



Waterloo to Surry Hills Cable Replacement Project

Historical Archaeological Assessment and Impact Statement

Prepared for AusGrid

April 2022



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Contents

1.	Introduction.....	1
1.1	Project initiation.....	1
1.2	Site location and identification.....	1
1.3	Development description.....	1
1.4	Statutory context.....	1
1.5	State Environmental Planning Policy (Transport and Infrastructure) 2021	9
1.6	Previous reports and investigations.....	9
1.7	Objectives.....	9
1.8	Approach and methodology	9
1.9	Limitations.....	10
1.10	Author identification	10
2.	Historical context	11
2.1	Introduction.....	11
2.2	Gadigal Country.....	11
2.3	Colonisation.....	11
2.4	Early land grants and industry.....	12
2.5	Subdivision, industry and public infrastructure	17
2.6	Twentieth century development	27
3.	Physical description.....	32
4.	Historical archaeological potential.....	37
4.1	Introduction.....	37
4.2	Archaeology of the neighbourhood.....	37
4.3	Phases of development.....	41
4.4	Summary of historical archaeological potential	44
5.	Assessment of historical archaeological significance	53
5.1	Basis for assessment.....	53
5.2	NSW heritage criteria for assessing significance related to archaeological sites and relics	53
5.3	Summary Statement of Significance	56
6.	Potential historical archaeological impact	58
6.1	Potential development impacts	58
6.2	Potential archaeological impact.....	58
6.3	Recommended mitigation measures	59
7.	Conclusions and recommendations	63

7.1	Key findings and conclusions	63
7.2	Recommendations	64
8.	References	65

List of tables

Table 1.	The following SHR items fall within the vicinity of the study area.	4
Table 2.	The following locally listed heritage items fall within the vicinity of the study area.	4
Table 3.	Heritage conservation zones that the study area falls within.	6
Table 4.	Summary of historical archaeological potential	46

List of figures

Figure 1.	Study area for the proposed cable replacement works.	1
Figure 2.	Conservation areas, locally listed heritage items and State Heritage Register items shown in relation to the study area.	7
Figure 3.	Detail of part of study area showing where the SHR listed Pressure Tunnel crosses the study area (light yellow Archaeological item).	8
Figure 4.	Joseph Lycett’s 1819 <i>Sydney from Surry Hills</i> . <i>Source:</i> Mitchell Library, State Library of New South Wales.	12
Figure 5.	c.1800 Petersham Parish map showing the grants made. <i>Source:</i> Historic Lands and Records Viewer.	13
Figure 6.	A plan of Waterloo Estate dated to between 1820 and 1840 showing the location of the Waterloo Mill and the dam, latter known as Little Waterloo Dam, feeding the mill. <i>Source:</i> State Library of New South Wales.	15
Figure 7.	<i>Turning the First Turf of the First Railway in the Australasian Colonies at Redfern, Sydney, NSW 3rd July 1850</i> by John Rae. <i>Source:</i> Mitchell Library, State Library of New South Wales.	17
Figure 8.	A watercolour by Samuel Elyard showing an unnamed mill in Botany at the time that Waterloo Mill was operational. <i>Old Botany Road, continuation of Bourke Street 1873</i> , watercolour, by S Elyard, 1862–1873.. In collection: Views of Sydney, 1862-1873. Call number: DGD 5. <i>Source:</i> State Library of New South Wales. https://archival.sl.nsw.gov.au/Details/archive/110333249	18
Figure 9.	1883 Metro detail of the Waterloo area, Sheet J. Map shows the “Little Waterloo Mill” and the mill building to the west of the dam. There is an unidentified structure to the north of the dam. <i>Source:</i> State Library of New South Wales.	19
Figure 10.	1928 Petersham Parish map showing the gradual establishment of streets within the study area. <i>Source:</i> Historic Lands and Records Viewer.	19

Figure 11. 1943 aerial photograph showing the southern end of the study area. Pitt Street has not been formally continued here. *Source: SixMaps*..... 20

Figure 12. The Cleveland Estate subdivision with study area marked. A wall and the driveway for the house are marked on the plan beneath the subdivision. From *Plan of the Cleveland Estate City of Sydney (Redfern, NSW) (1856)*. *Source: National Library of Australia* (<http://nla.gov.au/nla.obj-229988813>). 21

Figure 13. 1865 Trig survey of Sydney, Block S1. The study area is marked in red. *Source: City of Sydney Archives*..... 22

Figure 14. City of Sydney Metro Detail Series, sheet K2, showing the streets around Cleveland Street, including Buckingham Street, where the study area extends from north to south. A red arrow indicates the location of Cleveland House. *Source: State Library of New South Wales*.(https://search.sl.nsw.gov.au/permalink/f/s8mhc3/SLNSW_ALMA2193462470002626). 22

Figure 15. 1842 plan of early proposal for subdivision of the Redfern Estate. *Source: Mitchell Library, State Library of New South Wales*. 23

Figure 16. 1865 Trigonometrical Survey of Sydney showing Albion Street and the area of present-day Little Albion Street. A brick structure, to the north-east, and a timber structure, to the south, fall partially within the study area. Sewer and water lines also fall within the study area. *Source: City of Sydney Archives* 25

Figure 17. Detail of a 1923 map of Sydney and suburbs showing tramway lines and stopping places. *Source: National Library of Australia*. 26

Figure 18. c.1910 photograph of 8 Smith Street, derelict Cottage, a brick and shingle-roofed cottage overgrown with ficus, with a battered wooden picket fence on raised sandstone and brick. *Source: City of Sydney Archives*. 28

Figure 19. Three boys and a dog pose for the camera outside a timber cottage at 6 Smith Street, Surry Hills, in 1902. *Source: City of Sydney Archives*..... 29

Figure 20. Location of Pressure Tunnel and City Tunnel map. *Source: W.V. Aird's 1961 The Water Supply, Sewerage and Drainage of Sydney 1788-1960*. 29

Figure 21. Part of a c.1920 plan showing the area draining to Sheas Creek Stormwater Channel. *Source: Sydney Water Collection, City of Sydney Archives*..... 30

Figure 22. 'View of Stormwater under construction in Waterloo', 1928. A photograph showing the formwork for the construction of the channel underground. *Source: Sydney Water Photograph Collection, City of Sydney Archive*..... 30

Figure 23. Construction of Sheas Creek Stormwater Channel. Photograph taken looking east along Allen Street, towards the location of the current study area. *Source: Sydney Water Photograph Collection, City of Sydney Archive*..... 31

Figure 24. 1942 aerial photograph of the southern end of the study area showing the location of a "zig-zag" anti-aircraft trench. *Source: NSW Department of Finance and Spatial Services*. 31

Figure 25. View to east of Zetland Substation and Allen Street. 33

Figure 26. View north of Pitt Street from Allen Street intersection..... 33

Figure 27. View west along Wellington Street towards Cope Street.	33
Figure 28. North facing photograph of Pitt Street, taken from Wellington Street intersection.	33
Figure 29. South view of Pitt Street from Redfern Street intersection.	33
Figure 30. East facing view of Redfern Street from Pitt Street intersection. No visible evidence of the tram network observed.	33
Figure 31. View of Great Buckingham Street looking north from Redfern Street intersection.	34
Figure 32. South facing view of Buckingham Street towards Cleveland Street and Great Buckingham Street. Note that no evidence of the tram network was observed on the ground surface of Cleveland Street.	34
Figure 33. Stormwater drain outside 89 Buckingham Street, in the vicinity of where a stream and sewer were marked on an 1865 plan.	34
Figure 34. View to the south-west of Cleveland House from the intersection of Buckingham and Bedford Streets.	34
Figure 35. View of the southern extent of Cleveland House.	34
Figure 36. East facing view of Rutland Street looking towards Elizabeth Street. No evidence of an 1865 sewer was observed here.	34
Figure 37. East facing view along Gladstone Street.	35
Figure 38. North facing view along Waterloo Street.	35
Figure 39. West facing view of Albion Street, looking towards Commonwealth Street.	35
Figure 40. View along little Albion Street from Commonwealth Street.	35
Figure 41. West facing view of Surry Hills Substation on Little Albion Street.	35
Figure 42. View to the west of Little Albion Street, including the rear of 80 Albion Street.	35
Figure 43. Alternate route along Ann Street, view to the east. Source: Google Street View, March 2021.	36
Figure 44. Alternate route along Ann Street, view to the west. Source: Google Street View, March 2021.	36
Figure 45. A graphic representation of archaeological potential identified at the southern end of the study area, in the vicinity of Allen and Pitt Streets.	49
Figure 46. A graphic representation of archaeological potential identified along Buckingham and Rutland Streets, between Cleveland and Devonshire Streets.	50
Figure 47. A graphic representation of archaeological potential at the northern end of the study area, along Albion and Little Albion Streets.	51
Figure 48. The fourth and final map of archaeological potential showing the three areas where the tram network crossed over with the study area.	52
Figure 49. Graphic of proposed route of project. <i>Source:</i> Ausgrid.	60
Figure 50. An alternate route proposed along Ann Street due to congestion of services along Little Albion Street. <i>Source:</i> Ausgrid.	61
Figure 51. Area of archaeological sensitivity on Buckingham Street. The area has potential for archaeological remains assessed to be of local significance.	62

1. Introduction

1.1 Project initiation

Extent Heritage Pty Ltd has been commissioned by AusGrid to undertake a Historical Archaeological Impact Assessment (HAIA) for Waterloo to Surry Hills cable replacement project. The study area extends from the Zetland Substation north to the Surry Hills Substation, a distance of approximately 3.2 km. At the northern, Surry Hills, end of the study area, an alternate route has been investigated. The study area falls within the curtilage of SHR item Pressure Tunnel and Shafts (SHR no. 01630). The study area does not fall within the curtilage of any local heritage items, but does extend through several conservation zones.

This report provides an evaluation of the project route's potential to contain historical archaeological remains and their significance, and provides a management strategy and measures for mitigation of development impacts. This report is intended to act as a standalone document to contribute to the preparation of an environmental assessment for the project and to help inform the placement of underground feeders within the proposed route.

1.2 Site location and identification

The site lies within the City of Sydney local government area and is located within the suburbs of Waterloo, Redfern, and Surry Hills. The proposed works would follow the following streets:

- commencing at the Zetland Substation, travelling along Pitt Street from the intersection of Allen Street; an arm of the proposed works extend from Pitt Street along Wellington Street to meet with an existing cable joint bay on Wellington Street, and the main route continues along Pitt Street until the intersection with Redfern Street;
- along Redfern Street until the intersection with Great Buckingham Street;
- along Great Buckingham Street, before joining Buckingham Street until the intersection with Rutland Street;
- along Rutland Street before joining with Holt Street and then Gladstone Street;
- along Waterloo Street from the Gladstone Street intersection until Foveaux Street;
- west on Foveaux Street before joining Bellevue Street until the Albion Street intersection; and
- west on Albion Street, north up Commonwealth Street and then east along Little Albion Street before ceasing at the Surry Hills Substation;
- due to congestion along Little Albion Street, an alternate route is also being considered east along Ann Street from Commonwealth Street, ceasing at the Surry Hills Substation.

The study area is located in the County of Cumberland and within the Parish of Alexandria (Figure 1).

EXTENT
HERITAGE ADVISORS

Waterloo to Surry Hills

- █ Waterloo to Surry Hills Route
- █ Waterloo to Surry Hills Alternate Route

Drawn by: Mariska Marnane
Checked by: Francesca McMaster
Date: 17 March 2022
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, HLRV

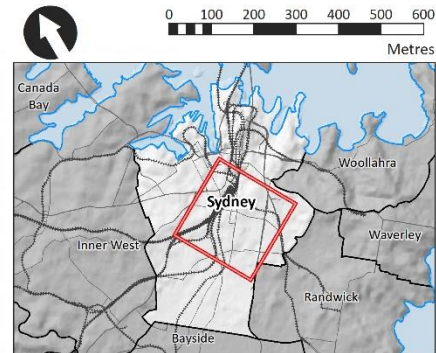


Figure 1. Study area for the proposed cable replacement works.

1.3 Development description

AusGrid proposes to undertake cabling works along a route between Waterloo and Surry Hills. The works will involve in-road trenching along the length of the route to allow the laying of cable and the placement of underground feeders. Due to congestion at the northern end of the route, along Little Albion Street, an alternate route along Ann Street has been covered within this assessment. A more detailed description of the proposed works is provided in Part 6 of this report (page 58).

1.4 Statutory context

Historical archaeological relics in NSW are protected by state legislation and environmental planning instruments provided by local government. Specific legislation relevant to this project includes:

- Sydney Local Environmental Plan 2012 (Sydney LEP 2012);
- *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act); and
- *Heritage Act 1977* (NSW) (the Heritage Act).

1.4.1 NSW Heritage Act 1977

The Heritage Act is designed to conserve the environmental heritage of New South Wales (NSW) and regulate development impacts on the state's heritage assets. While the requirements of the Heritage Act are 'turned off' for State Significant Development (SSD) or State Significant Infrastructure (SSI) as defined by the State Environmental Planning Policy (SEPP) (State and regional Development) 2011, they still provide guidance for the management of the state's heritage resources. Significant historical archaeological features are afforded automatic statutory protection by the 'relics' provisions of the Act. A 'relic' is defined in the Act as:

any deposit, artefact, object or material evidence that:

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

In accordance with section 139(1) of the Heritage Act, it is an offence to disturb or excavate land, where this may affect a relic, without an approval or excavation permit issued by the Heritage Council of NSW, or an endorsed 'exemption' or 'exception' to disturb or expose and destroy a relic. Sites which may contain archaeological relics are usually managed under sections 140 (application) and 141 (approval) of the Heritage Act. Sites with potential archaeology, listed on the State Heritage Register (SHR), are managed under sections 60 (application) and 63 (approval) of the Heritage Act.

While heritage maps indicate that the State Heritage listed Pressure Tunnel and Shafts (SHR No. 01630) crosses over the study area, the curtilage for the item is restricted to within 3m of the tunnel. The tunnel is located between 15m and 67m below the ground surface, therefore the curtilage does not extend into the current study area. In addition to the Pressure Tunnel, there are several other heritage items within the vicinity of the study area, as listed in Table 1 below.

1.4.2 Environmental Planning and Assessment Act 1979

Environmental planning instruments made under the EPA Act include SEPPs, which deal with matters of state or regional environmental planning significance, and Local Environmental Plans (LEPs), which guide planning decisions for local government areas. The study area falls within the City of Sydney LGA. Currently, the relevant environmental planning instrument is the Sydney LEP 2012.

1.4.2.1 Sydney Local Environmental Plan 2012

The objectives of the Sydney LEP 2012 with respect to environment and heritage are provided in the following clauses:

5.10 Heritage conservation

(1) Objectives

The objectives of this clause are as follows—

- (a) to conserve the environmental heritage of the City of Sydney;
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

(2) Requirement for consent

Development consent is required for any of the following—

- (a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance)—
 - (i) a heritage item,
 - (ii) an Aboriginal object,
 - (iii) a building, work, relic or tree within a heritage conservation area,
- (b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,

- (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- (d) disturbing or excavating an Aboriginal place of heritage significance,
- (e) erecting a building on land—
 - (i) on which a heritage item is located or that is within a heritage conservation area, or
 - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- (f) subdividing land—
 - (i) on which a heritage item is located or that is within a heritage conservation area, or
 - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

(7) Archaeological sites

The consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies)—

- (a) notify the Heritage Council of its intention to grant consent, and
- (b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.

The study area crosses over several conservation zones listed in schedule 5 of the Sydney LEP (Environmental heritage), indicated in Table 3 below. As the study area is primarily within roadways, there are no local heritage items listed in schedule 5 of the Sydney LEP within the study area. There are several local heritage item in the vicinity of the study area, listed in Table 2 below.

1.4.3 Listings in the vicinity

There are several heritage items, of local and state significance, within the vicinity of the study area (Table 1 and Table 2). The study area also crosses through several heritage conservation zones, listed in Table 3 below. Figure 2 and Figure 3 below are graphic representations of the heritage listings within and in the vicinity of the study area.

Table 1. The following SHR items fall within the vicinity of the study area.

Name	Location	Significance	Listing number
Redfern Park and Oval	Elizabeth, Redfern, Chalmers and Phillips Streets Redfern	State	02016
Cleveland House	146-164 Chalmers Street, Surry Hills	State	00065
Pressure Tunnel and Shafts	From Chullora to Waterloo, crosses study area at Pitt Street, north of McEvoy Street. Curtilage is within 3m of the tunnel, located 15m to 67m below ground surface.	State	SHR no. 01630 NSW Water S170 no. 130141

Table 2. The following locally listed heritage items fall within the vicinity of the study area.

Name	Location	Significance	Listing number
Waterloo Park & Oval including grounds and landscaping	Elizabeth Street, Waterloo	Local	I2079
Duke of Wellington Hotel including interior	291 George Street, Waterloo	Local	I2085
Former Somerset Hotel including interior	191 Pitt Street, Redfern	Local	I1346
Terrace house/shop including interior	189 Pitt Street, Redfern	Local	I1345
Former shop and residence including interior	130–132 Pitt Street, Redfern	Local	I1344
Cottage including interior	111 Pitt Street, Redfern	Local	I1343
Terrace house including interior	87 Pitt Street, Redfern	Local	I1342
Redfern Park including low sandstone perimeter walls, entrance gates, fountain and war memorials and landscaping	Redfern Street, Redfern	Local	I1347
Former A Hordern & Sons factory complex including interiors	53–63 Great Buckingham Street	Local	I2253

Name	Location	Significance	Listing number
	(and 611–619 Elizabeth Street), Redfern		
Electrical substation	2 Great Buckingham Street, Redfern	Local	I1321
Former “Demco Machinery Co” including interior	267–271 Cleveland Street, Redfern	Local	I1296
“Pembroke Terrace” including interiors	91–101 Buckingham Street, Surry Hills	Local	I1464
“Cleveland Terrace” including interiors	108–116 and 120 Buckingham Street, Surry Hills	Local	I1465
Terrace group including interiors	1–13 Belvoir Street, Surry Hills	Local	I1423
Belvoir Street Baptist Church including interiors	86 Buckingham Street, Surry Hills	Local	I1463
Terrace houses including interiors	46–48 Buckingham Street, Surry Hills	Local	I1461
Terrace group including interiors	36–42 Buckingham Street, Surry Hills	Local	I1460
Terrace houses including interiors	32–34 Buckingham Street, Surry Hills	Local	I1459
Terrace houses including interiors	30–30a Buckingham Street, Surry Hills	Local	I1458
Terrace group including interiors	16–28 Buckingham Street, Surry Hills	Local	I1457
Strawberry Hills Hotel including interior	451–455 Elizabeth Street, Surry Hills	Local	I1535
Former ANZ Bank including interior	420–422 Elizabeth Street, Surry Hills	Local	I1534
Society of Friends (Quaker) Meeting House including fence and interior	119–123 Devonshire Street, Surry Hills	Local	I1516
Former Clarendon Hotel including interior	156–158 Devonshire Street, Surry Hills	Local	I1518
Former “Reader’s Digest” building including interior and landscaping	71–111 Cooper Street, Surry Hills	Local	I1488

Name	Location	Significance	Listing number
Excelsior Hotel including interior	64 Foveaux Street, Surry Hills	Local	I1549
Former “Schweppes Building” (65–67 Foveaux Street) including interior	65–67 Foveaux Street, Surry Hills	Local	I1550
Former “Schweppes Building” including interior	63 Foveaux Street, Surry Hills	Local	I1548
Former “William Booth Institute” including interior	56–58 Albion Street, Surry Hills	Local	I1408
Former Children’s Court building, including interior	66–78 Albion Street, Surry Hills	Local	I1409
St Francis de Sales group buildings, including interiors	80–96 Albion Street, Surry Hills	Local	I1410

Table 3. Heritage conservation zones that the study area falls within.

Name	Suburb	Significance	Listing number
Redfern Estate	Redfern	Local	C56
Little Riley Street	Surry Hills	Local	C65
Albion Estate	Surry Hills	Local	C58
Reservoir Street and Fosterville	Surry Hills	Local	C66
Cleveland Gardens	Surry Hills	Local	C62

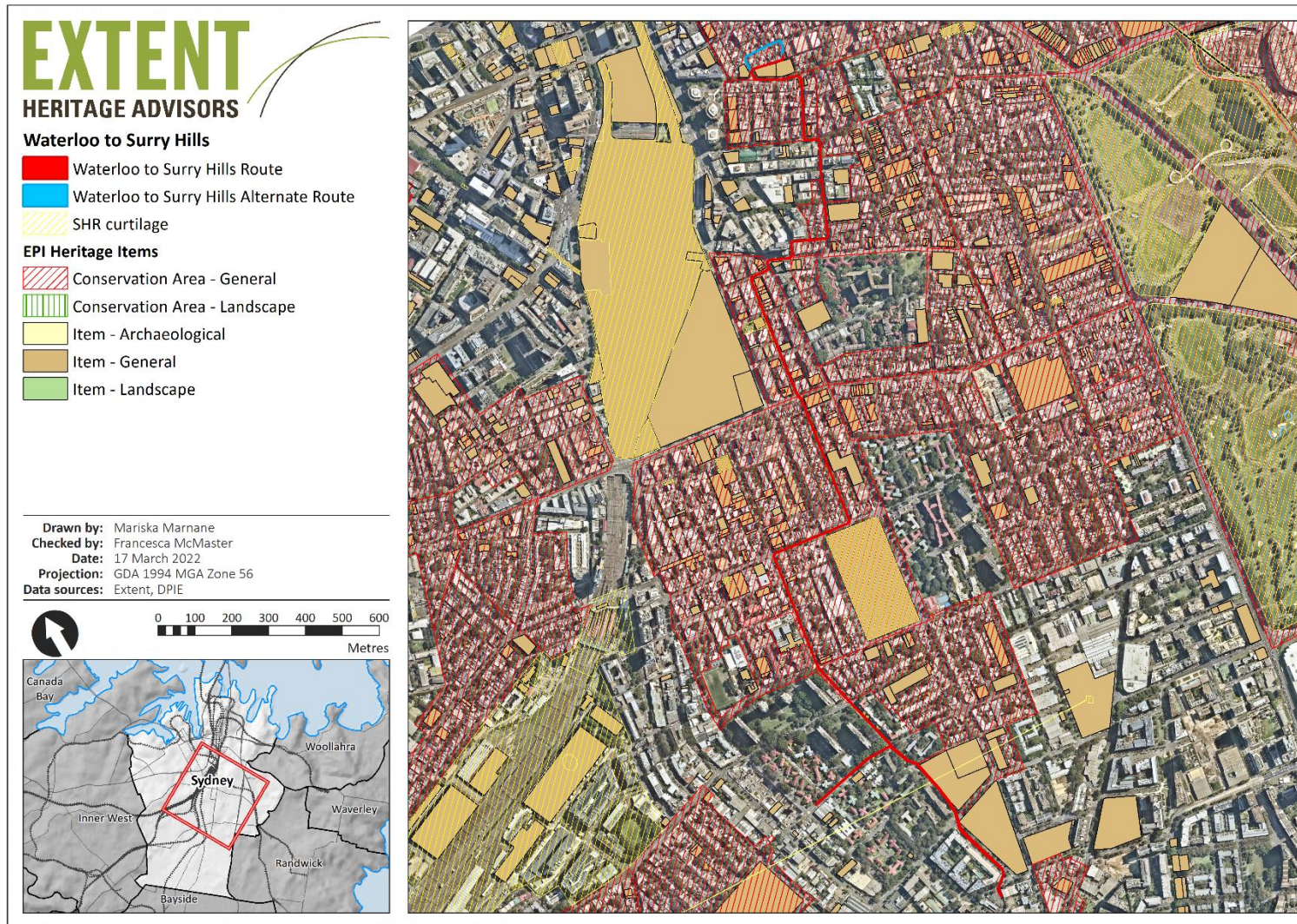


Figure 2. Conservation areas, locally listed heritage items and State Heritage Register items shown in relation to the study area.

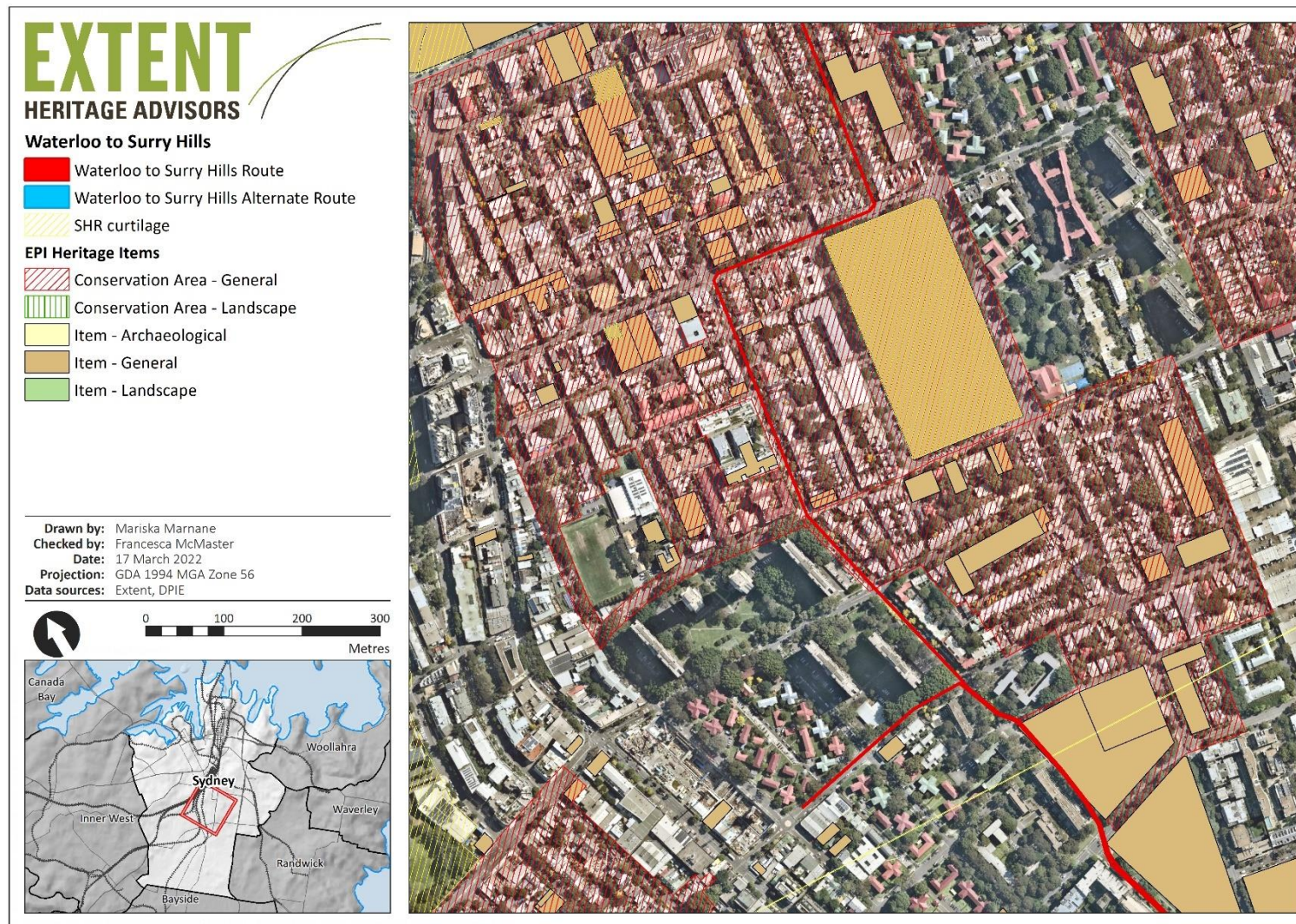


Figure 3. Detail of part of study area showing where the SHR listed Pressure Tunnel crosses the study area (light yellow Archaeological item).

1.5 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 provides for the undertaking of works for the purposes of electricity transmission or distribution networks. Section 2.44 of Development permitted without consent states:

- (1) Development for the purpose of an electricity transmission or distribution network may be carried out by or on behalf of an electricity supply authority or public authority on any land...
- (2) In this section, a reference to development for the purpose of an electricity transmission or distribution network includes a reference to development for any of the following purposes if the development is in connection with such a network –
 - (a) Construction works (whether or not in a heritage conservation area), including –
 - (i) Laying and installation of cables and cable pits, co-location of cabling and erection of ventilation and access structures, bridges and tunnel adits, and construction of a tunnel or conduit for an underground cable, on which a heritage item is located or that is within a heritage conservation area...

As the impacts from the proposed works are inconsequential to the heritage conservation areas, under Section 2.11 of the policy, no notification is required to the local council.

1.6 Previous reports and investigations

The study area has not been previously assessed.

Reports and investigations undertaken within the vicinity of the study area are discussed in Part 4.2 of this report.

1.7 Objectives

This report aims to present an overview of the potential historical archaeological resource and its significance located within the study area. The archaeological potential was assessed on the basis of comparative mapping and review of relevant historical materials. This report also assesses the potential development impacts on the identified archaeological resources and provides recommendations for the management of these impacts.

1.8 Approach and methodology

This report was prepared in accordance with the principles and procedures established by the following documents:

- *The Australia ICOMOS Charter for Places of Cultural Significance, 2013 (the Burra Charter)* (Australia ICOMOS 2013);

- *Archaeological Assessment Guidelines* (Heritage Office and Department of Urban Affairs and Planning 1996);
- *Assessing Significance for Historical Archaeological Sites and 'Relics'*, (Heritage Branch, Department of Planning 2009); and
- *'Historical Archaeology Code of Practice'* (Heritage Office, Department of Planning 2006).

This report was prepared as a desktop assessment of existing literature and reports and draws heavily on the previous studies undertaken across and nearby to the study area.

1.9 Limitations

This report uses both primary and secondary historical documentation previously prepared by third party heritage consultants. This report does not review the built heritage or Aboriginal cultural heritage values of the subject area.

1.10 Author identification

This report was prepared by Francesca McMaster (heritage advisor) and Clare Fitzpatrick (research assistant) with mapping prepared by Brian Shanahan (senior associate, team leader, geospatial and digital heritage) and Mariska Marnane (GIS specialist).

It was reviewed by Dr MacLaren North, NSW Director.

2. Historical context

2.1 Introduction

The following historical overview of the study area has been prepared to provide context to the cultural significance of the entire study area. It provides a rationale for historical developments in the area and assists in identifying historical archaeological potential within the study area.

2.2 Gadigal Country

The Gadigal, also known as Cadigal and Caddiegal, are the traditional owners of the land on which inner city Sydney is located, including the study area. Prior to European arrival, the land sustained lives and communities for countless generations, providing a storehouse of resources from not only the coastline, harbours, and rivers, but also the freshwater wetlands and dunes. Aboriginal presence around this area is evident through the presence of stone tools, middens, grinding grooves, and rock art, while community histories preserve knowledge and stories relating to the region.

This dynamic Indigenous occupation is evident across the study area. The site of present-day Belmore Park, Prince Alfred Park, and Central Train Station was an important meeting place for Aboriginal people, and saw continuous use throughout the 1790s for performances, ceremonies, and trials (Collins 1798, Dec 1793). At the time of first contact, an Aboriginal track existed between Cockle Bay and Botany Bay, roughly following the route of present-day Botany Bay Road and provided an important corridor for trade and movement for Aboriginal people in early Sydney (Hunter 1793).

2.3 Colonisation

For the Gadigal, and other Aboriginal groups in the Sydney region, every facet of life changed dramatically following British colonisation. Dispossession of traditional lands, restrictions to resources, the environmental impacts of clearing and settlement, diseases, and violence resulted in a complete disruption for Aboriginal groups.

At the time of colonisation, the landscape within the study area ranged from large tracts of open forests and dense shrubland to dunes and wetlands. (Marriott 1988, 44). In February 1788, Governor Arthur Phillip recorded a description of the area between Sydney Cove and Botany Bay, with the first portion 'occupied by a wood, in some parts a mile and a half, in others three miles across', and described the area beyond that as a 'kind of heath, poor, sandy, and full of swamps' (Phillip 1789, Feb 1788). In 1792, Richard Atkins, the Judge Advocate of New South Wales, described the northern section of the subject area (present-day Surry Hills) in greater detail:

A very good road is made the whole way to it through the wood, where trees of an immense size border it on both sides, their lofty and wide spreading branches look beautiful ... The underwood is mostly flowering shrubs, some of whom are now in blossom of the most vivid

and beautiful colours imaginable, and many of them most delicately formed. (Atkins 1792, 17 April 1792)

By the early nineteenth century, the landscape described by Phillip and Atkins had been dramatically altered. Colonial artist Joseph Lycett's 1819 watercolour (Figure 4) shows the northern section of the subject area as a fenced and bare field, with cleared trees in the foreground. The area had been plundered for timber, slate, clay, and stone for use as building materials in the city, while early farmers stumped and burnt the trees to open up grazing land for sheep and cattle.



Figure 4. Joseph Lycett's 1819 *Sydney from Surry Hills*. Source: Mitchell Library, State Library of New South Wales.

2.4 Early land grants and industry

By the early nineteenth century, land grants were being made throughout the Sydney region. In the area directly around the Sydney settlement, grants of between 80 and 100 acres were made, with some larger grants further to the south (Figure 5). The following Part outlines areas of early development, including land clearing and cultivation, and the people who owned these grants within the study area. The overview of early development starts in Waterloo, at the south of the study area, before discussing Redfern and lastly Surry Hills at the northern extent of the site.

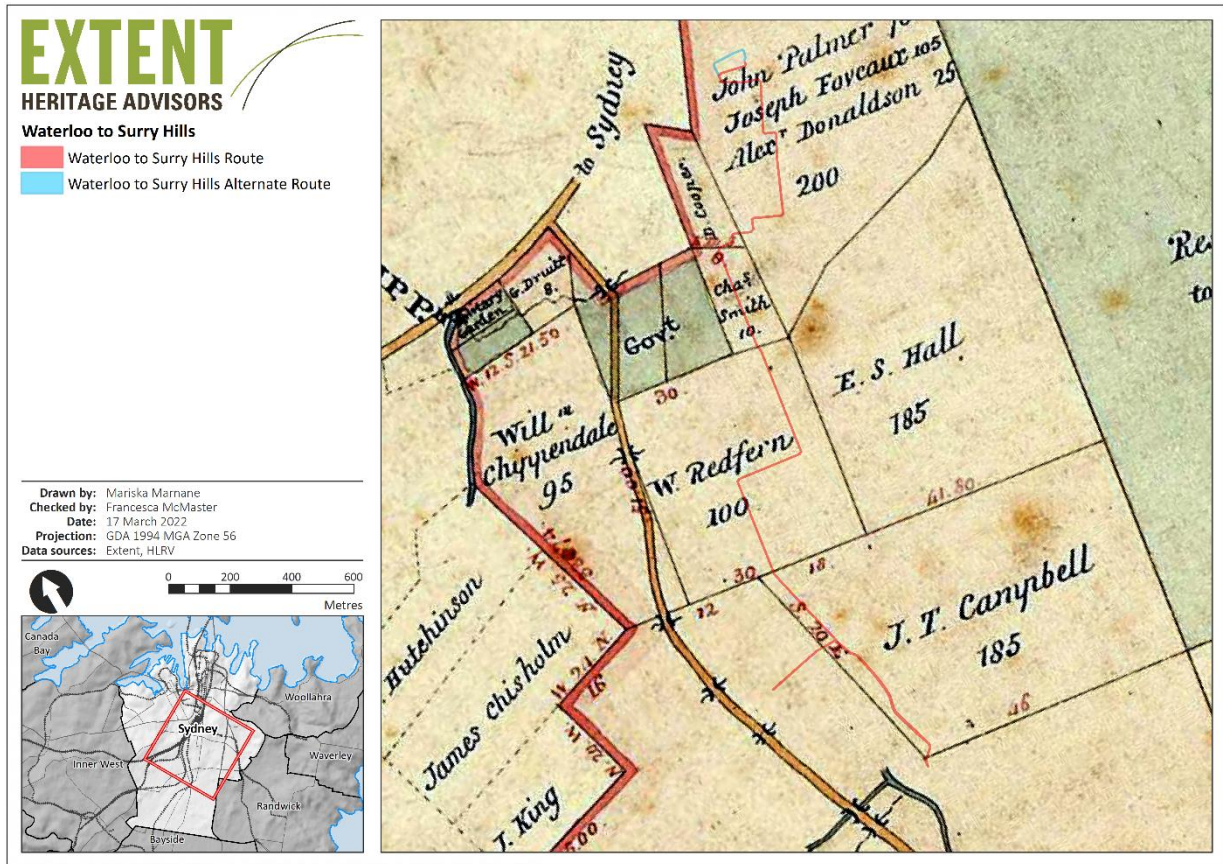


Figure 5. c.1800 Petersham Parish map showing the grants made. *Source:* Historic Lands and Records Viewer.

2.4.1 Waterloo

In the early nineteenth century, the present-day suburb of Waterloo was considered remote from the city of Sydney. The construction of Botany Road, ordered by Governor Macquarie, started in 1818. It was the first major road in the colony, stretching through the wilderness from a tollgate in Redfern to Botany Bay and providing access to some of the remote stretches of land between Jackson Harbour and Botany Bay. The study area is located to the east of the Botany Road.

In 1825, a 185-acre grant was made to John Thomas Campbell, known as Mount Lachlan Estate, and a 1400-acre grant was made to William Hutchinson, named 'Waterloo Estate'. The northern end of the study area extends into the north-eastern edge of Hutchinson's grant at the boundary with Campbell's grant, before continuing north through Campbell's grant.

John Thomas Campbell arrived in New South Wales in 1810 as secretary for Governor Macquarie. He and Macquarie's relationship quickly solidified into a friendship with Campbell becoming Macquarie's principal assistant for the administration of the colony and one of his most loyal supporters (Holder 1966, para 2). Campbell, however, caused several public embarrassments for Macquarie during his time as his secretary through rash actions and indignation, mainly directed at Reverend Samuel Marsden and Marsden's disregard of Governor Macquarie's authority. Pressure from Marsden's friends in London eventually led to a

downgrading of Campbell's position from secretary. Despite this, Campbell continued to hold important positions in the colony, going on to become a member of the Land Board as well as playing an integral role in the establishment of the Bank of New South Wales (Holder 1966, para. 3, 4, and 6).

William Hutchinson was transported to Norfolk Island for theft in 1799. By 1803 he had been appointed as overseer of government stock and acting superintendent of convicts. An entrepreneurial man, Hutchinson acquired property on the island and established a pork trade with the government (Le Roy 1966, para 1). Arriving in Sydney in 1814, following the evacuation of Norfolk Island, he was appointed principal superintendent of convicts and public works. Over the following years Hutchinson's wealth and influence continued to grow. By the time he retired from ill health in 1829 he had extensive landholdings throughout New South Wales, including Waterloo Estate within the study area.

The environment of Waterloo, containing swamps and marshlands, was an ideal environment for industrial purposes. By the early nineteenth century, Waterloo and Alexandria were swiftly becoming major industrial areas. A paper mill was established to the east of the study area on the edge of Botany Swamp by Simon Lord in 1815 paving the way for further industrial enterprises to utilise the area (Cumming 2004, 31). In 1820 William Hutchinson entered into a joint venture with Cooper, Williams, and Laverton to construct the Lachlan and Waterloo Mills. Lachlan Mill was located to the east of the study area, on the eastern boundary of Samuel Terry's grant. The Waterloo Mill was located at the northern extent of Waterloo Estate, close to the south-western corner of Campbell's property and to the southern end of the present study area (Figure 6). The mill was positioned on Sheas Creek, a tributary of the Cooks River, which was partially dammed for the purpose of establishing the mill (Cumming 2004, 31). The Mills were intended to grind wheat for the colony, and successfully did so for several years, before being converted to woollen mills in c.1827 (Cumming 2004, 32).

In 1829 Campbell and Hutchinson's land were acquired by merchant Daniel Cooper. Cooper retained the large property until 1853 and the mill continued operating into the late nineteenth century.



Figure 6. A plan of Waterloo Estate dated to between 1820 and 1840 showing the location of the Waterloo Mill and the dam, latter known as Little Waterloo Dam, feeding the mill. *Source:* State Library of New South Wales

2.4.2 Redfern

In what is now the suburb of Redfern, the first land grant was made to Dr William Roberts in 1794. Consisting of 30 acres, the precise location of Roberts' grant is unknown. However, it is thought to have been in proximity to an extensive swamp, later known as Boxley's Lagoon, in the present-day location of Redfern Park, to the east of the study area (AHMS 2012, 14). In 1816 Roberts' grant, then owned by John Boxley, was incorporated into a 100-acre grant for Dr. William Redfern by Governor Macquarie, known as 'Redfern Estate'.

Despite his previous involvement in a mutiny, Dr William Redfern was appointed to assistant surgeon in Sydney in 1808. He would go on to become a widely respected doctor, pioneering medical education and public health in Australia, and acting as physician for the Macquarie and Macarthur families (Ford 1967, para. 7). As a condition of the grant, Redfern was required to cultivate 20 acres of the property within a period of five years from the grant date. While it is unclear where on the property this cultivation took place, records indicate that at least some of the property remained uncleared until 1820, when a notice was published in the *Sydney Press* warning against trespass for timber-getting (AHMS 2012, 16).

Following Redfern's death, the trustees of his estate subdivided the land in 1833 into two and five-acre allotments for lease by auction, which included the buildings and gardens of Charles

Smith. The allotments were offered for seven-year terms, with the advertisement directed to gentlemen in public office, market gardeners, nurserymen and fruiterers and notably excluded applications from brickmakers (Sydney Herald 1834, 4).

2.4.3 Surry Hills

In the present-day area of Surry Hills, the first grants were made in the 1790s. Captain Joseph Foveaux received eighty-five acres in 1793 which increased to 105 acres a short time later. He named the grant Surry Hills Farm and cleared the land for grazing cattle and sheep. There is no indication that Foveaux lived on the property, or that any substantial structures were built there at this time (Fletcher 1976, 73). In 1794 John Palmer was granted 70 acres (and later acquired a further 25 acres) bordering Foveaux's property. When Foveaux left New South Wales for Norfolk Island in 1800 Palmer acquired his estate, making Palmer one of the principal farmers in the colony at the time. However, Palmer's success was short-lived when he became involved in the Rum Rebellion in 1808. He lost his position as Commissary General, and returned to England to give evidence in Bligh's trial. When he returned to New South Wales in 1814 his finances were suffering, leading to the sale of the Surry Hills property to Samuel Foster and Samuel Terry. Terry established Albion Brewery on the land, located to the west of the study area. A small stream was dammed and the foundation stone laid for the brewery in 1826.

South of Surry Hills Farm, 10 acres of land was granted to Charles Smith in 1809. The grant became known as 'Cleaveland Gardens'. This study area runs across the grant, up the present-day Buckingham Street. During his ownership of the property, Smith used the land as a market garden or nursery indicating that the property was cleared and cultivated in the early nineteenth century. While there is no record of a structure on the land at this time, it is possible that Smith resided on his property (Annable 1991, 9).

By 1823, Daniel Cooper (mentioned above in relation to Waterloo Estate) had acquired Charles Smith's property. Cooper was a merchant and investor who arrived in New South Wales in 1816. He received a conditional pardon in 1818 and an absolute pardon in 1821. In 1819 Cooper married Hannah Dodd, who had been transported to New South Wales for fourteen years. By the time Cooper had begun constructing Cleveland House in 1823, he was running a general store on George Street and was the licensee of a public house. Cleveland House was constructed between 1823 and 1824, reportedly at a cost of 4,000 pounds (Annable 1991, 5). The expense of the construction provides an indication of how successful Daniel Cooper's business ventures had become. An advertisement in 1823 by August Francis Greenway called for tradesmen to construct a house for Mr D Cooper, suggesting that Greenway, who had been dismissed from his position as the colony's government architect in 1822, had designed the building for Cooper (*The Sydney Gazette and New South Wales Advertiser* 1823, 4). The design of Cleveland House is described by Broadbent and Hughes, in their book on Greenway, as being relatively understated compared to Greenway's other designs. They note that a lack of refinement in the finishing details suggested that he may not have been involved in finishing the house (1997, 89). There is no indication of whether Greenway was involved in the design or layout of the grounds around the house.

Three years after the completion of Cleveland House, Cooper and his wife separated. The house was given to Mrs Cooper as part of the separation to provide a source of income.

Between 1829 and 1850 the house was leased to families for residential purposes. An 1850 watercolour of the area around Cleveland House captured the building at the rear, prior to the subdivision of the estate. The wall around Cleveland House is visible, although on the opposite side to our study area on the east (Figure 7).



Figure 7. *Turning the First Turf of the First Railway in the Australasian Colonies at Redfern, Sydney, NSW 3rd July 1850* by John Rae. Source: Mitchell Library, State Library of New South Wales

Note: Cleveland House is the two-storey white building visible on the right side, surrounded by a high wall.

2.5 Subdivision, industry and public infrastructure

The mid-nineteenth century saw significant change in Sydney as development boomed, the railway was introduced, and industry established a firm footing within Waterloo, Redfern, and the southern portion of Surry Hills. As the large early grants were subdivided and sold off, new streets and roadways were established shaping the suburbs that we recognise today. Amenities, such as sewerage and water mains, were also installed across parts of the study area.

2.5.1 Waterloo Woollen Mill and the Cooper Estate

In the mid to late nineteenth century multiple mills were operating in the Waterloo area (Figure 8). The mill first established by Hutchinson and Terry in 1820 continued operation well into the nineteenth century. In 1821 Daniel Cooper had bought into Hutchinson, Terry and Co (also known as Waterloo Co), in 1825 Cooper and Solomon Levey bought Hutchinson's property,

including the Waterloo Mill (Davidson 1966, para 2). In 1827 the mill, previously used for milling wheat, was converted for woolwashing. Over the following decades, despite changes within Waterloo Co, the mill continued operation and the land remained within the Cooper family (AMAC 2021, 20). However it appears that the mill, and another mill on the property, were operated by different companies which leads to some confusion in the historic record. Hinchcliff's Waterloo Mills wool washing was established on Waterloo Dam in 1848, to the south of the study area. Sands Directory record from 1885 lists 'Geddes Brothers; Waterloo and Buckland Mills, woollscourers and fellmongers' as being situated between James Street and the Waterloo Public School. This location fits for the northern-most mill occupying the land around Little Waterloo Dam, and in proximity to the current study area. The 1883 Metro Detail map shows the mill on the western side of the 'Little Waterloo Dam' along with several wooden races extending from the dam and a watercourse to the west (Figure 9). It is unclear if the mill being operated by the Geddes Brothers is the same building first built by Hutchinson and Terry in 1820. A second structure is marked to the north-east of the mill (also to the west of the study area).

In the late nineteenth century the Geddes Brother's operation was bought by Fred William Hughes. Hughes moved the woolwashing operation from Waterloo to Botany in 1898 (Ryan 1974). After this move it doesn't appear that anyone else took up the operation at the Waterloo Mill, with no mention of the Mills on Botany Road in the Sand's Directory after 1900.

From 1870, urban development in the Waterloo area had grown significantly. The area was attractive to buyers as a cheaper alternative to inner-city blocks, as well as often being close to places of work with much of Sydney's industry located in Waterloo and the surrounding suburbs of Alexandria and Zetland. Besides several small subdivisions in the nineteenth century, it wasn't until the twentieth century that the vast Cooper Estate (including Mount Lachlan Estate), some 1,500 acres, was broken up, after being owned by the Cooper family for ninety years (Cumming 2004, 36). The southern end of the current study area crosses into the north-eastern area of Cooper Estate. This area was part of the Little Waterloo Dam for the Waterloo Mill, and the ground would have required significant infilling before development could have taken place. Petersham Parish maps from 1928 show the gradual development of streets in the area, including Pitt Street, down which the current study area is positioned (Figure 10). The 1943 aerial of the area shows that while proposed, the southern end of Pitt Street had not been formally laid at this time. An informal footpath is visible through a grassed area at the back of an industrial block and alongside a park in the aerial photograph (Figure 11).



Figure 8. A watercolour by Samuel Elyard showing an unnamed mill in Botany at the time that Waterloo Mill was operational. *Old Botany Road, continuation of Bourke Street 1873*, watercolour, by S Elyard, 1862–1873.. In collection: Views of Sydney, 1862-1873. Call number: DGD 5. Source: State Library of New South Wales. <https://archival.sl.nsw.gov.au/Details/archive/110333249>.

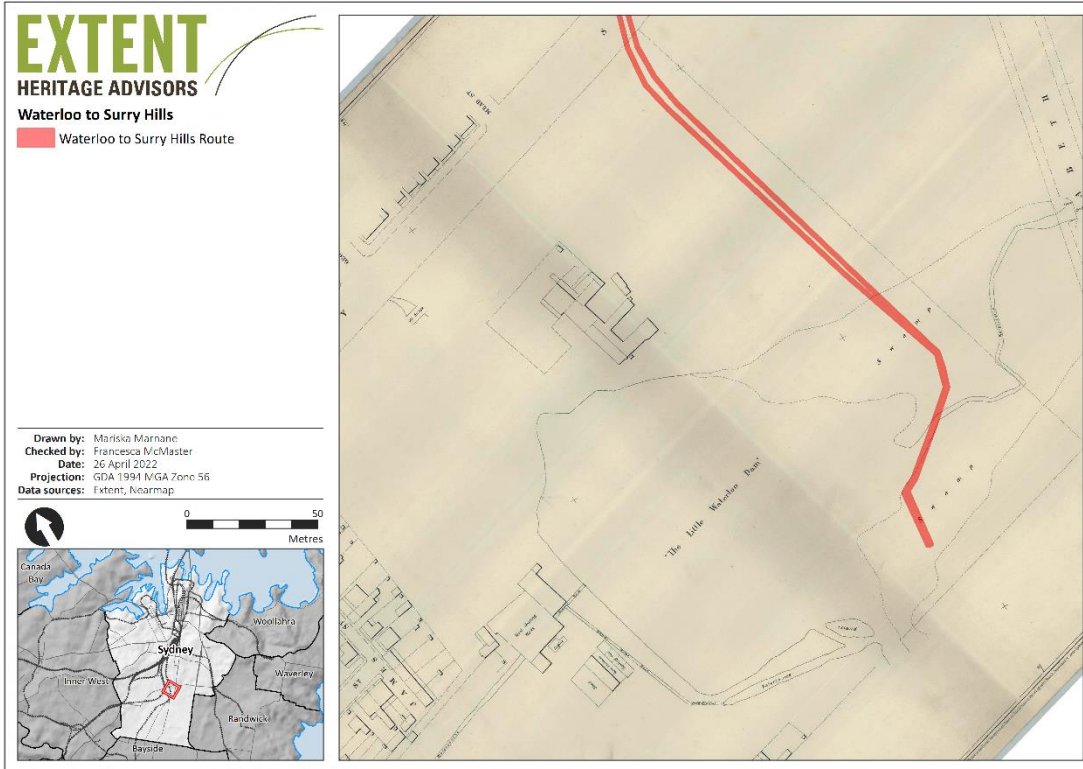


Figure 9. 1883 Metro detail of the Waterloo area, Sheet J. Map shows the “Little Waterloo Mill” and the mill building to the west of the dam. There is an unidentified structure to the north of the dam. *Source:* State Library of New South Wales

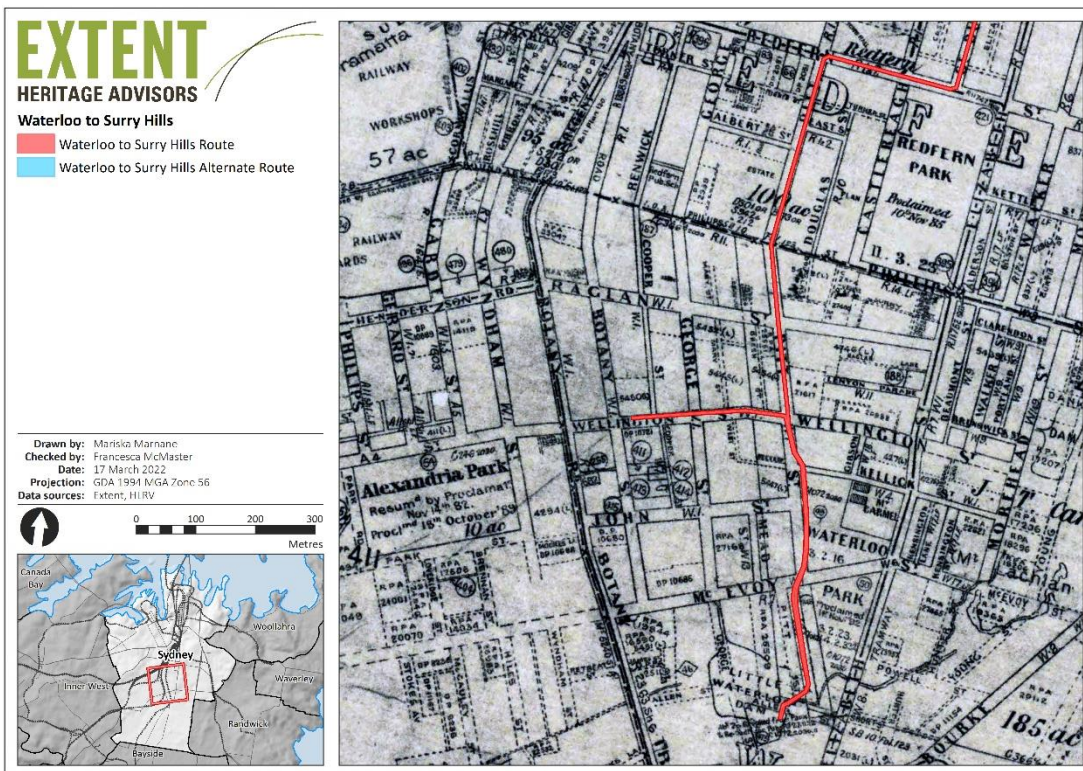


Figure 10. 1928 Petersham Parish map showing the gradual establishment of streets within the study area. *Source:* Historic Lands and Records Viewer.

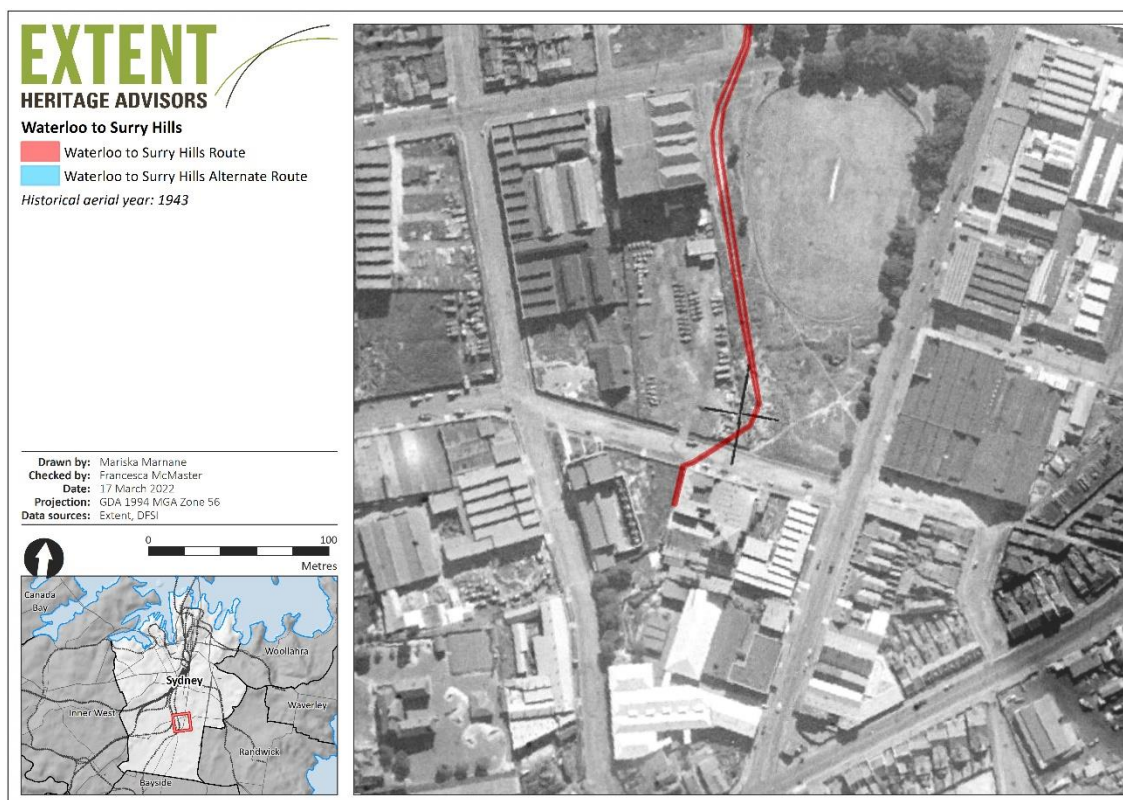


Figure 11. 1943 aerial photograph showing the southern end of the study area. Pitt Street has not been formally continued here. *Source:* SixMaps.

2.5.2 Cleveland House and Estate

With the construction of the railway in 1850, the area of Cleveland House and surrounds changed significantly. Large-scale industrial enterprise began to move into the area, and subdivision of the early estates became a lucrative option as population growth led to residential sprawl into areas previously deemed to be on the outskirts of Sydney. The Cleveland Estate was subdivided in 1855, with a small portion of land around Cleveland Estate retained and auctioned as section 3. While early records of the design and layout of Cleveland House are sparse, the 1855 subdivision plan for Cleveland Estate provides a detailed drawing of the house, outbuildings, boundary walls, wells, and entrance road. A fence crossing present-day Buckingham Street from the rear of the house extending to Elizabeth Street is shown. An entrance road, curving from Elizabeth Street around to the front of the house and onwards to Castlereagh Street, is also indicated. This entrance road crosses the study area at the intersection of Bedford and Buckingham Streets. Two wells and several structures at the rear of the main house are also indicated, but these do not fall within the study area (Figure 12).

The 1865 Trig Survey of Sydney covered the northern half of the study area, including the area developed as part of Cleveland Estate. The survey indicates that by 1865 several of the allotments had been developed on, but others remained vacant. It also indicated a small waterway crossing the study area on an east-to-west orientation, running beneath Buckingham Street on the block between Belvoir and Cleveland Streets. Alongside the waterway a sewer is marked with two red lines, following the same route as the waterway (Figure 13). A sewer line is also marked at Rutland Street.

Following subdivision, Cleveland House and its outbuildings were purchased as a single property. The structure continued to be used residentially until c.1858, after which its use reflected the changing nature of the neighbourhood, including use as a school, a laundry, a boarding house, gentlemen’s apartments, a Government labour bureau, and a cordial factory. Alterations and additions were made to the property during this time to facilitate the different uses. The Metro Detail series of maps shows the streets around Cleveland House as mostly developed by 1883 (Figure 14). In 1903 the property was purchased by the Order of the Good Samaritan to use as a refuge. A four-storey building and laundry were constructed opposite the main Cleveland House building (Annable 1991, 6–7).

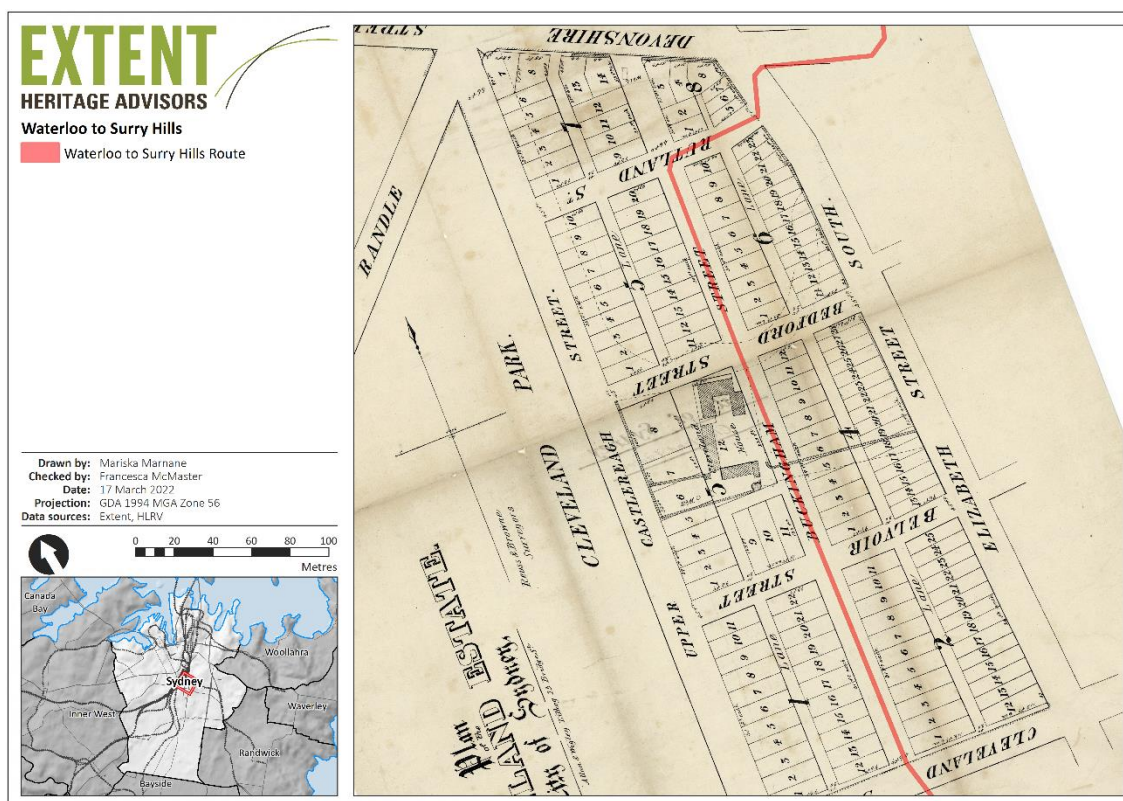


Figure 12. The Cleveland Estate subdivision with study area marked. A wall and the driveway for the house are marked on the plan beneath the subdivision. From *Plan of the Cleveland Estate City of Sydney (Redfern, NSW) (1856)*. Source: National Library of Australia (<http://nla.gov.au/nla.obj-229988813>).

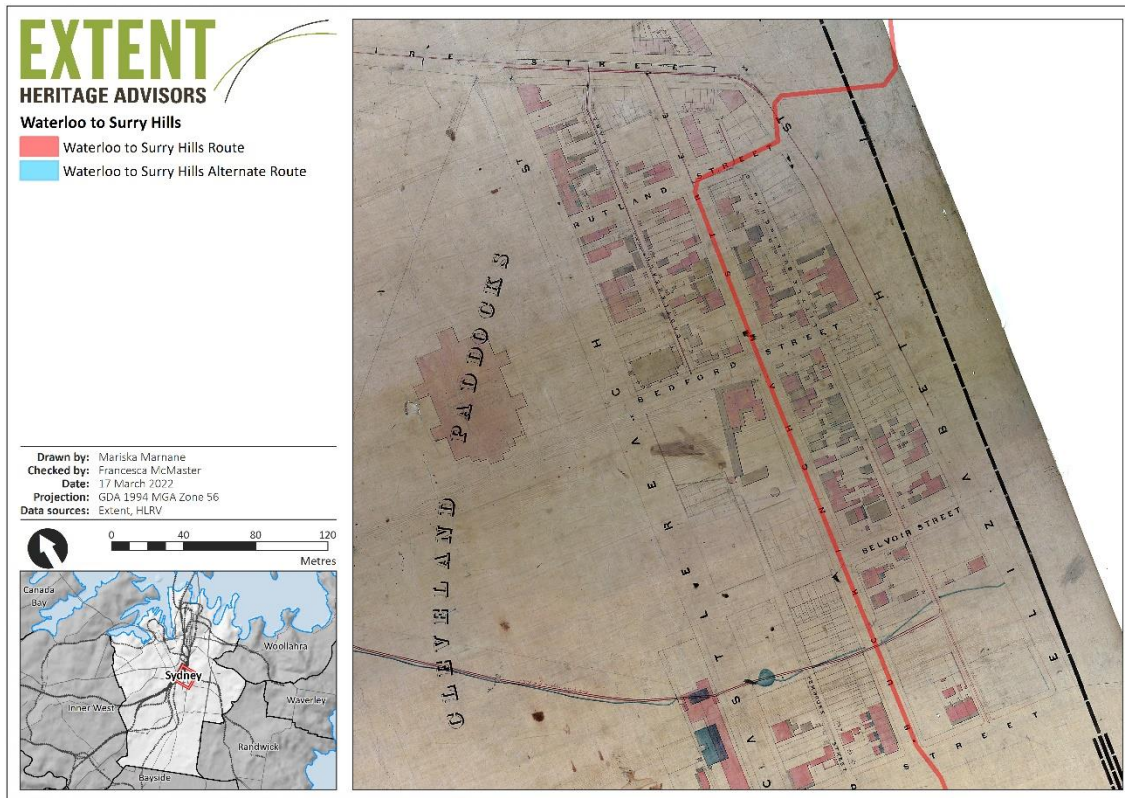


Figure 13. 1865 Trig survey of Sydney, Block S1. The study area is marked in red. *Source:* City of Sydney Archives

Note the waterway marked in blue and sewer marked in red crossing Buckingham Street at the bottom of the map.

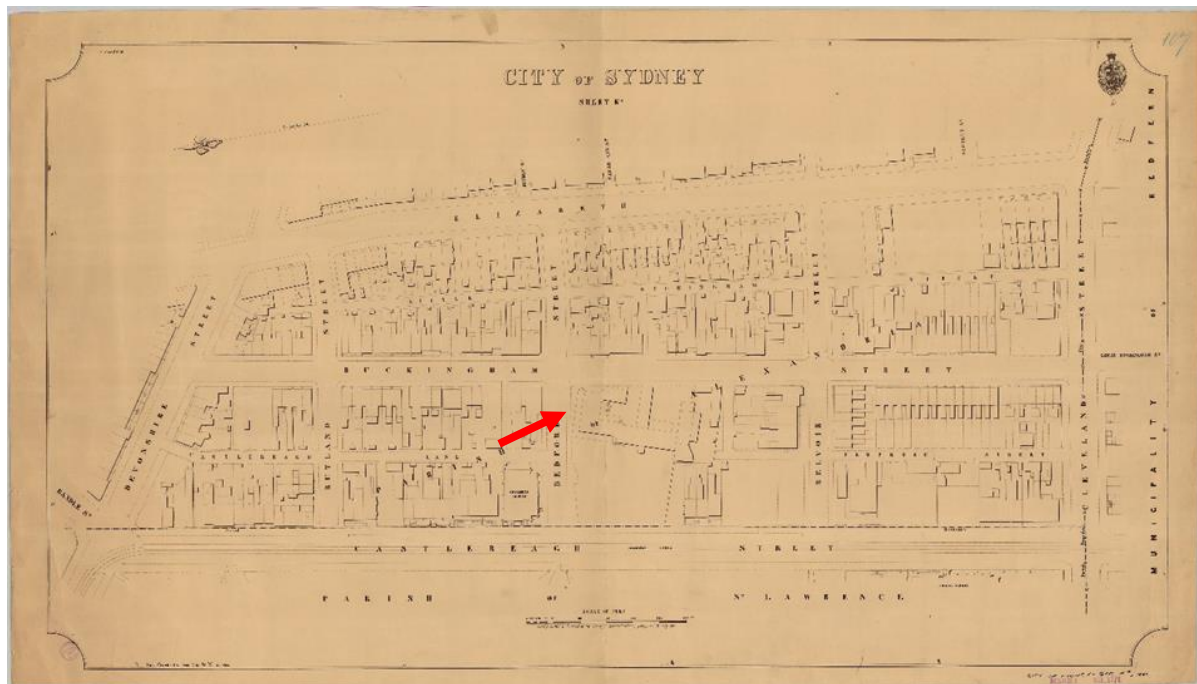


Figure 14. City of Sydney Metro Detail Series, sheet K2, showing the streets around Cleveland Street, including Buckingham Street, where the study area extends from north to south. A red arrow indicates the location of Cleveland House. *Source:* State Library of New South Wales. (https://search.slnsw.gov.au/permalink/f/s8mhc3/SLNSW_ALMA2193462470002626).

2.5.3 Redfern Estate

In 1842, the Redfern Estate was re-subdivided into residential allotments in preparation for sale as freehold. Surveyor Edward Knapp prepared two different plans for the subdivision that document the sale of parts of the Redfern Estate. The main north-to-south thoroughfares in the subdivision followed the alignments and names of some of the city CBD streets such as George, Pitt, and Elizabeth Streets. The first allotments, offered for sale on 16 March 1842, were larger than those offered in later releases auctioned on 27 December 1842 (Figure 15).

By the late 1840s, New South Wales was suffering from an economic depression. Despite the hardship and impacts of the depression in Sydney, parts of Redfern continued to develop during this decade, particularly the northern parts of the Estate, closest to the city. Small and modest residences were typical of working-class residential development in this part of Redfern and neighbouring Surry Hills, consisting of small cottages and narrow two-storey terraces.

By the late 1880s Redfern had numerous small businesses and in 1888 there were 441 stores and shops, thirty-six hotels, nine ironworks, eleven boot factories, five coach factories, five cooperages, three cordial factories, one soap works, and five dairies (*Sydney Morning Herald* 1888, 7). The population of the Redfern Municipality rose from 1,200 people in 1851, to 22,000 people in 1891. By 1891, Redfern had the second highest density of occupation per acre of any of the inner-city suburbs (AHMS 2012, 20).

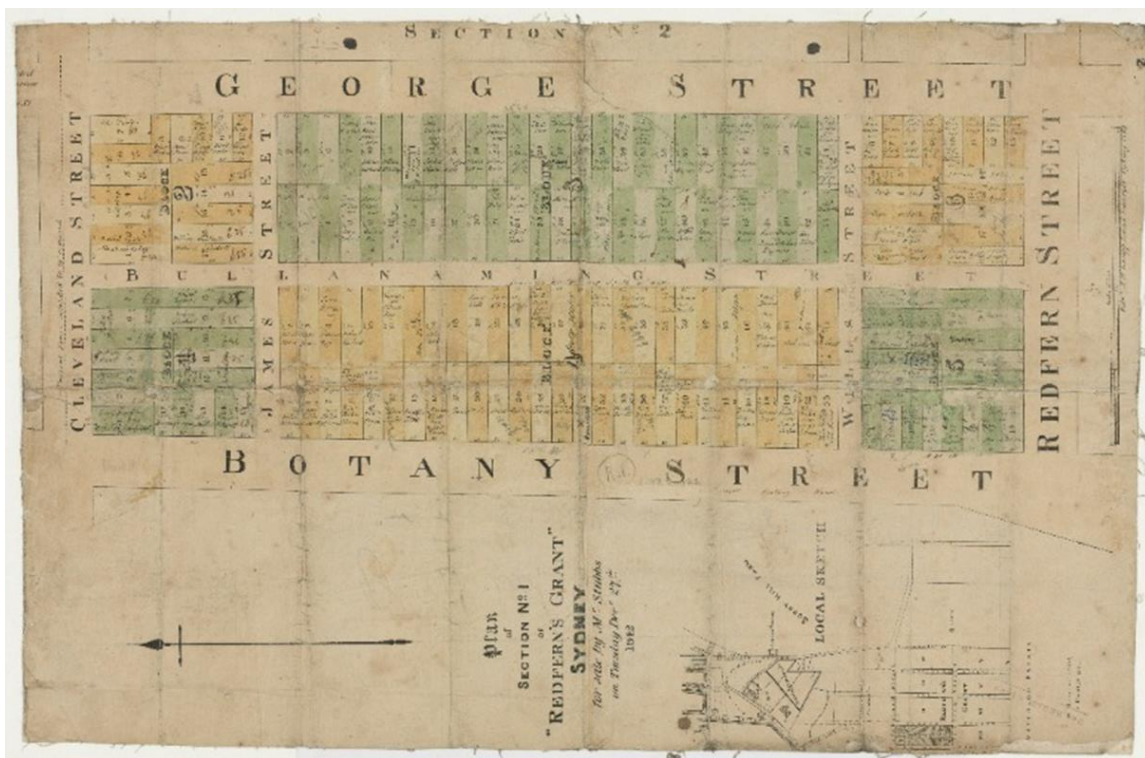


Figure 15. 1842 plan of early proposal for subdivision of the Redfern Estate. Source: Mitchell Library, State Library of New South Wales.

2.5.4 Surry Hills and the Fosterville Estate

The earliest subdivisions in Surry Hills occurred in the southern portion of the suburb, near Strawberry Hills, and in the area around Bourke and Albion Streets (*Sydney Gazette and New South Wales Advertising* 1831, 1). As the city's population continued to spread southward, these areas became the first to be sold in house-size allotments. In 1833, the area north of the Fosterville Estate was subdivided into small allotments which catered to the lower end of the rental market. Governor Bourke's public works program during the late 1830s and early 1840s drew workers and service industries to Surry Hills. As with Redfern, Surry Hills continued to rapidly develop despite the 1840s depression.

From the 1850s onwards Surry Hills underwent a rapid increase in population due its proximity to the city, the development of the railway, and further general subdivision. The growing number of subdivisions encouraged the development of terrace houses that would come to dominate the Surry Hills landscape. It was marketed as a desirable residential location, with auctioneers highlighting the beautiful views and describing it as a peaceful retreat from the dirt and bustle of the city. (Keating 1991, 19–20). After an unsuccessful attempt to sell the estate in 1843, parts of the Fosterville Estate were finally subdivided and sold on a leasehold basis, which encouraged the construction of low-quality housing (Keating 1991, 32).

The 1865 Trigonometrical Survey shows a stone building adjoining a row of brick terraces that were part of the Fosterville Estate, referred to in the 1865 Sands Directory as 'Sophia Terrace' (66–76 Albion Street). Another building can be seen at the rear of the allotment, within the study area, and is marked as being a timber construction. The building is within the path of Little Albion Street which had not been built in 1865 (Figure 16). The stone building's use as a public house dates to 1856, when James McCrossen, a licensed victualler, was granted a publican's license for an establishment called the Apple Tree (Publicans' Licenses Index 1856). The Apple Tree, like many public houses during this time, was used as a venue for coronial inquests, and is referenced several times in local newspapers during 1856 and 1857 (*The Maitland Mercury and Hunter General Advertiser* 1856, 4; *Empire* 1857, 4). McCrossen applied again in 1858 for a license for the hotel before being listed on the Insolvency Index a year later in 1859, and there were no further licence's granted under the Apple Tree name (Publicans' Licenses Index 1858; Insolvency Index 1859). The building was possibly still operating as a hotel in 1861, with the Sands directory listing the building at 78 Albion Street as Henry W Dudley's 'New Inn'. (Sands 1861, 18). It is unclear what the rear timber structure was used for at the time but may have been an ancillary structure for the public house, used for storage.

Also marked on the 1865 Trigonometrical Survey is a brick structure to the north-west of the timber building. Located on a separate allotment, this structure is a long thin rectangular shape orientated north to south. The southern half of the building falls within the study area. Sands records do not provide a clear indication of who might have owned or used this structure in the late 1800's. In addition to increased residential development, this period of growth in Surry Hills also saw the introduction of public infrastructure such as water and sewerage. The 1865 Trigonometrical survey marks sewerage, water mains and fireplugs. Along Albion Street and, what would become later become, Little Albion Street and Ann Street, sewer lines and water lines are marked within the study area (Figure 16).

Throughout the 1870s, small subdivisions continued to fill in the remaining areas of open space, and like previous Surry Hills subdivisions, the internal street arrangements were often incompatible with surrounding streets (Keating 1991, 45). By the 1890s, Surry Hills contained nearly 5300 dwellings and almost 30,000 inhabitants. As the area became more densely settled, health problems associated with poor drainage, sewerage systems and overcrowding became increasingly evident. The Sydney Municipal Council did not have the legislative powers to force landlords and speculative builders to connect houses to water supplies, and a shortage of funds left other services such as roads, sewerage, and drainage in a poor condition (Wotherspoon and Keating 2009). As the population grew in these tightly packed streets, so too did crime rates, and by the end of the nineteenth century the suburb had been abandoned to the working class and casually-employed poor.

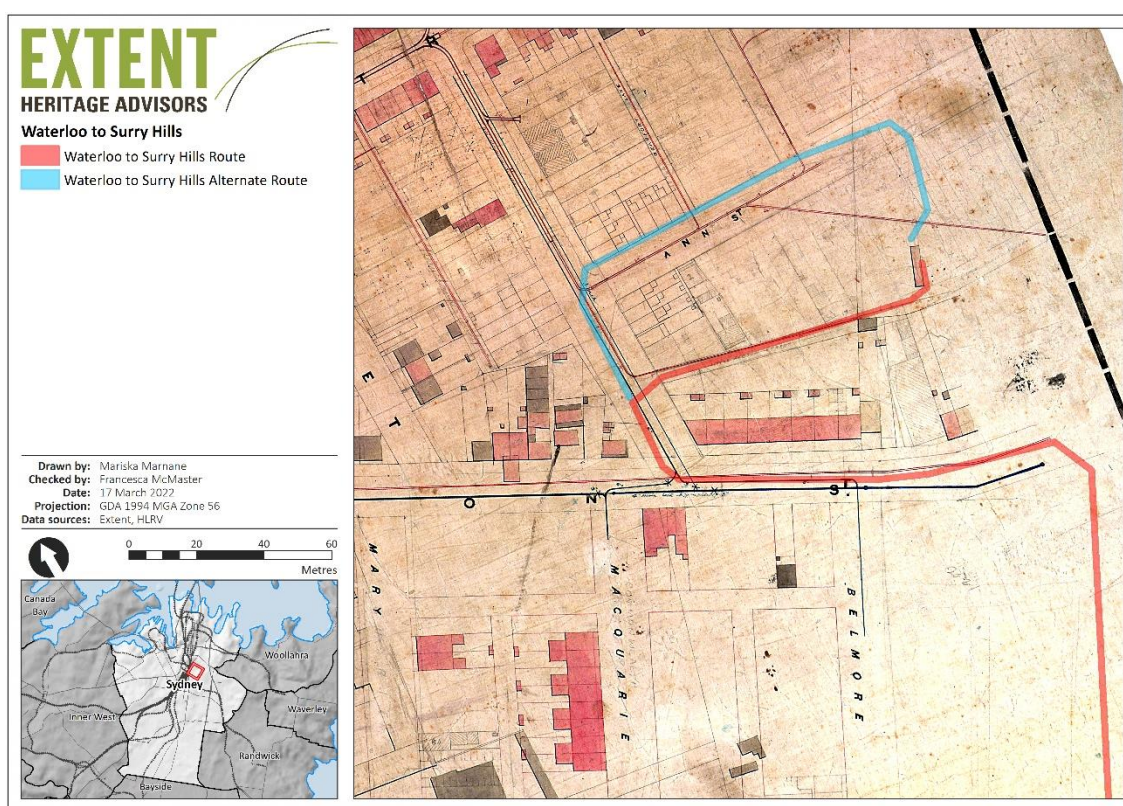


Figure 16. 1865 Trigonometrical Survey of Sydney showing Albion Street and the area of present-day Little Albion Street. A brick structure, to the north-east, and a timber structure, to the south, fall partially within the study area. Sewer and water lines also fall within the study area. *Source:* City of Sydney Archives

2.5.5 Moving the masses: the Sydney tram network

In planning for the 1879 International Exhibition in Sydney, the NSW Government decided to construct a temporary steam operated tramway to facilitate movement of crowds along a mile-long route from Old Redfern Station to Hunter Street. The line was so successful that it became permanent and led to growing support for the establishment of further tramlines in Sydney (MacCowan 1990, 6).

The Surry Hills line was opened in 1891. The line branched from Oxford Street onto Crown and continued until just north of Cleveland Street. This line was further extended between 1896 and 1899 and duplicated from Cleveland to Dowling Street. In 1882 a southern branch line to Botany was opened (Figure 17). This line extended from Devonshire Street to Redfern and Regents Streets, and then Botany Road (MacCowan 1990, 8).

The study area crosses the Surry Hills and Botany branch lines in several locations: Elizabeth Street, Cleveland Street, and Redfern Street.



Figure 17. Detail of a 1923 map of Sydney and suburbs showing tramway lines and stopping places. Source: National Library of Australia.

2.6 Twentieth century development

At the turn of the century, amidst housing and sanitary reform prompted by outbreaks of bubonic plague, there were a series of resumptions and demolitions. In 1902, the Sydney Municipal Council completed the first comprehensive survey of the nature of housing in Surry Hills, which concluded that they all exhibited the common defects of inner-city housing (Keating 1991, 68). In 1905, they were granted the power to take over the title, or resume land, with the first resumptions taking place in 1906, demolishing over 178 houses (Extent Heritage 2019a, 14).

Reports from the City Building Surveyor in 1904 and again in 1910 attest to the resumption efforts taking place across Surry Hills, even prior to the passing of the *Corporation Act 1905* (NSW) (City Building Surveyor 1904; City Building Surveyor 1910). The reports note that many of the weatherboard and timber cottages along Albion and Samuel Streets (including those in Figure 18 and Figure 19) were 'in such a condition of dilapidation as to absolutely be past repair', with the surveyor recommending their demolition (City Building Surveyor 1904).

Throughout the twentieth century the suburbs of Waterloo, Redfern, and Surry Hills grew significantly as the population of Sydney boomed. Industrial and residential buildings continued to be built side by side in increasingly crowded areas. Although initial installation was slow, modern amenities began to arrive in Waterloo, Redfern, and Surry Hills at the beginning of the twentieth century with sewerage lines, water, and electricity not only installed, but also enforced so landlords had to ensure amenities were connected (Keating 1991, 68).

Higher demand for water in Sydney in the twentieth century saw investigations for a pressure tunnel to run from Potts Hill Reservoir, near Chullora in western Sydney, to the Waterloo Pumping Station. The aim of the pressure tunnel was to assist the trunk mains between Potts Hill and Crown Street. The pressure tunnel was first proposed in 1914 with trial bores for the 16km line investigated in 1921 and 1922. Despite ruptures and fracturing during early testing, laying of the tunnel commenced in 1930 and was completed in 1934. 17 shafts, to provide access for excavation of the tunnel, were first sunk along the route. The tunnel was partially excavated using a tunnelling machine, but these machines proved unsuitable and were withdrawn with manual excavation completing the majority of the tunnel (Aird 1961, 53). The final pipe location ran from Potts Hill Reservoir through Bankstown, Enfield, Canterbury, Ashfield, Petersham, Marrickville, Erskineville and Waterloo (Figure 20). It is the third largest water pipeline pressure tunnel in the world (State Heritage Inventory, 'Pressure Tunnel Shaft No. 1 & associated infrastructure').

In the 1920s the Sheas Creek Stormwater Channel was constructed. The construction involved the building of new drains and connection of existing drains to drain into Sheas Creek, to the south-east of the study area, which had been formalised in 1905 and drained into Alexandra Canal (Ringer 2013, para 14). Part of the channel was constructed down Allen Street and across the foot of Pitt Street, which the study area crosses at its southern end (Figure 21). Construction of the channel involved deep trenching and the construction of a concrete drain channel (Figure 22 and Figure 23).

With the onset of World War II in 1939 came the threat of aerial attack on Sydney. The National Emergency Service (NES) coordinated the protection of civilians, including organising the

excavation of four-and six- foot deep “zig-zag” anti-aircraft trenches across the city. These trenches were dug in open spaces, such as parks and school playgrounds.

In a 1942 aerial photograph, one of these “zig-zag” trenches is visible within the informal portion of Pitt Street, within the block between McEvoy and Allen Streets. The location of the trench falls within the study area (Figure 24). By 1943 the trench had been backfilled.

In 1961 the Sydney tram network, once the largest in Australia, ceased operation. The overhead wires for the electric cars were removed and, in most cases, the tracks were pulled up leaving only the concrete blocks beneath the ground as a remnant of the network. In some areas the original tracks are still visible within roadways.

Over the following decades development of Waterloo, Redfern, and Surry Hills continued. The growing population of Sydney and a desire to live closer to the CBD fuelled a gradual push-out of industrial premises, which were soon replaced with residential. Despite this, parts of Waterloo, Redfern, and Surry Hills still maintain their industrial roots with areas of industry spread throughout the residential.



Figure 18. c.1910 photograph of 8 Smith Street, derelict Cottage, a brick and shingle-roofed cottage overgrown with ficus, with a battered wooden picket fence on raised sandstone and brick. *Source:* City of Sydney Archives.



Figure 19. Three boys and a dog pose for the camera outside a timber cottage at 6 Smith Street, Surry Hills, in 1902. Source: City of Sydney Archives.

Note: Freestanding timber cottages like this one with a timber shingle roof, were becoming increasingly rare by the turn of the century. Part of the Fosterville Estate.

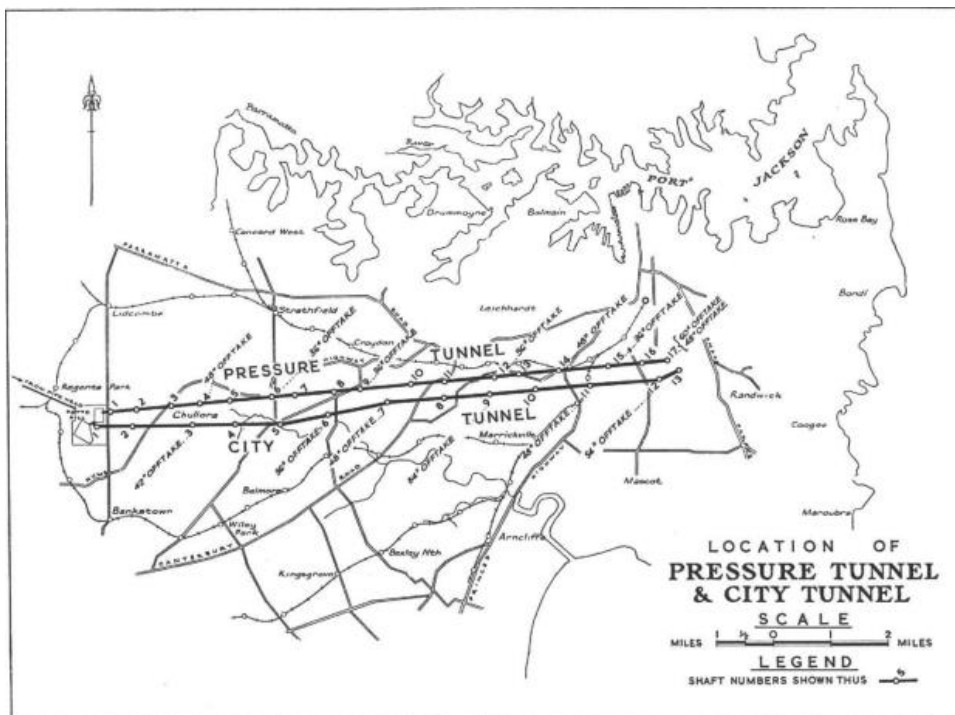


Figure 20. Location of Pressure Tunnel and City Tunnel map. Source: W.V. Aird's 1961 The Water Supply, Sewerage and Drainage of Sydney 1788-1960.



Figure 21. Part of a c.1920 plan showing the area draining to Sheas Creek Stormwater Channel. *Source:* Sydney Water Collection, City of Sydney Archives.

Note: The blue lines indicate the location of new channels to drain to Sheas Creek. The location that the study area crosses the channel is marked with a red arrow, on Allen Street.



Figure 22. 'View of Stormwater under construction in Waterloo', 1928. A photograph showing the formwork for the construction of the channel underground. *Source:* Sydney Water Photograph Collection, City of Sydney Archive.



Figure 23. Construction of Sheas Creek Stormwater Channel. Photograph taken looking east along Allen Street, towards the location of the current study area. *Source:* Sydney Water Photograph Collection, City of Sydney Archive.

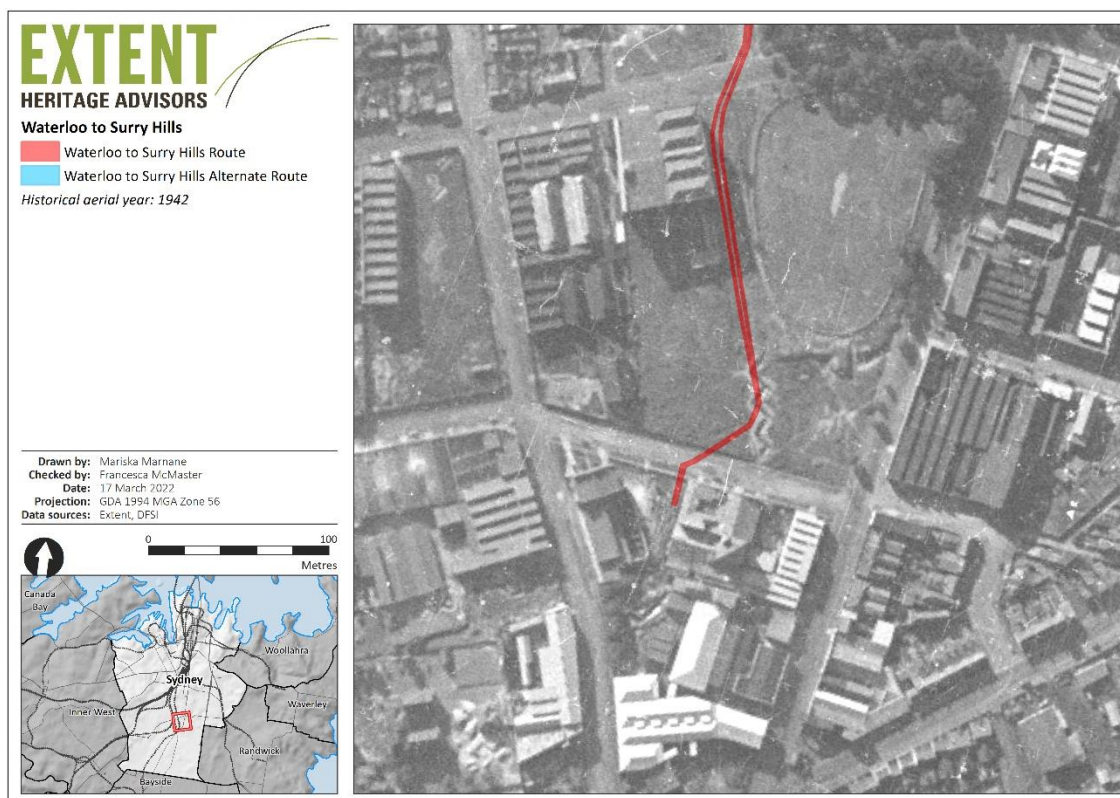


Figure 24. 1942 aerial photograph of the southern end of the study area showing the location of a “zig-zag” anti-aircraft trench. *Source:* NSW Department of Finance and Spatial Services.

3. Physical description

On 16 March 2022, Francesca McMaster (heritage advisor) and Clare Fitzpatrick (research assistant) undertook a site visit of the study area. The following observations were made:

- Starting at the southern end of the study area, along Allen Street and the foot of Pitt Street at the Zetland Substation, there was no indication of the Sheas Creek Channel on the ground surface (Figure 25). The streets were asphalted, with modern concrete curbing and drainage. From this point the inspection continued north along Pitt Street (Figure 26).
- Continuing north along Pitt Street, the study area extends west along Wellington Street was inspected before continuing north (Figure 27, Figure 28 and Figure 29). As with Pitt Street, Wellington Street is asphalted with concrete curbing and drainage.
- The study area veers east onto Redfern Street from Pitt Street. No evidence of the tramline along Redfern Street was observed on the ground surface (Figure 30). From Redfern Street the study area turns north onto Buckingham Street (Figure 31).
- From Buckingham Street the study area crosses Cleveland Street to continue north onto Great Buckingham Street. Crossing Cleveland Street, there was no evidence of the Cleveland Street branch of the tramline visible on the ground surface (Figure 32).
- An 1865 plan marked a sewer line and waterway travelling east to west, approximately in the vicinity of 89 Buckingham Street. A stormwater drain was observed out the front of 89 Buckingham Street but there was no evidence of an early sewer or early culvert material in the area (Figure 33).
- Cleveland House is located on the western side of Buckingham Street, between Belvoir Street and Bedford Street. No evidence of the boundary wall, front garden area or entrance road associated with Cleveland House were observed on Buckingham Street. The roadway was asphalted with sandstone curbing. Little indication of services within the roadway were observed beyond a sewer vent (Figure 34 and Figure 35).
- The study area continues north from Cleveland House before turning east onto Rutland Street, north onto Elizabeth Street and then east again onto Devonshire Street. Along Rutland Street no evidence of a c.1865 sewer was observed on the ground surface of the roadway (Figure 36). From the eastern end of Rutland Street to Holt Street the proposed new cable will join with an existing cable. Trenching will commence again on Gladstone Street (Figure 37).
- From Gladstone Street the study area continues northward along Waterloo Street before heading west along Albion Street, north up Commonwealth and then west along Little Albion to meet with the Surry Hills Substation (Figure 38, Figure 39, Figure 40).
- At the northern end of the study area, no evidence for c.1865 structures were observed within the roadway of Little Albion Street, nor was any evidence of sewers and watermains observed (Figure 41 and Figure 42).



Figure 25. View to east of Zetland Substation and Allen Street.



Figure 26. View north of Pitt Street from Allen Street intersection.



Figure 27. View west along Wellington Street towards Cope Street.



Figure 28. North facing photograph of Pitt Street, taken from Wellington Street intersection.



Figure 29. South view of Pitt Street from Redfern Street intersection.



Figure 30. East facing view of Redfern Street from Pitt Street intersection. No visible evidence of the tram network observed.



Figure 31. View of Great Buckingham Street looking north from Redfern Street intersection.



Figure 32. South facing view of Buckingham Street towards Cleveland Street and Great Buckingham Street. Note that no evidence of the tram network was observed on the ground surface of Cleveland Street.



Figure 33. Stormwater drain outside 89 Buckingham Street, in the vicinity of where a stream and sewer were marked on an 1865 plan.



Figure 34. View to the south-west of Cleveland House from the intersection of Buckingham and Bedford Streets.



Figure 35. View of the southern extent of Cleveland House.



Figure 36. East facing view of Rutland Street looking towards Elizabeth Street. No evidence of an 1865 sewer was observed here.



Figure 37. East facing view along Gladstone Street.



Figure 38. North facing view along Waterloo Street.



Figure 39. West facing view of Albion Street, looking towards Commonwealth Street.

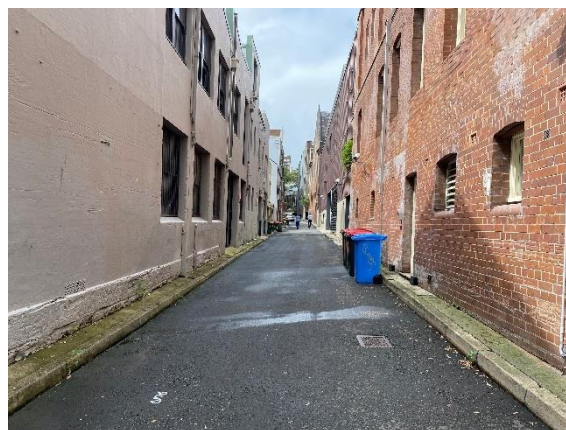


Figure 40. View along little Albion Street from Commonwealth Street.



Figure 41. West facing view of Surry Hills Substation on Little Albion Street.



Figure 42. View to the west of Little Albion Street, including the rear of 80 Albion Street.



Figure 43. Alternate route along Ann Street, view to the east. Source: Google Street View, March 2021.



Figure 44. Alternate route along Ann Street, view to the west. Source: Google Street View, March 2021.

4. Historical archaeological potential

4.1 Introduction

This section of the report discusses the site's potential to contain archaeological evidence of the previous phases of occupation. The potential for the archaeological resource to reveal useful information about the previous uses or activities that shaped its history depends on the extent, nature, and level of its intactness. Disturbed archaeological features and deposits in the form of fragmentary structural remains and random artefacts may be evidence of previous occupation, but their use or value in reconstructing the past though providing meaningful information is limited. This is because such features and deposits are disassociated from the stratigraphic sequence that establishes their provenance and secured date of deposition. This assessment is informed by the results of archaeological excavations and assessments in nearby sites, the phases of site development, and evidence of modern disturbances likely to have impacted on or removed historical archaeological remains.

This section identifies where intact archaeological evidence is likely to be found at the site, and to what extent it may be preserved. The level of significance of archaeological evidence (known or potential) is discussed in Part 5 (page 53).

4.2 Archaeology of the neighbourhood

There have been several archaeological assessment reports completed within the vicinity of the study area.

4.2.1 Waterloo

34–36 Wellington Street, Waterloo, Final Archaeological Report (AMAC 2013)

In 2013 AMAC investigated the site of 34–36 Wellington Street, Waterloo, which formed part of the Mount Lachlan Estate and housed industrial and commercial business throughout the nineteenth century, including a dairy factory, carriage works, and a condiments maker. Archaeological monitoring and excavation work revealed limited evidence for nineteenth century industrial occupation of the study site. The only evidence pertaining to the nineteenth century were concrete footings with evidence of dry-press brick impressions found in the center of the site, which were associated with a building identified on 1883 and 1888 plans of the site. Disturbances and destruction by later developments, in particular the construction of a petrol station in the 1960s, removed almost all remains of structures on site, as well as the historic soil profile, which may have identified the operation of industries on the site during this time. In addition to the lack of evidence for industrial activity, no evidence for farming or agricultural activities associated with early land grants or evidence earlier domestic occupation was found.

4.2.2 Alexandria

Alexandria Park Community School, Historical Archaeological Assessment (Extent Heritage 2017)

In 2017 Extent Heritage prepared an assessment for a proposed redevelopment at Alexandria Park Community School. The site was leased for agricultural purposes throughout the nineteenth century, including as a market garden. In the late nineteenth century, drainage works associated with the Alexandria Canal were undertaken, and the site was developed for industrial purposes, before being redeveloped in 1977 as a school. The HAA found that archaeological evidence of the early agricultural and market garden uses of the site, such as fences, postholes, and gardening furrows, would have been highly disturbed by later developments and environmental processes. The assessment stated that although there is high potential for the presence of these later developments during the sites industrial phase, it is unlikely that these remains would provide substantial additional historical information. The stormwater drain associated with the Alexandria Canal which transects the site is an active subsurface service, and therefore was not assessed as an archaeological feature.

75–83 Wyndham Street, Alexandria, Historical Archaeological Assessment (Extent Heritage 2019b)

In 2019, ahead of the redevelopment of 75–83 Wyndham Street, Extent Heritage carried out an archaeological assessment. The assessment found that the site had been heavily and continually developed, with geotechnical evidence (STS GeoEnvironmental 2015) suggesting that the upper portion of the original ground level was removed and replaced by a mixed fill. The degree of disturbance of deposits beneath the extant workshop was unclear, however across the rest of the site it varied between 0.9 and 2.5 m in depth. Following this, they concluded it was likely that subsurface features associated with mid-to-late nineteenth century residential and commercial occupation could be present on the southern half of the site beneath the workshop. The potential for historical archaeological remains associated with the earliest phase of agricultural development was assessed as nil-to-low across the site.

4.2.3 Redfern

153–167 George Street, Redfern, Archaeological Assessment (GML 2013a)

In 2013 GML undertook an assessment of 153–167 George Street ahead of the site's residential redevelopment. The site formed part of William Redfern's 1816 grant, and remained vacant until subdivision and development began in the second half of the nineteenth century. It subsequently housed various workshops, and was also used as a builder's yard, theatre, motor service center, and warehouse. The assessment found that the development of the site in the late nineteenth and twentieth centuries would likely have destroyed any prior archaeological remains. Geotechnical investigations (Douglas Partners 2012) revealed substantial natural soil profiles, ranging from natural sands and clays to shale deposits and showed the slope of the site from both north to south and east to west. The results from BH 1 located in the west of the site showed a profile which included modern sand-based fill (0–1 m depth) overlying loose fine to medium grained sand (1–3 m depth) over stiff silty clay (3–6.5 m depth) before reaching shaly clay (6.5–8.6 m depth) above the bedrock. BH2 located in the north-east of the site revealed modern sand-based fill (0–0.5 m depth) overlying loose fine-to-medium-grained sand (0.5–

1.5 m depth) over stiff silty clay (1.5–2.5 m depth) and shaly clay (2.5–4 m depth) before reaching the bedrock at 4 m.

31 Cope Street, Redfern, Historical Archaeological Impact Assessment and Archaeological Record (AHMS 2007)

In 2007 AHMS investigated three sandstock brick-lined wells which were exposed during the removal of contaminated soils for a development at 31 Cope Street, Redfern. The wells were exposed between 0.5 and 1 m below original ground level, surviving from four and six brick courses to 2.6 m in depth. Their internal diameters ranged from 0.67–0.97 m wide. Three glass bottles were recovered from the fill of Well 3 prior to the archaeologist's arrival on site, with two of the bottles having their corks preserved and retaining their original contexts. The bottles were dated to between the 1860s and the 1890s, coinciding with the early development of the area following the subdivision of Redfern's Estate.

Former Rachel Forster Hospital, 134 Pitt Street, Redfern, Historical Archaeological Assessment and Research Design (AHMS 2012, 2014a)

The site of the Former Rachel Forster Hospital at 134 Pitt Street Redfern was assessed by AHMS in 2012 and 2014 for a proposed redevelopment. The assessment identified the potential for historical archaeological features and deposits to survive dating from the 1850s to the 1930s. Their research found that although no substantial development prior to 1840s occurred in the subject area, evidence of yard deposits, fence lines, or pastoral activities such as plough marks may survive. Between 1853 and 1887, several dwellings and outbuildings were constructed including Redfern Lodge. The principal phase of development that disturbed or removed evidence of previous occupation was the construction of the Rachel Forster Hospital in the 1940s. The construction required demolition of existing structures and excavation for basement levels, supporting piers, and utility services. The assessment concluded that the levels of disturbance associated with the construction of the hospital would have removed and or truncated potential historical archaeological resources relating to earlier occupation. However, in the areas of the site not directly impacted by the hospital's construction, there would be potential for historical resources to survive such as post holes, underfloor deposits, cesspits, wells, outbuildings, and yard surfaces, as well as deposits associated with the nineteenth century subdivision.

71–73 Renwick Street, Redfern, Archaeological Assessment (Casey & Lowe 2015)

In 2015 Casey & Lowe assessed the potential of 71–73 Renwick Street Redfern. The history of the site was similar to other sites in Redfern, involving early land grants of Redfern Estate, mid-to-late nineteenth century residential subdivision, and late nineteenth century industrial use. The historical archaeological potential was assessed as high-to-moderate for remains associated with mid-to-late nineteenth century housing, particularly cesspits, wells, and cisterns. There was low-to-moderate potential for evidence related to the Redfern Estate, including the possibility of the study area containing the remains of a c.1830s butcher's operation.

4.2.4 Surry Hills

CBD and South East Light Rail, Heritage Impact Assessment and Archaeological Monitoring Report (GML 2013b, 2014)

The 2013 assessment prepared by GML stated that there was moderate potential for remains relating to the residential development following the 1855 subdivision of Cleveland House Estate to be present in the Surry Hills precinct, as well as remains associated with the early alignment of Devonshire Street. They assessed the potential for evidence of early land grants as nil-to-low, including pastoral or agricultural use associated with the Cleveland House Estate.

In 2013 and 2014, GML undertook archaeological monitoring in conjunction with geotechnical and subsurface utility service investigations as part of the CBD and South East Light Rail project. Archaeological monitoring was primarily undertaken in Zone 1 HAMUs (City Centre precinct), with archaeologists on call to investigate any historical archaeological evidence identified during works in Zone 2 and Zone 3 HAMUs. As the on-call archaeologists were not notified of any potential archaeological features in Zone 2 or 3 HAMUs, no monitoring was undertaken along the Surry Hills precinct (Devonshire Street West). As a result, their report does not provide any information on the subsurface profiles in the study area.

244 Cleveland Street, Surry Hills, Archaeological Assessment (Casey & Lowe 2016)

In 2016 Casey & Lowe prepared an archaeological assessment for the former Cleveland Street Primary School, recommending a programme of archaeological monitoring. The historical archaeological potential was assessed as low-to-moderate for evidence of early land clearance and cultivation associated with the use of the site as part of the government's Cleveland Paddock, with any evidence likely ephemeral in nature. There was moderate potential for the site to contain evidence of the original 1855 school building and parsonage, as well as a c.1865 brick oviform drain and earlier creek line.

New Children's Court, 66–78 Albion Street, Surry Hills, Historical Archaeological Excavation Report (Austral Archaeology 2017)

This historical archaeological excavation report documents the archaeological works undertaken by Austral Archaeology in 2015–2016 at the former Children's Court, located at 66–78 Albion Street, Surry Hills. Archaeological excavations were undertaken in two phases. Phase 1 preceded the demolition of the former Children's Court and investigated the western courtyard of the building complex, while Phase 2 was completed following the demolition and investigated the interior of the former children's court. Excavations in both areas of the site uncovered archaeological deposits and structures relating to the Sophia Terraces, a row of eight terraces constructed in the 1850s and demolished in 1910 for the construction of the former Children's Court. Remains from several phases of occupation were identified, with the dating of specific features attributed to either earlier phases based on the 1865 plan, or later phases based on the 1888 plan of the site. These included footings, cesspit deposits, yard deposits, and services. No material associated with the construction of the terraces was found.

202-210 Elizabeth Street, Surry Hills, Archaeological Salvage Excavation, Interim Report (Extent Heritage 2019a)

In 2019 Extent Heritage carried out archaeological monitoring and salvage at 202–210 Elizabeth Street after undertaking an assessment ahead of the construction of a boarding house and retail

development. Salvage excavation revealed that evidence for the Brickfields and early land grants at the site was restricted to modifications made to the natural soil profile, with the discovery on an erosion scar associated with vegetation clearance. Due to the widening of Elizabeth Street (c.1914 to 1918), the site contains only the rear portions and yard areas of nineteenth and early twentieth century structures. Excavation uncovered domestic assemblages and structural remains dating to both the early residential subdivision (1831–1845) as well as the later residential in-fill (1845–1880) including outbuildings, a brick-lined well, a cistern, multiple privies, and the brick and sandstone footings of cottages. The remains of massive brick footings were the only remains associated with the construction of a series of residential and commercial terraces in the subsequent phase during the sites transition into a commercial area (1880–1913). Excavation also revealed that the development in this later phase removed a significant portion of earlier deposits and structures. Overlying the terraces was a thick demolition deposit associated with their removal in 1913.

4.3 Phases of development

Based on the historical research undertaken to date the following broad historical phases of site development could be identified:

- Phase 1 (1793–1853): Early land grants and industry;
- Phase 2 (1854–1920): Industry and Suburbanisation; and
- Phase 3 (1921–present): Twentieth century development.

Historical development undertaken during each phase with the likelihood to result in creation or destruction, of historical archaeological evidence is discussed here.

4.3.1 Phase 1 (1793–1853) Early grants and development

In the decades following British colonisation of New South Wales, land grants were made beyond the early Sydney settlement. The study area crosses over parts of the following grants made between 1793 and 1825:

- 1793: 190 acres to Captain Joseph Foveaux in Surry Hills;
- 1794: 94 acres to John Palmer in Surry Hills and 30 acres to William Roberts in Redfern;
- 1809: 10 acres to Charles Smith in Surry Hills, who cultivates the property as a market garden or nursery;
- 1816: William Roberts' grant is incorporated into a 100-acre grant to Dr William Redfern in Redfern;
- 1823: Daniel Cooper acquires Smith's grant in Surry Hills and builds Cleveland House, which is used for residential purposes until the 1850s;

- 1825: 185-acre grant to John Thomas Campbell, and a 1400-acre grant to William Hutchinson, both in Waterloo; Waterloo Mill, including the damming of Sheas Creek, is built in 1820; and
- 1829: Daniel Cooper acquires Hutchinson's grant, including Waterloo Mill.

The properties listed above are noted as having all or part of the land cleared in the years immediately after the grants were made and, besides those described in more detail below, none of the aforementioned properties are noted to have had structures built on them during this phase.

Charles Smith's grant was reportedly used as a market garden or nursery during his ownership. There is no record that Smith lived on his grant. Archaeological remains associated with the development of the land for cultivation and ephemeral structures associated with use as a market garden or nursery, such as postholes, plough lines or furrows within the soil profile and evidence for drainage or irrigation trenches, are unlikely to survive within the archaeological record.

Cleveland House was constructed between 1823 and 1824. Plans from the 1850s indicate that the house and outbuildings were located to the west of the study area. The house and outbuildings were partially surrounded by a boundary wall that extended across the study area on an east-to-west orientation, and an entrance road that approached from the north, crossing the study area at the present-day intersection of Bedford and Buckingham Streets. Archaeological evidence might include structural remains of unrecorded buildings associated with this phase of use, indicated by stone, timber, or brick footings. Ancillary structures might include wells, cesspits, privies, workshops, cisterns, and sheds. There is also potential for landscaping evidence such as paved areas or paths, gardens, and drains. Sealed artefacts might be anticipated in rubbish pits cut and filled in yard spaces, as fill within wells, cesspits, cisterns, and drains, and as deposits accumulated in gardens, yards, and on floor surfaces.

Damming of Sheas Creek to provide a water supply to Waterloo Mill, to the south-west of the southern end of the study area, likely took place in conjunction with the mill construction in 1823. The study area falls within the eastern extent of the dam. Archaeological evidence associated with establishment of the dam would be limited to evidence of sedimentation within the soil profile.

4.3.2 Phase 2 (1854–1920): Industry and Suburbanisation

In the mid-nineteenth century the early estates began to be broken up through subdivisions. Subdivision also led to the establishment of new streets and roads, creating the suburbs we recognise today, and the introduction of services such as sewerage and water.

The following development was identified in the study area in Phase 2:

- Streets across the study area are established in conjunction with the subdivision of the early grants. The construction and use of the streets and roads during this phase is likely to have impacted on archaeological evidence resulting from earlier phases of use.

- In 1856, construction of Apple Tree Public House at 78 Albion Street began. An 1865 map of the area indicates that a wooden structure was built at the rear of the Albion Street-fronting main structure, within present day Albion Lane. Georeferencing of the 1865 Trigonometrical survey indicates that the timber structure is located on the edge of the present study area. With discrepancies in nineteenth century plans it is possible that the structure is located 1-2 metres further north or south. Archaeological evidence associated with the pre-1865 timber building at the rear of 78 Albion Street may include structural remains (brick or stone footings, post holes, wall slots), yard surface, fence lines (postholes), and subsurface features (wells, cesspits, or cistern).
- Pre-1865, a brick structure to the north-west of the timber structure at the rear of 78 Albion Street was built. Similarly to the timber structure noted above, georeferencing of the 1865 Trigonometrical survey indicates that the brick structure is located on the edge of the present study area. With discrepancies in nineteenth century plans it is possible that the structure is located 1-2 metres further east or west. Archaeological evidence associated with the pre-1865 brick structure may include structural remains (brick or stone footings), yard surface, fence lines and subsurface features (well, cesspits or cistern).
- Pre-1865, sewers and water mains are marked within the study area along Albion Street, Little Albion Street, Rutland Street, and Buckingham Street. A small waterway is also marked running beneath Buckingham Street, alongside the sewer line. Archaeological evidence of the sewer and waterway may survive in the form of brick-built drain structure, evidence of trenching in the soil profile and a stone or brick culvert structure.
- Between 1882 and 1891, the Sydney Tram network is established through parts of the study area: Elizabeth Street, Cleveland Street, and Redfern Street. Remnant tram infrastructure, while of historical interest, is not considered an archaeological relic under the Heritage Act.
- In 1920, the Sheas Creek Stormwater Channel was constructed down Allen Street. The channel connected to the Sheas Creek Canal, and was created through the excavation of a trench and construction of a concrete drain. It would have significantly impacted archaeological remains from previous historical phases.
- Following the breakup of Cooper Estate and cessation of operations at Waterloo Mill c.1900, the Waterloo Dam is backfilled. The dam was likely backfilled with mixed fills and rubbish.
- During this phase, infrastructure such as underground electrical services, electrical poles, guttering and stormwater services, municipal sewerage and water, and underground telecommunication infrastructure would have been installed in areas across the study area, sometimes impacting archaeological remains from previous phases.
- Archaeological evidence associated with the pre-1865 timber building at the rear of 78 Albion Street and the brick structure to the north-east may include structural remains (i.e., brick or stone footings, post holes, and wall slots), yard surface, fence lines (postholes), and subsurface features (wells, cesspits, or cisterns).

4.3.3 Phase 3 (1921–present) Twentieth century development

- In 1934, the Potts Hill to Waterloo Pressure Tunnel was completed. The tunnel crosses over the present-day study area on Pitt Street, north of McEvoy Street. As the tunnel was constructed at a depth of between 15m and 67m below ground surface, there is no archaeological potential for the tunnel or evidence of the tunnels construction to be uncovered within the study area as it would be at a greater depth than the proposed works.
- In 1939, zig-zag trenches were excavated at the southern end of Pitt Street, north of Allen Street. The excavation would have involved a deep trench and shoring. Backfilling of the trenches in 1945, at the end of World War II, is likely to have been done with rubbish and imported fill.
- The Sydney tram network ceased operation in 1961, and the tram tracks and lines were consequently removed. The bedding for the tram tracks, in the form of concrete blocks and gravel, is likely to remain, but is not considered archaeologically significant.
- The c.1945 construction of Little Albion Street and the continuation of Pitt Street may have impacted archaeological evidence from previous historical phases.

4.4 Summary of historical archaeological potential

The study area has been subject to historical development since at least 1793, when the first historical land grants were made and land clearing commenced. While modern development may have resulted in localised impacts to archaeological evidence, archaeological evidence may have been truncated but not entirely removed within the roadways. Four areas of archaeological potential across the study area were identified.

At the southern extent of the study area, there is high potential for archaeological remains associated with the establishment of the “Little Waterloo Dam” (Phase 1 1793-1853), Sheas Creek Water Channel (Phase 2 1854-1920) and a “zig-zag” anti aircraft trench (Phase 3 1921-present).

Crossing through the study area on Pitt Street, to the north of McEvoy Street, there is nil-low archaeological evidence associated with the construction of the Potts Hill to Waterloo Pressure Tunnel. While the SHR curtilage of the item appears to cross over with the study area, the boundary is limited to within 3m of the tunnel which is located between 15m and 67m below ground level, and as such, would not be crossed during the proposed works. The tunnel was constructed below ground level with several shafts, located outside of the study area, excavated to provide access from the ground level.

Within Buckingham Street, between Rutland and Cleveland Streets, there is nil-low potential for archaeological remains associated with Charles Smith’s property, and low to moderate potential for historical archaeological evidence associated with the development of Cleveland House (Phase 1 1793-1853), located within Buckingham Street. There is also moderate potential for archaeological remains associated with sewer lines and a waterway indicated on the 1856 Trigonometrical survey (Phase 2 1854-1920) within Buckingham Street and a sewer within Rutland Street.

At the northern extent of the study area, along Albion and Little Albion Streets, there is low-moderate potential for archaeological remains associated with the establishment and occupancy of a brick structure and a timber structure and the establishment of sewer and water lines, identified on the 1865 Trigonometrical survey (Phase 2 1854-1920).

In three areas across the study area, on Cleveland Street, Elizabeth Street and Redfern Street tram networks were established in c.1891 (Phase 2 1854-1920). There is moderate potential for remains associated with the tram line to be present in these areas.

Table 4, below, lists the potential archaeological remains from all phases of historical development with summarised formation process which may have affected the survival of those relics. Their likelihood of survival is graded in accordance with the following classification: Nil-Low, Moderate, and High. Four areas containing potential archaeological features have been mapped below (Figure 45 to Figure 48).

Table 4. Summary of historical archaeological potential

Phase	Site feature or site activities	Potential remains	Location	Level [or likelihood] of survival
1: (1794–1853)	Land clearing	Tree boles Wash deposits	Entire Study area	Nil-to-low
	Charles' Smith property	Ephemeral or temporary agricultural structures Fence lines (postholes) Plough lines and palynological evidence Isolated artefacts resulting from loss or discard	Buckingham Street, between Cleveland and Rutland Streets	Nil-to-low
	Little Waterloo Dam	Sedimentation evidence within the soil profile	Southern end of study area, Allen Street	Moderate
	Cleveland House	Boundary wall footings, sandstock brick and/or stone	Buckingham Street, between Cleveland and Rutland Streets	Moderate
Gravel surface of entrance road. Unrecorded outbuildings Landscaping evidence including gardens, paths or drains		Buckingham Street, between Cleveland and Rutland Streets	Low	

Phase	Site feature or site activities	Potential remains	Location	Level [or likelihood] of survival
2: (1854–1920)	Road construction	Road surfaces, potentially including gravel, wood block paving, concrete, and bitumen	Entire study area	Moderate-to-extant
	Construction of pre-1865 timber structure	Brick or stone footings, postholes and wall slots Yard surface, fence lines Subsurface features such as wells, cesspits or cisterns built from stone or brick	Rear of 80 Albion Street	Moderate
	Construction of pre-1865 brick structure	Brick or stone footings Yard surface, fence lines Subsurface features, such as wells, cesspits, or cisterns built from stone or brick	33–35 Ann Street	Low
	Pre-1865 sewer line, waterway, and water main	Brick sewer lines A small waterway, potentially including a culvert beneath roadway Water main with fireplugs	Buckingham Street, between Belvoir and Cleveland Streets, Albion Street, and Little Albion Street	Moderate
	Establishment of Sydney tram network	Tram track bedding, concrete blocks and gravel	Elizabeth Street, Cleveland Street, and Redfern Street	Moderate

Phase	Site feature or site activities	Potential remains	Location	Level [or likelihood] of survival
	Backfilling of Waterloo Dam	Rubbish dumping and fill deposits	Allen Street and Pitt Street intersection	High
	Construction of Sheas Creek Stormwater Channel	Concrete drain	Allen Street	High
3: (1921–present)	“Zig-zag” anti-aircraft trenches	Earthen embankments Shoring Rubbish dumping and fill deposits	South end of Pitt Street, at intersection with Allen Street	High

EXTENT

HERITAGE ADVISORS

Waterloo to Surry Hills

- Waterloo to Surry Hills Route
- Historical elements

Archaeological potential

- High

Historical element description

- A.** c.1920 Sheas Creek Stormwater Channel
- B.** Pre-1883 configuration of Little Waterloo Dam
- C.** Pre-1942 anti-aircraft trench

Drawn by: Mariska Marnane
Checked by: Francesca McMaster
Date: 26 April 2022
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, Nearmap

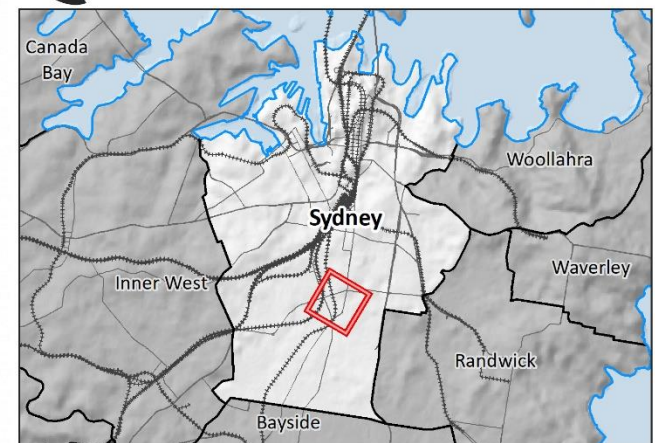
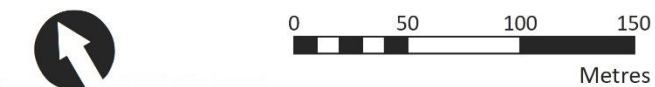


Figure 45. A graphic representation of archaeological potential identified at the southern end of the study area, in the vicinity of Allen and Pitt Streets.

EXTENT

HERITAGE ADVISORS

Waterloo to Surry Hills

- Waterloo to Surry Hills Route
- Waterloo to Surry Hills Alternate Route
- Historical elements

Archaeological potential

- High
- Moderate
- Low

Historical element description

- A.** c.1891 Elizabeth Street tramline
- B.** Pre-1865 Sewer line
- C.** Pre-1855 Cleveland House boundary wall
- D.** Pre-1855 Cleveland House garden
- E.** Pre-1855 Cleveland House entrance road
- F.** Pre-1865 waterway and sewer line

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Checked by: Francesca McMaster
Date: 26 April 2022
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, Nearmap

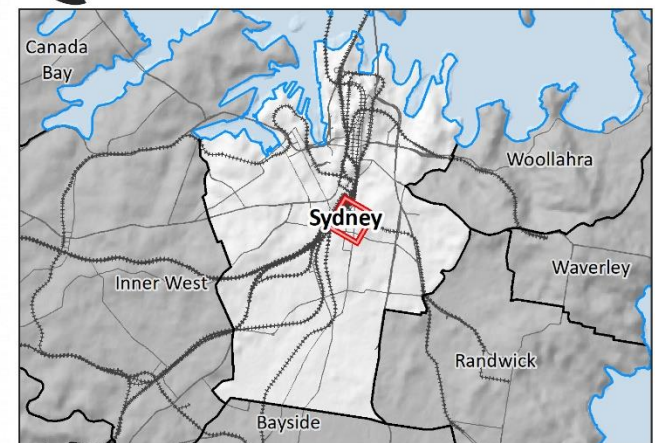
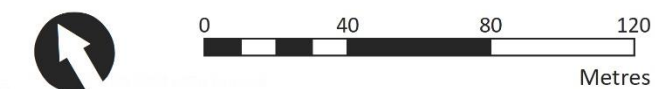


Figure 46. A graphic representation of archaeological potential identified along Buckingham and Rutland Streets, between Cleveland and Devonshire Streets.

EXTENT

HERITAGE ADVISORS

Waterloo to Surry Hills

- Waterloo to Surry Hills Route
- Waterloo to Surry Hills Alternate Route
- Historical elements

Archaeological potential

- High
- Moderate
- Low

Historical element description

- A. Pre-1865 sewer lines
- B. Pre-1865 water main and fire plugs
- C. Pre-1865 timber structure
- D. Pre-1865 brick structure

Drawn by: Mariska Marnane
Checked by: Francesca McMaster
Date: 26 April 2022
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, Nearmap

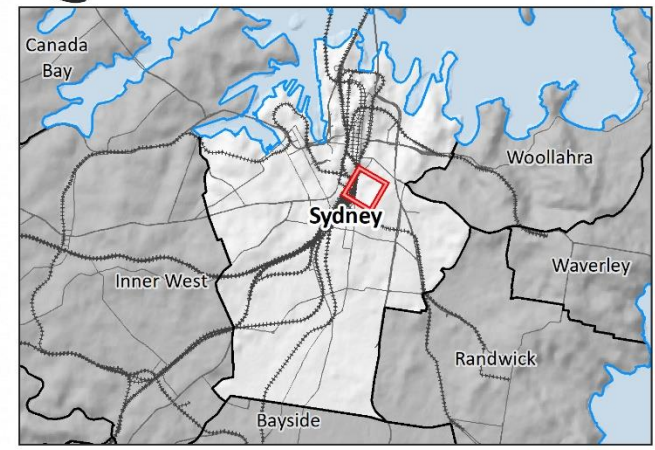


Figure 47. A graphic representation of archaeological potential at the northern end of the study area, along Albion and Little Albion Streets.

EXTENT

HERITAGE ADVISORS

Waterloo to Surry Hills

- Waterloo to Surry Hills Route
- Waterloo to Surry Hills Alternate Route
- Historical elements

Archaeological potential

- High
- Moderate
- Low

Historical element description

- A. c.1891 Elizabeth Street tramline
- B. c. 1891 Cleveland Street tram line
- C. c. 1891 Redfern Street tram line

Drawn by: Mariska Marnane
Checked by: Francesca McMaster
Date: 26 April 2022
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, Nearmap

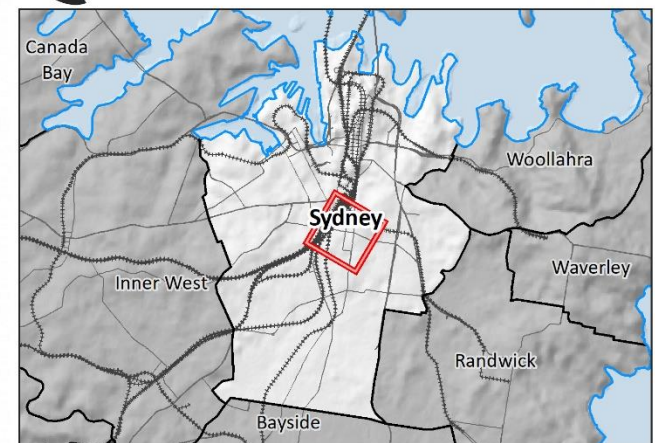
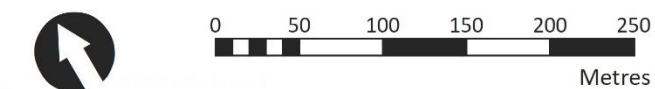


Figure 48. The fourth and final map of archaeological potential showing the three areas where the tram network crossed over with the study area.

5. Assessment of historical archaeological significance

5.1 Basis for assessment

Archaeological significance refers to the heritage significance of known or potential archaeological remains. While they remain an integral component of the overall significance of a place, it is necessary to assess the archaeological resources of a site independently from aboveground and other heritage elements. Assessment of archaeological significance is more challenging, as the extent and nature of the archaeological features is often unknown, and judgment is usually formulated on the basis of expected or potential attributes.

5.2 NSW heritage criteria for assessing significance related to archaeological sites and relics

The following significance assessment of the subject area's archaeological resource is carried out by applying criteria outlined in the publication 'Assessing Significance for Historical Archaeological Sites and 'Relics', prepared by the Heritage Branch, formerly Department of Planning (NSW) (now Heritage NSW, Department of Premier and Cabinet) in December 2009.

5.2.1 Archaeological research potential (NSW Heritage Criterion E)

Archaeological evidence associated with the yard, boundary wall, and entrance road of Cleveland House has low research potential for its ability to provide new information regarding the development of Cleveland House gardens, entrance road and yard area. Archaeological remains may provide information on the development of the house during Phase 1 (1794–1853) and occupancy of the house by the Coopers in the years after construction was completed in 1824. This information could further enhance our knowledge of the early period of occupancy. Archaeological evidence associated with the development of Cleveland House in Phase 1 would be of local significance under this criterion.

Historical maps indicate that the southern end of the study area falls within an area that formed part of a dam for Waterloo Mill, built in 1823. Archaeological evidence pertaining to the dam would be limited to sedimentary evidence within the soil profile. This information would have limited research potential. Archaeological evidence associated with the damming of Sheas Creek during Phase 1 is unlikely to meet the threshold for significance under this criterion.

The pre-1865 timber structure at the rear of 80 Albion Street is associated with the Apple Tree public house. While the purpose of the rear structure is uncertain, structural remains would provide insight into its construction, and artefacts from sealed deposits could inform our understanding of the use of the structure, as well as potentially shedding light on the class, gender, age and ethnicity of those who used the building. The building also has potential to provide information about the development and operation of the Apple Tree public house.

Archaeological evidence associated with the timber structure from Phase 2 (1854–1920) would be of local significance under this criterion.

Archaeological remains of a pre-1865 brick structure, located at the northern end of the study area, would provide insight into local development and provide information as to what activities were taking place on the site at this time. Structural remains would inform our understanding of the construction of the building and its possible use, and artefacts from sealed deposits would provide insight into the use of the building. Archaeological remains of the brick structure from Phase 2 (1854–1920) would be of local significance under this criterion.

Phase 2 (1854–1920) development of municipal services including the establishment of streets, installation of sewers, water mains, Sheas Creek Stormwater Channel, and establishment of tram tracks throughout the study area may provide limited additional information on the layout of early services in the area, but not beyond what is generally well understood in terms of the development of municipal services in Sydney.

While the Pressure Tunnel, built in 1934 (Phase 3) from Potts Hill to Waterloo, is of State significance, excavation associated with the proposed works would not be in proximity to the tunnel structure itself or the SHR boundary and as such there is no potential for archaeological remains to be uncovered which may provide any new information on the tunnel that is not already available through other sources.

Archaeological remains of the “zig-zag” anti-aircraft trenches may provide insight into local response to perceived threat during World War II, and protections afforded residents of the area. However, this information is readily available through written records and it is unlikely that new information could be learnt through their excavation.

5.2.2 Associations with individuals, events or groups of historical importance (NSW Heritage Criteria A, B, and D)

Archaeological evidence associated with Cleveland House has associations with emancipated convict turned successful merchant, Daniel Cooper and his family, who built the house and resided in it following its completion in 1824. However it is unlikely that specific evidence relating to individuals or families will be able to be ascertained from any remains. Archaeological evidence associated with the occupation of the site during Phase 1 (1793–1853) would be unlikely to meet the threshold for significance under this criterion.

While the Pressure Tunnel (Phase 3) has social significance for its contribution to the growing population of Sydney through providing water supply, the proposed works will not expose the tunnel itself as it is between 15 and 67m below ground level. As such, there is no potential for archaeological remains associated with the tunnel to be uncovered.

No further significant associations were identified within the study area. The remainder of the identified archaeological resource is unlikely to meet the threshold for significance under this criterion.

5.2.3 Aesthetic or technical significance (NSW Heritage Criterion C)

Prior to excavation, it is difficult to determine if archaeological remains would meet this criterion, as the level of preservation is unknown. It is not possible to assess this criterion fully with regard to aesthetic characteristics prior to excavation occurring.

The Pressure Tunnel is recognised for its technical achievements in the early nineteenth century and as being the third largest tunnel of its kind in the world. However, considering the depth of the tunnel below ground surface, there is no potential for archaeological remains associated with the tunnels technical attributes to be uncovered within the study area. No other significant technical advances were identified as having occurred within the study area. The anticipated archaeological resource is unlikely to meet the threshold for significance under this criterion.

5.2.4 Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F, and G)

The archaeological potential of the study area has the ability to demonstrate the development of the area, from an outer 'bush' area of Sydney to large-scale industrial area and lastly to bustling inner-city suburbs.

Further understanding of the development of Cleveland House gardens and entrance road and the use and occupation of the pre-1865 timber and brick structures at the northern end of the study area would shed light on the development of the area more generally as well development of the individual sites. Archaeological remains associated with Cleveland House from Phase 1 (1793–1853) and the pre-1865 timber structure and the pre-1865 brick structure from Phase 2 (1854–1920) would be of local significance under this criterion.

While the Pressure Tunnel itself is significant under this criterion, it will not be exposed during the proposed works as it is located between 15 and 67m below ground level.

5.2.5 Bickford and Sullivan's questions

The above NSW Heritage Criteria are supplemented by the established assessment framework developed by Anne Bickford and Sharon Sullivan (1984), who established three fundamental questions that assist in determining the research potential of an archaeological site. These three questions have been used to aid in the assessment of significance for the study area.

5.2.5.1 *Can the site contribute knowledge that no other resource can?*

The grounds of Cleveland House, including an entrance road, boundary wall and potential gardens, may provide additional information concerning the development of the House and surrounds that has not been recorded in written records or on historic maps.

The pre-1865 timber and brick structures could provide information on the use and occupation of the structures that is not presently available through the written record.

5.2.5.2 Can the site contribute knowledge that no other site can?

Information concerning the development the grounds of Cleveland House would be unique to the site. General information concerning the development of the area and the development of Gentleman's Estates in NSW in the early nineteenth century would not be unique to this site.

The site of the two pre-1865 structures may provide insight into development of the area and specific information concerning the development and use of the two buildings. The site would not, however, provide information concerning the development of the Surry Hills area that is not available at other sites.

5.2.5.3 Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

Due to the limitations in the size of the study area and the disturbance that has taken place through subsequent development of the study area, it is unlikely that potential archaeological evidence from the grounds of Cleveland House or the pre-1865 structures would have the ability to contribute to significant additional information regarding the early settlement of Redfern and Surry Hills or Sydney more generally. While the Pressure Tunnel is relevant to technical development in Australia, the tunnel is located 15m to 67m below the ground surface and will not be exposed during the proposed works.

5.3 Summary Statement of Significance

The archaeological significance of the study area is principally associated with the development and occupation of the grounds of Cleveland house, namely a boundary wall, entrance road and garden area in Phase 1 (1793–1853) and the two pre-1865 structures at the northern extent of the study area from Phase 2 (1854–1920).

Archaeological remains associated with the development of Cleveland House grounds have the potential to enhance our understanding of the use and development of the land immediately surrounding Cleveland House. Sealed artefact deposits would help inform our understanding and knowledge of the site, and the changes it underwent from construction in 1823 to subdivision in 1855.

The development of the pre-1865 brick and timber structures at the northern end of the study area has potential to survive in the form of structural and artefactual remains. Archaeological remains associated with the structures would help inform our understanding of the mid-nineteenth century period of development in Surry Hills, the operation of a public house in the area and shed light on the use and purpose of the two structures.

Archaeological remains associated with the development of Cleveland House and the pre-1865 structures are likely to be of local significance.

The SHR boundary for the Pressure Tunnel is not located within the study area as it only extends 3m around the tunnel structure, which is located 15m to 67m below the ground level. As such no archaeological evidence of construction nor the tunnel itself will be exposed during the proposed works.

Archaeological evidence of the “zig-zag” air raid trenches would have limited potential to provide significant information as the simple construction technique and their presence at a number of sites across the Sydney metropolitan area would have limited ability to offer additional information.

Other potential archaeological remains identified, mainly associated with the establishment of municipal services including sewerage, water mains, roadways, stormwater channels and tram tracks, and the establishment of the Waterloo dam and “zig-zag” anti-aircraft trench, would be considered ‘works’ under the heritage act as they have limited potential to provide further information than what is provided within the historical record. These items do not have archaeological significance.

6. Potential historical archaeological impact

6.1 Potential development impacts

Ausgrid proposes to undertake a cable replacement project from the Zetland Substation, Allen Street Waterloo, to the Surry Hills Substation, via Little Albion Street or Ann Street as an alternate route, Surry Hills. The proposed route will extend through the suburbs of Waterloo, Redfern, and Surry Hills for approximately 3.2 km. Except for two small sections of the route, the proposed works will require mechanical excavation of a trench with an approximate width of 1400 mm and depth of 1300 mm. The trench will typically be aligned within the roadway, subject to technical requirements and existing services. The trench will have plastic conduits laid within it and provision for two additional conduits will be made. The trench will then be backfilled, and the road made good.

The two areas along the route that will not require trench excavation are a length of the route from the northern end of Greater Buckingham Street to the southern end of Buckingham Street, across Cleveland Street, here the conduit will be laid via under boring. From Rutland Street to Holt Street, the new conduit will connect with an existing line, therefore trenching will not be required in this area (Figure 49).

The nature of the works will result in the total removal of any archaeological materials within the proposed route.

6.2 Potential archaeological impact

This assessment has identified two areas of archaeological sensitivity.

Area 1, located on Buckingham Street has low to moderate potential for historical archaeological relics of local significance, associated with the development of the grounds, entrance road and boundary wall of Cleveland House (Figure 51). It is likely that excavation for the cable replacement trench will impact directly on the potential remains of the boundary wall, entrance road and the grounds of the house, which have been assessed to be of local significance.

The second area of sensitivity is located at the northern end of the study area, on Little Albion Street. Two pre-1865 structures have been identified here as having low-moderate potential to survive and to be of local heritage significance. Should the Little Albion Street route be chosen, excavation of the cable replacement trench through this area is likely to impact the potential remains of the timber structure on the southern side, and the brick structure on the northern side. If the alternate route, along Ann Street, is chosen there will be no impact on the two pre-1865 structures.

The SHR listed Pressure Tunnel and Shafts is located 15m to 67m below the ground surface. The SHR curtilage for the item extends 3m around the structure, therefore putting the study area outside of the SHR curtilage for the item. As such, the Pressure Tunnel will not be impacted by the proposed works which have a maximum depth of 1300 mm.

Evidence associated with nineteenth and twentieth century works, such as municipal services including roadways, sewerage, water mains, stormwater channels and tram tracks, and Waterloo dam and the “zig-zag” anti-aircraft trench, are likely to be impacted by the excavation of the cable replacement trench. These items have been assessed to have no archaeological significance and would comprise a ‘work’ rather than a ‘relic’ under the Heritage Act and as such provisions of the Act do not apply. These items do not require any mitigation of impact.

The areas proposed for the under boring commencing and concluding have been assessed to not contain any archaeological remains of significance.

6.3 Recommended mitigation measures

As the proposed works will not be excavated to the depth of the SHR boundary for the Pressure Tunnel (located on Pitt Street, north of McEvoy Street, 15m to 67m below ground level) the impact on the heritage significance of the item will be negligible. Therefore, a permit is not required to carry out works in the area directly above the SHR listed item.

Given the description of the proposed works and the potential archaeological remains of local significance identified within the vicinity of Cleveland House on Buckingham Street, the proposed works would be defined as minor works due to the size of the proposed trench for service installation and the area of impact being within grounds/gardens of Cleveland House as opposed to an area of high potential (such as a cesspit or footprint of a building). Additionally, the potential archaeological remains identified within the vicinity of Cleveland House are likely to survive in other areas surrounding Cleveland House, being a boundary wall, an entranceway and grounds. It is recommended that an S139(4) exception be applied for and the works proceed with caution. To mitigate risk of delay to the proposed works, it is recommended that excavation in this area is monitored by an archaeologist. The area of sensitivity and proposed monitoring zone is indicated in Figure 51.

An alternate route has been proposed at the northern extent of the study area, via Ann Street as opposed to Little Albion Street due to a congestion of services on Little Albion Street. Should this alternate route be chosen, there would be reduced impact on potential archaeological remains associated with two pre-1865 structures identified on Little Albion Street. It is recommended that the Ann Street route be considered over the Little Albion Street route if technically feasible, to minimise archaeological impacts.

The rest of the study area should be excavated under an Unexpected Finds Procedure, attached in Appendix A, to mitigate impacts on historical archaeological resources beyond the potential archaeology identified in this report. An Unexpected Finds Procedure allows works to proceed with caution in areas not identified as requiring monitoring.

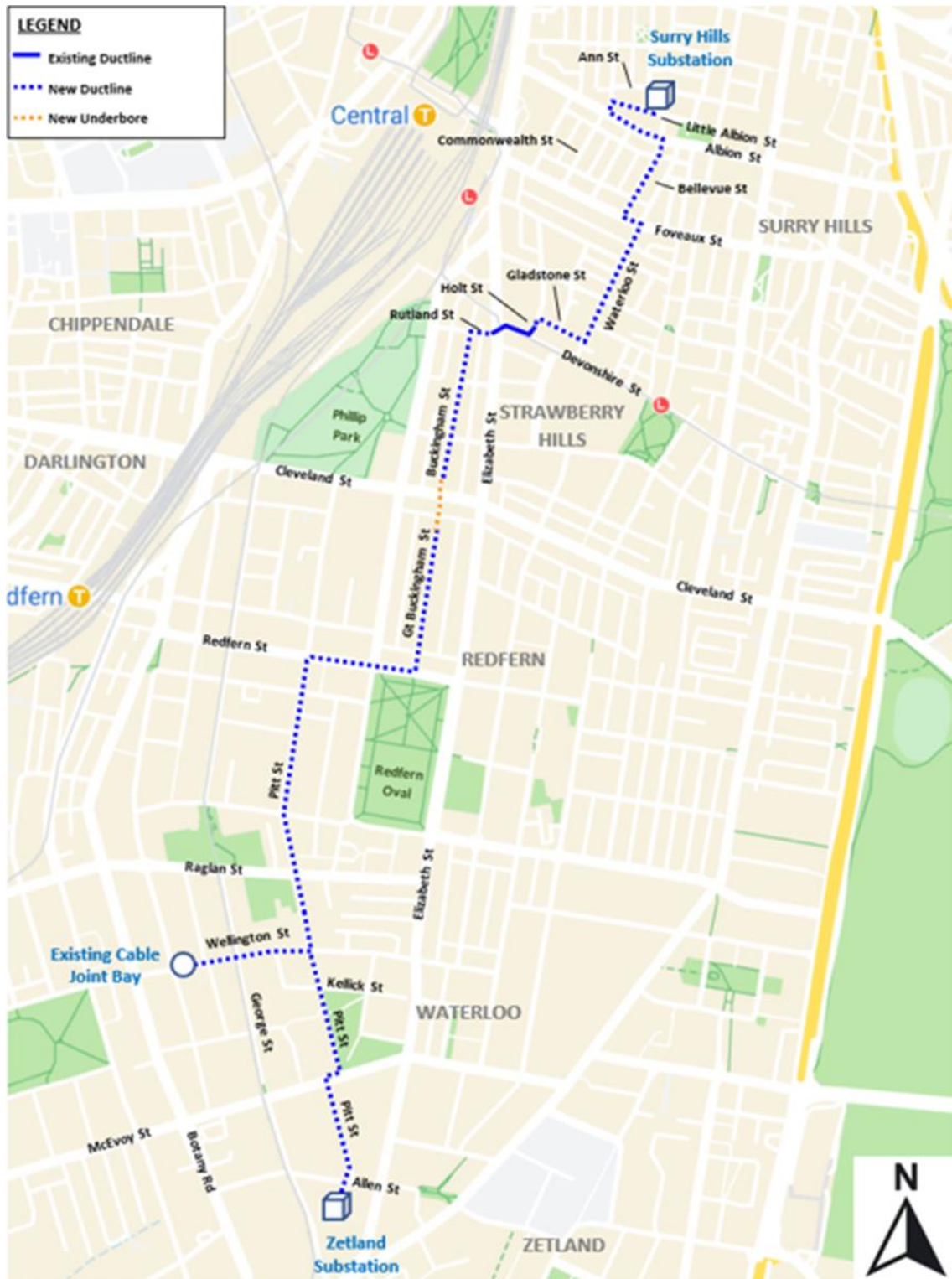


Figure 49. Graphic of proposed route of project. Source: Ausgrid.

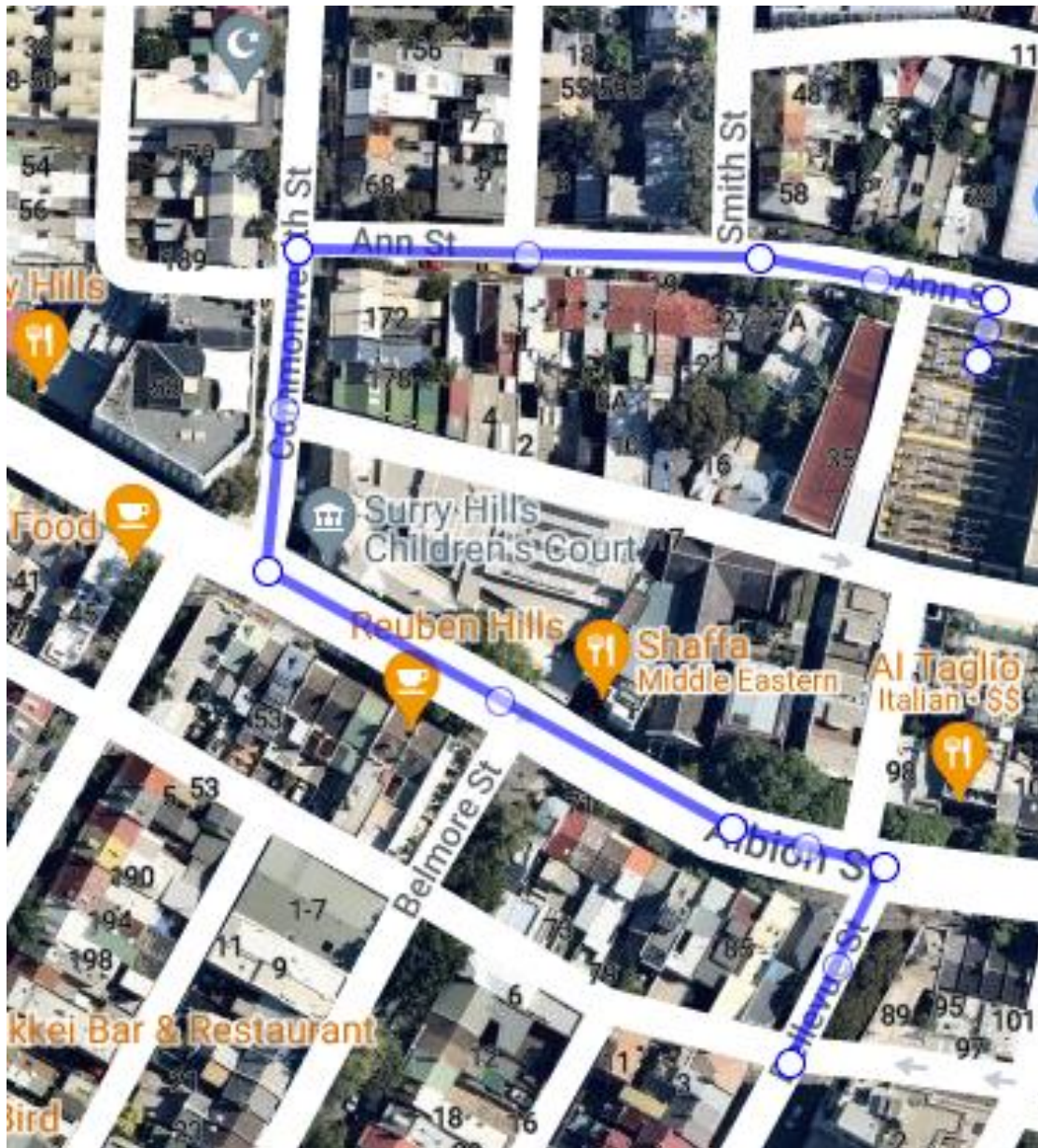


Figure 50. An alternate route proposed along Ann Street due to congestion of services along Little Albion Street. *Source:* Ausgrid.

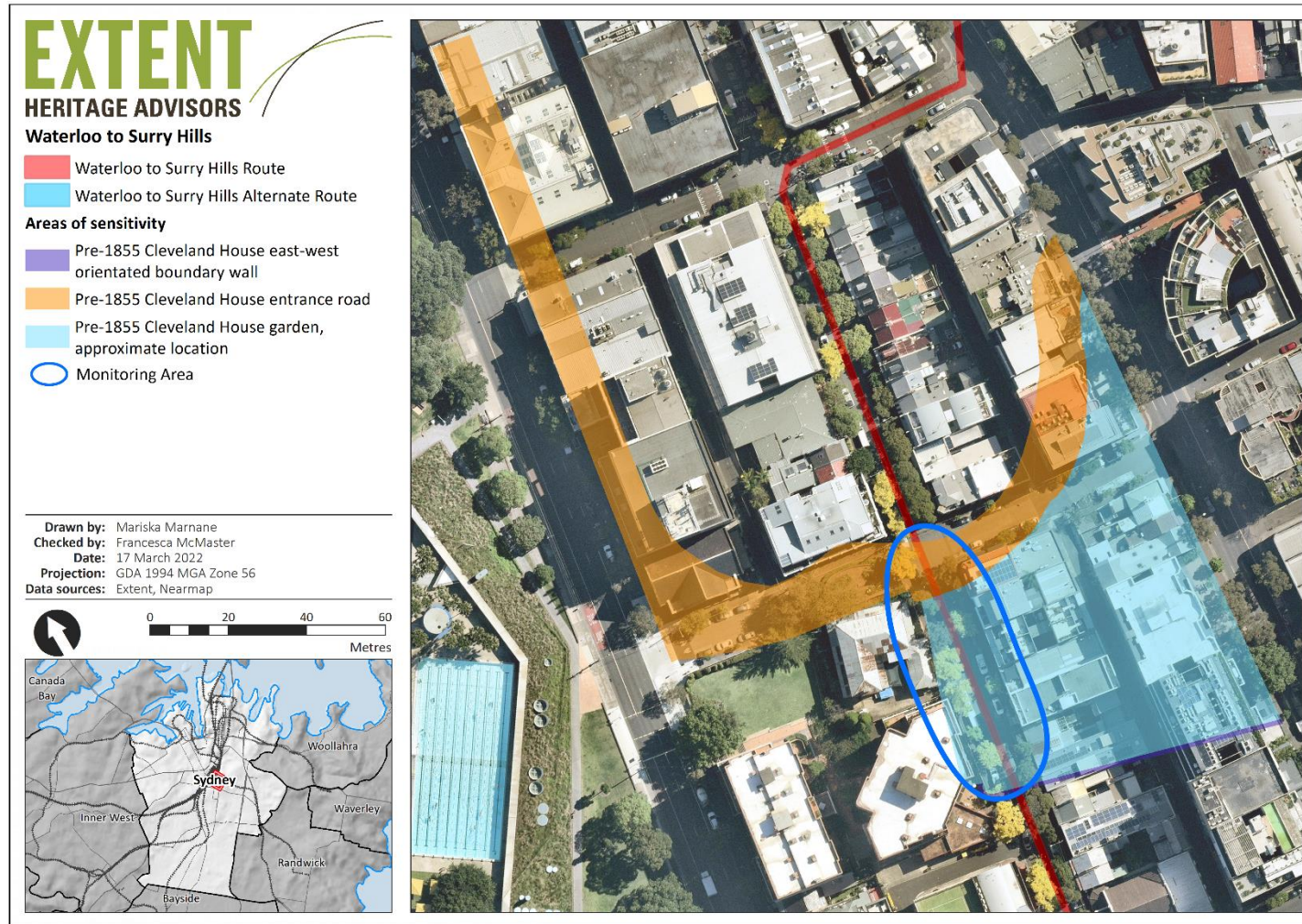


Figure 51. Area of archaeological sensitivity on Buckingham Street. The area has potential for archaeological remains assessed to be of local significance.

7. Conclusions and recommendations

7.1 Key findings and conclusions

- The study area encompasses approximately 3.2km length of roadway through the suburbs of Waterloo, Redfern and Surry Hills. At the northern extent of the study area two different routes are proposed; one via Little Albion Street and the other via Ann Street to conclude at the Surry Hills Substation.
- The study area is within the vicinity of the SHR boundary for the Pressure Tunnel and Shafts, which is located beneath the ground surface. The tunnel is located between 15m and 67m below the ground and the SHR boundary is within 3m of the tunnel structure. Therefore, the study area does not impinge the SHR boundary for the item.
- Across the length of the route, the study area crosses through several local conservation zones. The study area does not contain any heritage items listed on the SHR or the Sydney LEP.
- The proposed works involve excavation of a trench with an approximate width of 1400 mm and depth of 1300 mm. Cables will be laid within the trench before the trench is backfilled and the roadway made good. The nature of the ground disturbance will involve the total removal of any archaeological materials within the proposed route.
- The study area crosses through several land grants made during the first fifty years of the NSW colony. Development within the study area was mainly limited to land clearing and grazing in the early nineteenth century. At the southern end of the study area, Waterloo Mill was established in 1823. In the same year construction began on Cleveland House, to the west of present-day Buckingham Street. Development of Cleveland House pre-1855 included the establishment of an entrance road to the house, boundary walls around the houses and outbuildings, and grounds around the house.
- 1865 Trigonometric Survey plans indicate that two structures, one timber and one brick, had been constructed partially within the study area by 1865, located on present day Little Albion Street. Sewer lines and water mains were also present throughout the study area by 1865.
- At the end of the nineteenth century and into the twentieth century municipal services such as the Pressure Tunnel, tram lines, stormwater channels and “zig-zag” anti-aircraft trenches were established throughout the study area.
- Several areas of archaeological potential were identified within the study area. Two areas were assessed as containing potential archaeological remains of local significance; Cleveland House boundary wall, grounds and entrance road on Buckingham Road, and pre-1865 timber and brick structures on Little Albion Street.
- The proposed works have potential to impact on the potential locally significant archaeological resources within two areas along the study area. However, the proposed

alternate route via Ann Street rather than Little Albion Street will avoid one of these areas thereby resulting in no impact to the two pre-1865 structures. For the second area of potential archaeological remains of local significance on Buckingham Street, the proposed works are considered minor works as defined by Heritage NSW as they are for service installation, and the potential archaeological resource has been assessed as low to moderate potential.

7.2 Recommendations

On the balance of the evidence presented in this report, the likelihood of surviving archaeological remains of local significance to be present on the site is considered low to moderate. Based on this assessment the following recommendations are made:

- An area of archaeological potential of local significance has been identified within the study area on Buckingham Street, in association with Cleveland House. The potential archaeological resource identified includes a boundary wall, grounds and an entrance road. These features have low to moderate potential to survive and are likely to survive in areas beyond the study area. The proposed works, as service installation, are considered minor works. As such, it is recommended that an S139(4) exception be applied to undertake the works. Following best practice, and to ensure that works can proceed with minimal delays and risk, we recommend that the guidelines for exception 2(e) be followed and archaeological monitoring be undertaken during excavation of the area.
- In order to undertake monitoring of the proposed works in the area of sensitivity identified on Buckingham Street, an archaeological monitoring research design will need to be prepared. The research design will form the framework for the monitoring program to follow, including identifying research questions to consider during the archaeological investigations.
- To mitigate impacts on the potential archaeological resource identified in northern portion of the study area, it is recommended that the alternate route along Ann Street, as opposed to Little Albion Street, is taken to avoid impacts on potential archaeological remains associated with two pre-1865 structures on Little Albion Street.
- In the event that unexpected historical archaeological remains - not identified in this report - are discovered at the site, all works in this area should cease and Heritage NSW should be notified, in accordance with Section 146 of the Heritage Act. These remains would be assessed in a timely manner and a determination on management would be made in consultation with Heritage NSW.
- In the event that evidence of the Aboriginal occupation of the site is identified during any phase of onsite works, all works in the affected area should stop, the area adequately protected and OEH informed about the discovery under section 89(A) of the National Parks and Wildlife Act 1974.

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Appendix A. Unexpected Finds Procedure

Unexpected finds procedure

In the event that a potential heritage artefact/item/object/site is encountered during construction the following steps shall be taken.

- **STOP ALL WORK** in the vicinity of the find and immediately demark the area to protect the artefact/item/object/site.
- The Excavation Director is to record the details, take photos of the find and ensure that the area is adequately protected from additional disturbance.
- If the Excavation Director advises that the find is not a potential Aboriginal object or significant historical relic, work will recommence in consultation with the Site Supervisor.
- If the Excavation Director advises that the find is a significant historical archaeological item the affected area will remain protected from any further ground disturbance.
- The Excavation Director will notify Heritage NSW about the discovery under s146 of the Heritage Act. No further ground disturbance work would be allowed in the location of the discovery until a response from Heritage NSW has been received.

Procedure for discovery of possible human skeletal remains

- In the unlikely event that human remains are discovered in the course of the proposed work the protocols, the Site Supervisor/Manager must engage a forensic specialist to confirm the discovery and notify the NSW Police by calling '000' and the Office of the NSW State Coroner by calling '(02) 8584 7777'.
- Should the NSW Police determine the remains to not be of a criminal nature, the Excavation Director should notify Heritage NSW, DPC to determine if the remains are of Aboriginal ancestry. Heritage NSW and/or the Excavation Director in liaison with the Registered Aboriginal Parties would determine the most appropriate course of action, which may include deviation of the construction works, or the careful removal of the remains and reburial elsewhere.
- Should Heritage NSW determine the remains to be of historic ancestry, the most appropriate course of action, which may include deviation of the construction works, or the careful removal of the remains and reburial elsewhere, would be decided in consultation with the Site Supervisor/Manager and the Excavation Director.
- Should the remains determined to be of non-human origin, construction works may proceed.