stage). The following provides a summary of the archaeological management requirements (Table 13-1 and Figure 13-1). Further detail is provided in Section 2.6.

**Table 13-1: Summary of archaeological management requirements at Chatswood dive site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| NC 3 | Moderate potential for locally significant remains of mid-late 19th century development | Potential direct impact – demolition, ground levelling and construction of construction site facilities | 2 | • AMS<br>• Monitoring or Test/Salvage |
| NC 5 | Moderate potential for locally significant remains of Bryson's cottage and store (1860s) and later 19th century development | Potential direct impact – demolition, ground levelling and construction of construction site facilities | 2 | • AMS<br>• Monitoring or Test/Salvage |

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| NC 6 | Low-Moderate potential for locally significant remains of the former School of Arts (1870s), later nineteenth century residential development and early twentieth century school | Direct impact – excavation for dive structure and access ramp | 1 | • AMS<br>• Test/Salvage |
| NC 1<br>NC 2<br>NC 4 | Nil-Low potential for archaeological remains. Unlikely to reach significance threshold | Potential direct impact – demolition, ground levelling and construction of site amenities | 3 | • Unexpected Finds Procedure |

### 13.2.2 Artarmon Substation

The Artarmon substation site archaeological assessment are provided in the NAHIA (Section 6.3.3). Implementation of an Unexpected Finds Procedure is an appropriate archaeological management strategy for the Artarmon substation site (Table 13-2, Figure 13-2).

**Table 13-2: Summary of archaeological management requirements at Artarmon substation site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| All | Nil-Low potential for archaeological remains. Unlikely to reach significance threshold | Bulk excavation<br>Construction of site facilities | 3 | • Unexpected Finds Procedure |

### 13.2.3 Crows Nest Station

Implementation of an Unexpected Finds Procedure is an appropriate archaeological management strategy for the Crows Nest Station site (Table 13-3, Figure 13-3). Further detail is provided in Section

**Table 13-3: Summary of archaeological management requirements at Crows Nest station site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| All | Low-Moderate potential for late 19$^{th}$ to mid 20$^{th}$ century remains. Unlikely to reach significance threshold | Open shaft bulk excavation<br>Demolition and construction of site facilities | 3 | • Unexpected Finds Procedure |

### 13.2.4 Victoria Cross Station

Archaeological impact mitigation is required for the Victoria Cross Station site. The following provides a summary of the archaeological management requirements (Table 13-4 and Figure 13-4). Further detail is provided in Section 4.5.

**Table 13-4: Summary of archaeological management requirements at Victoria Cross station site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| VC 2 | Low potential for locally significant remains c.1880s cistern and outhouse | Direct impact – bulk excavation | 2 | • AMS<br>• Monitoring if required |
| VC 3 | Low-Moderate potential for locally significant remains of c.1880s structures, cisterns and outhouses | Direct impact – bulk excavation | 1 | • AMS<br>• Test/Salvage |
| VC 1<br>VC 4<br>VC 5 | Nil-Low potential for remains. Unlikely to reach significance threshold | Demolition, levelling and construction of site amenities | 3 | • Unexpected Finds Procedure |

### 13.2.5 Blues Point Temporary Site

Archaeological mitigation is required at Blues Point temporary site. The following provides a summary of the archaeological management requirements (Table 13-5 and Figure 13-5). Further detail is provided in Section 5.6.

**Table 13-5: Summary of archaeological management requirements at Blues Point temporary construction site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| BP 1 | Moderate potential for locally significant archaeology associated with the 19th century occupation and development of the ferry service and boatbuilding industry in Blues Point | Direct impact – retrieval shaft excavation<br><br>Potential direct impact – landscaping (benching or cut/fill etc.) and construction of site amenities | 1 / 2 | • AMS<br>• Test/Salvage in bulk excavation area<br>• Monitoring or Test/Salvage of other ground works |
| BP 2<br>BP 3 | Moderate-High potential for archaeological evidence associated with the 19th century development of the ferry service and boatbuilding industry in Blues Point (State and local) | Potential direct impact – landscaping and construction of site amenities | 2 | • AMS<br>• Monitoring or Test/Salvage |
| BP 4 | Low potential for locally significant remains | Potential direct impact – demolition and construction of site amenities | 3 | • Unexpected Finds Procedure |

### 13.2.6 Barangaroo Station

Archaeological impact mitigation is required at the Barangaroo Station site. The following provides a summary of the archaeological management requirements Table 13-6 and Figure 13-6). Further detail is provided in Section 6.6.

**Table 13-6: Summary of archaeological management requirements at Barangaroo Station site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| B 2 (western half) | Moderate potential for local and State significant archaeological evidence associated 19th century wharf development and occupation | Direct impact – bulk excavation for station construction | 1 | • AMS<br>• Test/Salvage |
| B 3 | Moderate-High potential for locally significant archaeological evidence associated with Cuthbert's shipyard | Direct impact – bulk excavation for station entrance | 1 | • AMS<br>• Salvage |
| B 5 (east only) | Moderate potential for locally significant archaeological evidence associated 19th century wharf development and occupation | Direct impact – bulk excavation for substation | 1 | • AMS<br>• Test/Salvage |
| B 1<br>B 4<br>B 5 | Nil | Nil | 3 | • Unexpected Finds Procedure |

### 13.2.7 Martin Place Station

Archaeological monitoring would be required for Site MP 3 (Table 13-7 and Figure 13-7). Further detail is provided in Section 7.6.

**Table 13-7: Summary of archaeological management requirements at Martin Place station site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| MP 3 | Low potential for State significant archaeological remains associated with early landscape and informal colonial use pre 1840 | Direct impact – demolition and bulk excavation | 1 | • AMS<br>• Monitoring if required |
| MP 1<br>MP 2<br>MP 4<br>MP 5<br>MP 6 | Nil | Nil | 3 | • Unexpected Finds Procedure |

### 13.2.8 Pitt Street Station

The Pitt Street Station site has potential to contain multiple phases of archaeological remains of both state and local significance. Large-scale archaeological salvage excavation and monitoring would be required for the majority of the Pitt Street Station construction sites—Sites PS 1 to PS 8 (Figure 13-8

and Table 13-8). Considering the potential for archaeology, archaeological mitigation at demolition and piling stages would also be required. Further detail is provided in Section 8.6.

**Table 13-8: Summary of archaeological management requirements at Pitt Street station site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| PS 1 | Moderate potential for State and locally significant archaeological remains dating from c.1820s | Direct impact – demolition, piling and bulk excavation | 1 | • AMS<br>• Monitoring demolition<br>• Salvage |
| PS 2<br>PS 3 | Low potential for locally significant archaeological remains dating from c.1850s. Basement extent unknown. | Direct impact – demolition, piling and bulk excavation | 2 | • AMS<br>• Monitoring / Salvage if required |
| PS 4<br>PS 5<br>PS 6<br>PS 7<br>PS 8 | Moderate-High potential for State and locally significant archaeological remains dating from c.1820s | Direct impact – demolition, piling and bulk excavation | 1 | • AMS<br>• Monitoring demolition<br>• Salvage |
| PS 9<br>PS 10 | Nil | Nil | 3 | • Unexpected Finds Procedure |

### 13.2.9 Central Station

Excavation work within the former Devonshire Cemetery site (Sites CS 1, CS 2 and CS 3) would require archaeological management. Ground disturbance such as piling, slab and footing removal, and footing construction at Site CS 6 would likely require archaeological management, such as monitoring. Ground disturbance and excavation work in Site CS 4 with potential to impact significant archaeological remains (rail-related 1850s-1900s) would require archaeological mitigation. This would be monitoring or test/salvage depending on extent of work and level of potential impact. A summary of the archaeological management requirements is presented in Table 13-9 and Figure 13-9. Further detail is provided in Section 8.6.

**Table 13-9: Summary of archaeological management requirements at Central Station metro site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| CS 2<br>CS 3 | Low potential for State significant archaeological remains associated with Devonshire Cemetery | Direct impact – piling and bulk excavation<br>Potential direct impacts – temporary platform construction, demolition and levelling | 1 / 2 | • AMS<br>• Monitoring / Test / Salvage if required<br>• Exhumation Policy applies |
| CS 4 | Moderate-High potential for rail-related remains from 1850s-1900s<br>Local / State | Direct impact –bulk excavation northern CS 4<br>Potential direct impacts – ground works, piling | 1 / 2 | • AMS<br>• Test/Salvage CS 4 north<br>• Monitoring / Salvage if required CS 4 |

| | | | | |
|---|---|---|---|---|
| CS 6 | Moderate-High potential for remains of the Wesleyan chapel and school constructed in 1847 | Potential direct impact – ground works, footing excavation, piling | 2 | • AMS<br>• Monitoring / Salvage if required |
| CS 5<br>CS 7<br>CS 8 | Low potential for isolated rail remains, early-mid 20th century remains. Unlikely to meet significance threshold | Potential direct impact – ground works, excavation, piling etc | 3 | • Unexpected Finds Procedure |

### 13.2.10 Waterloo Station

Archaeological test excavation at the Waterloo Station construction site would be required to clarify the significance of the archaeological remains. The testing program should be undertaken following demolition and prior to construction work. Salvage excavation may be required depending on the testing results. A summary of the archaeological management requirements is presented in Table 13-10 and Figure 13-10. Further detail is provided in Section 10.6.

**Table 13-10: Summary of archaeological management requirements at Waterloo Station site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| WL 1 – 5<br>WL 7 – 8<br>WL 12 – 14<br>WL 16 - 17 (east half of site) | Evidence of c.1880s residential, commercial and light industrial development | Direct impact – bulk excavation | 1 | • AMS<br>• Testing (clarify significance)<br>• Salvage if significant |
| Rest (west half of site) | Evidence of c.1880s residential, commercial and light industrial development | Potential direct impacts – ground works and construction of site facilities | 2 | • AMS<br>• Monitoring / Test/ Salvage depending on significance / impacts |

### 13.2.11 Marrickville Dive Site

The Marrickville dive site archaeological assessment is presented in the NAHIA (Section 6.12.4). Implementation of an Unexpected Finds Procedure is an appropriate archaeological management strategy for the Marrickville Dive site (Table 13-11, Figure 13-11).

**Table 13-11: Summary of archaeological management requirements at Marrickville Dive site**

| Site Code | Potential archaeology | Impact | Management zone | Mitigation |
|---|---|---|---|---|
| All | Nil – Low potential for archaeological remains. Unlikely to meet significance threshold | Bulk excavation<br>Demolition and construction of site facilities | 3 | • Unexpected Finds Procedure |

### 13.2.12 Power Supply Routes (PSR)

Archaeological monitoring is recommended for a number of locations where there is potential to impact significant remains (Table 13-12, Figure 13-12 and Figure 13-13). The unexpected finds procedure applies to all other areas identified in Section 11.0 of this report. Further detail is provided in Section 11.4.

**Table 13-12: Summary of archaeological management requirements for PSR**

| Route | Section of Route | Potential archaeology | Management zone | Mitigation |
|---|---|---|---|---|
| **PSR 1**<br>**PSR 2**<br>**PSR 3** | All | Low potential archaeological remains associated with former infrastructure such as drains, surfaces and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |
| **PSR 4** | Hickson Road (south) | Low – Moderate potential for truncated archaeological remains relating to the Australian Gas Works, Girard's Flour Mill, and a number of mercantile warehouse structures along the foreshore. Potential for uncovering stone and brick footings, artefacts, industrial plant, workshop and yard surfaces. Local and State significant | 2 | • AMS<br>• Monitoring if required |
| | Sussex Street | Low – Moderate potential for truncated archaeological remains relating to the former alignment of Sussex Street (1800s-1900s). Stone warehouse present on site by 1865. Potential for footings, yard surfaces, industrial plant, artefact deposits, former infrastructure such as drains. Locally significant | 2 | • AMS<br>• Monitoring if required |
| | Rest of PSR 4 | Nil - Low potential for former 19th century infrastructure such as brick or stone drains, surfaces and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |
| **PSR 5** | Margaret Street | Low potential for archaeological remains such as footings and other features associated with the c1818-1840s military barracks, potential for burials. State significant | 1 | • AMS<br>• Monitoring |
| | Hunter Street | Low potential for archaeological remains relating to the Tank Stream (1788-1850s) within approximately ten metres of the outer boundary of the physical drain structure. State significant | 1 | • AMS<br>• Monitoring |
| | Castlereagh Street | Low potential for former infrastructure such as brick or stone drains, surfaces and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |
| **PSR 6** | Eddy Avenue | Nil - Low potential for archaeology associated with the former Devonshire Cemetery. State significant | 1 | • AMS<br>• Monitoring |

| Route | Section of Route | Potential archaeology | Management zone | Mitigation |
|---|---|---|---|---|
| | Hay Street | Low potential for former infrastructure such as brick or stone drains, surfaces and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |
| | Elizabeth Street | Low-Moderate potential for former late 19th archaeological remains of former infrastructure such as drains and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |
| **PSR 7** | All | Low potential for former infrastructure such as brick or stone drains, surfaces and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |
| **PSR 8** | Campbell Street | Low potential for archaeological remains of former mid 19th century structures, and former 19th century infrastructure such as drains and kerbing. Locally significant | 2 | • AMS<br>• Monitoring if required |
| | Rest of PSR 8 | Low potential for archaeological remains of former late 19th century terraces, infrastructure such as drains, surfaces and kerbing. Unlikely to meet significance threshold | 3 | • Unexpected Finds Procedure |

## 13.3 Archaeological Management Zone Mapping

**Figure 13-1: Chatswood dive site archaeological management zones**

**Figure 13-2: Artarmon archaeological management zones**

**Figure 13-3 Crows Nest archaeological management zones**

**Figure 13-4: Victoria Cross Station site archaeological management zones**

**Figure 13-5: Blues Point temporary site archaeological management zones**

**Figure 13-6: Barangaroo Station site archaeological management zones**

**Figure 13-7: Martin Place Station site archaeological management zones**

**Figure 13-8: Pitt Street archaeological management zones**

**Figure 13-9: Central archaeological management zones**

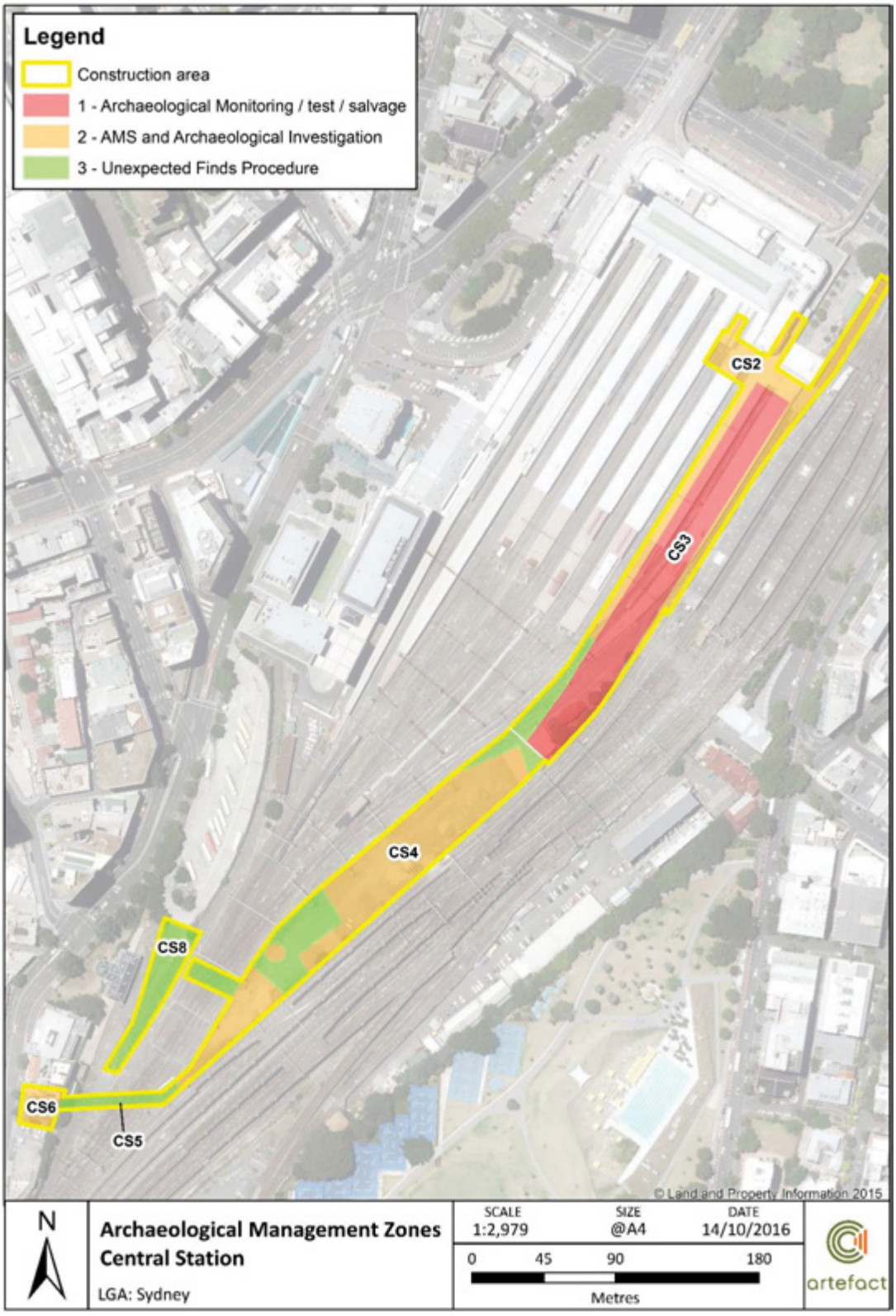


**Figure 13-10: Waterloo archaeological management zones**

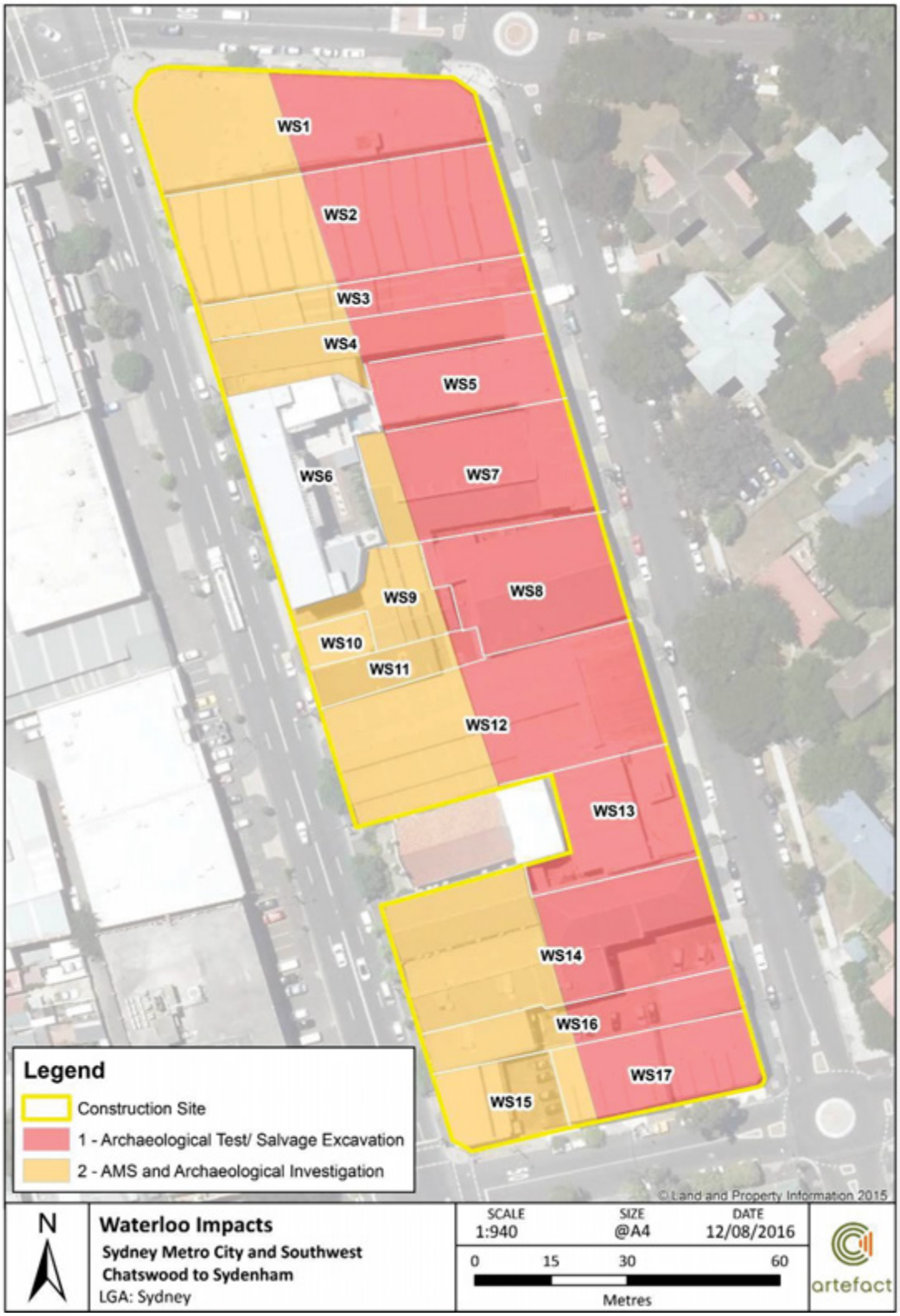


**Figure 13-11: Marrickville archaeological management zones**

**Figure 13-12: PSR 4 Hickson Road and Sussex Street PSR archaeological management zone**

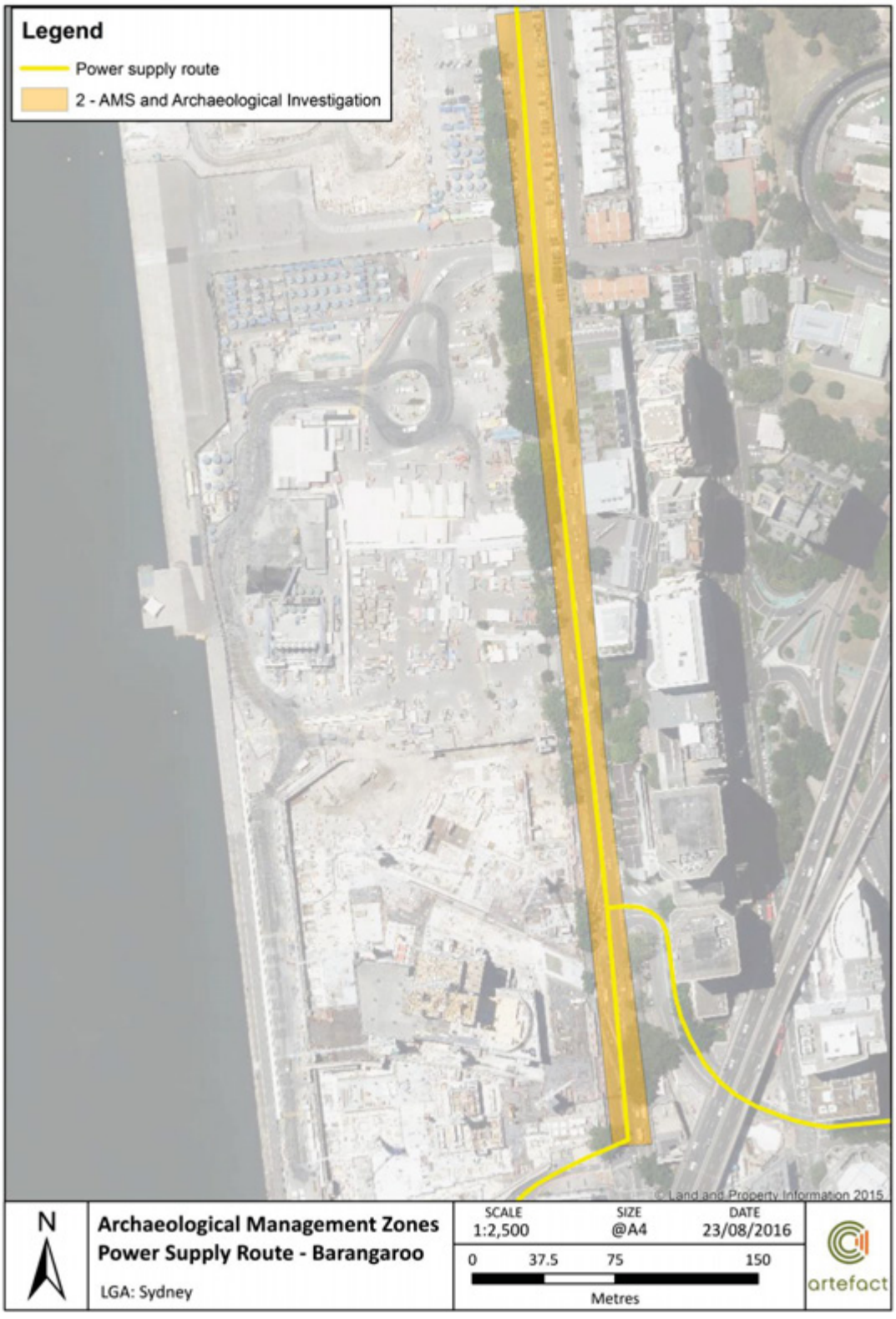


**Figure 13-13: PSR 5 Margaret Street to Hunter Street archaeological management zones**

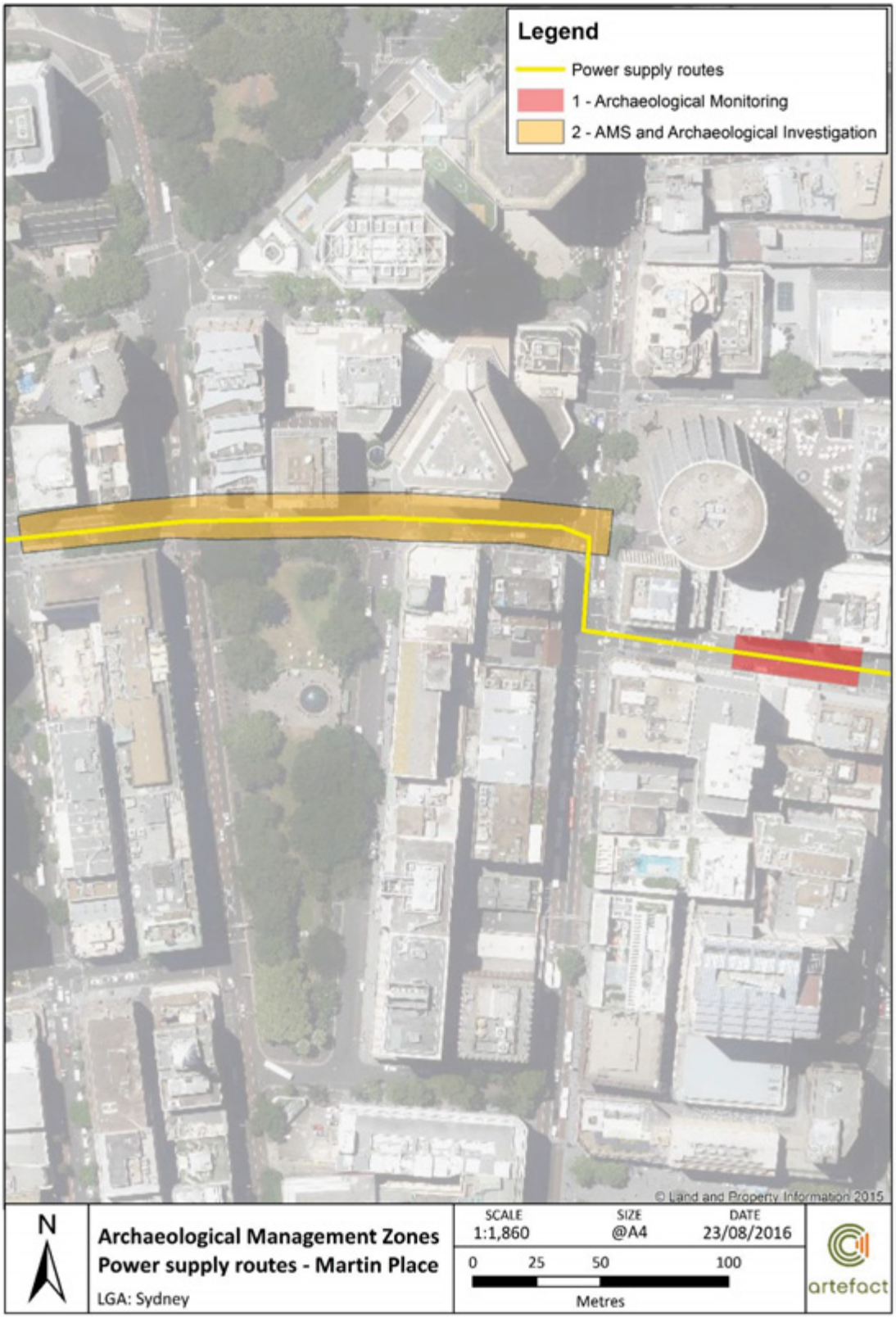
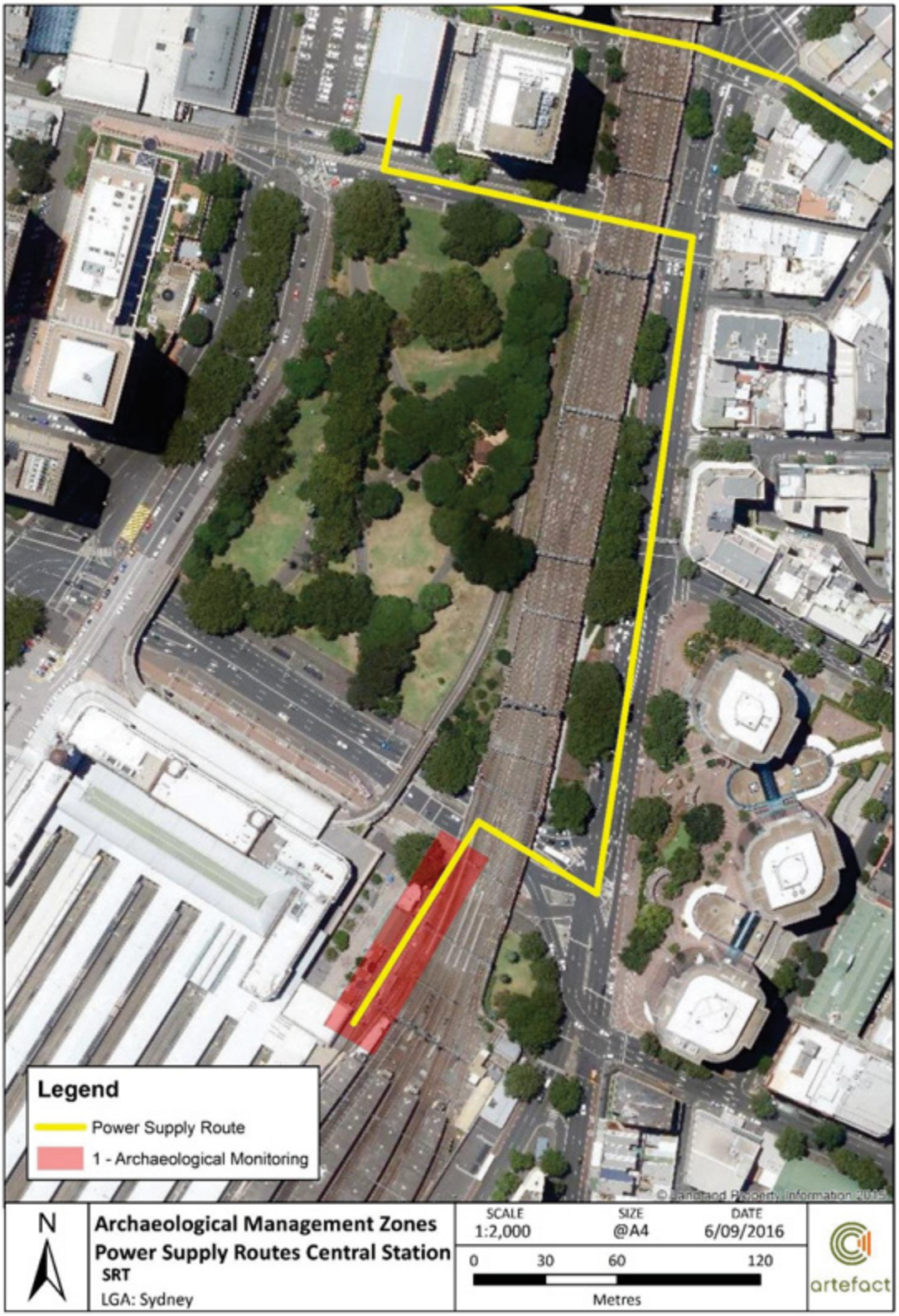
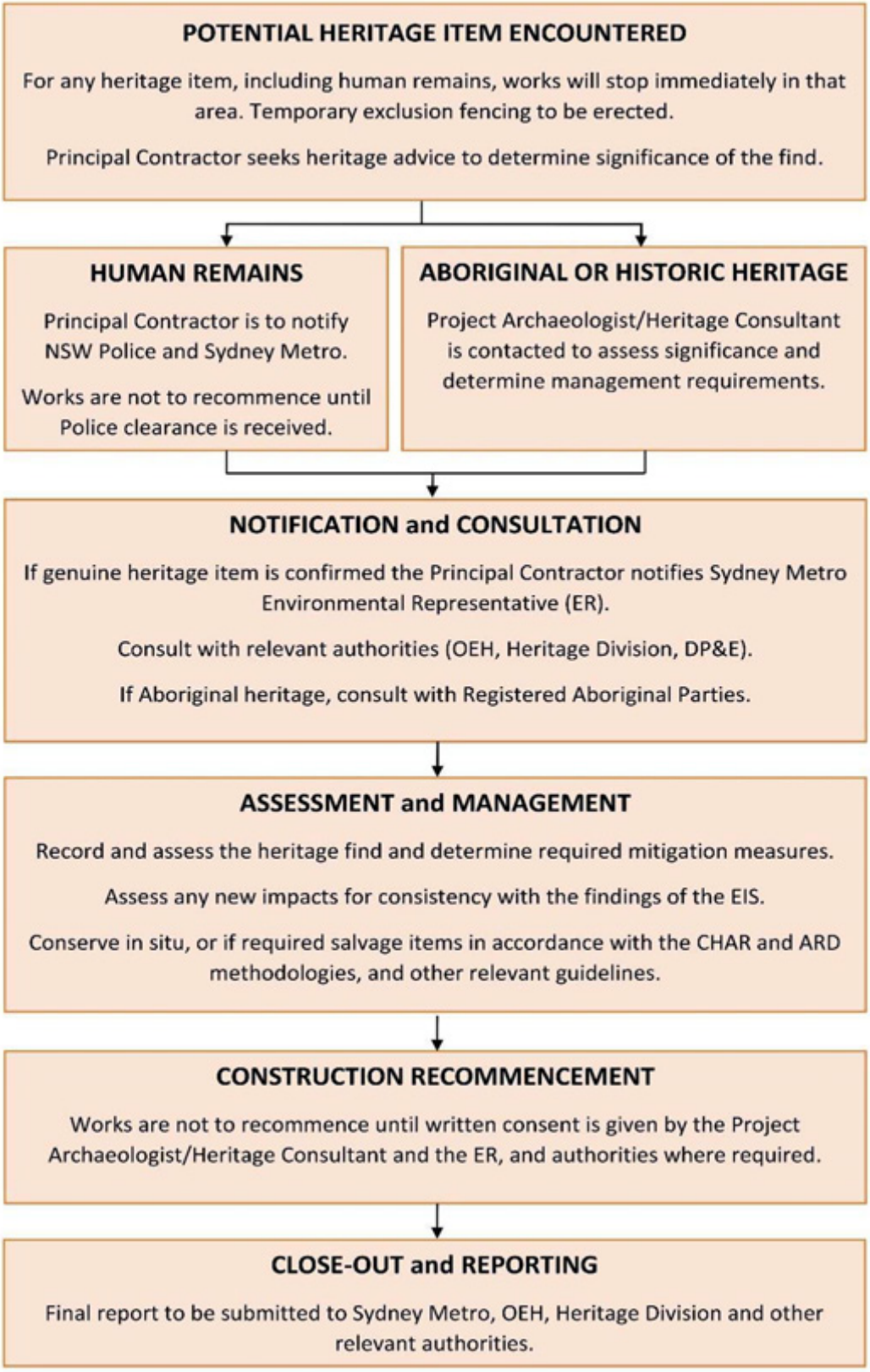


**Figure 13-14: PSR 6 Central to Eddy Avenue archaeological management zone**



# 14.0 APPENDICES

## 14.1 Unexpected Finds Procedure



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