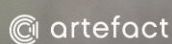


# Vaucluse Diamond Bay Ocean Outfalls Project

Statement of Heritage Impact

Report to GHD

March 2020



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## EXECUTIVE SUMMARY

In November 2018, the NSW Government announced its commitment to address the flow of untreated wastewater from three ocean outfalls at Vaucluse and Diamond Bay. To address this issue, Sydney Water proposes to construct and operate sewerage infrastructure at Vaucluse and Diamond Bay, which will redirect untreated wastewater through the wastewater network to the catchment of Bondi Wastewater Treatment Plant for treatment, mitigating the associated risks to water quality and public health. The location of the project and the existing outfalls is shown in Figure 1-1.

The project will include the construction and operation of the following key components:

- Sewage pumping station at Parsley Bay, Vaucluse (SP1216).
- Sewage pumping station at Eastern Avenue Reserve, Diamond Bay (SP1217).
- Wastewater mains connecting the pumping stations to the existing outfalls and network.

The two sewage pumping stations at Vaucluse and Diamond Bay would be constructed mainly below existing ground level. The wastewater mains would be constructed by a mix of open trenching and trenchless methods such as horizontal directional drilling or microtunneling.

During normal operation, the project will redirect untreated wastewater through the wastewater network to the catchment of Bondi Wastewater Treatment Plant for treatment. During wet weather, when the catchment is at full capacity, wastewater may continue to flow through ocean outfalls.

Artefact Heritage has been engaged by GHD on behalf of Sydney Water to provide a non-Aboriginal (historic) Statement of Heritage Impact (SoHI) for the project. The aim of this SoHI is to identify heritage items and archaeological remains which may be impacted by the project, determine the level of heritage significance of each item, assess the potential impacts to those items, recommend mitigation measures to reduce the level of heritage impact and identify other management or statutory obligations.

## Conclusions

The project is located within the curtilage of four heritage listed items:

- Oceanview Avenue Conservation Area (Waverley LEP 2012 C54)
- Sandstone Escarpment Conservation Area (Waverley LEP 2012 C37)
- Diamond Bay Outfalls (No. 1 & No. 2) (Sydney Water s170 SHI 4574204)
- Vaucluse Outfall (Sydney Water s170 SHI 4574203)

The project is located adjacent to or nearby nine heritage items:

- West Parsley Bay obelisk (Woollahra LEP 2014 I356, Sydney REP 2005 Item no. 44, Australian Underwater Cultural Heritage Database ID number. 10979)

- 3 Forest Red Gums, Sydney Pink Gum (Woollahra LEP 2012 I388)
- Vaucluse House (SHR 00955)
- Reservoir No 120 and Reservoir No 121 (RNE Item 102243)
- 1950s House (Waverley LEP 2012 I438)
- 1930s style bungalow (Waverley LEP 2012 I441)
- Electricity Substation No. 94 (Ausgrid s170 SHI 3430453)
- Parsley Bay Swimming Enclosure (RNE Item no. 103518)
- Suspension Footbridge (Woollahra LEP 2014 I386)

A total of four unlisted heritage items were also identified within or in close proximity to the study area during the site inspection for the project:

- Landscape modifications (chiselled stairs) in Parsley Bay Reserve (shown in Figure 5-43)
- Surveyors mark in Parsley Bay Reserve – (shown in Figure 5-43)
- Landscape modification (chiselled steps and doorway) along the Coastal Sandstone Escarpment, Dover Heights (shown in Figure 5-44)
- Sandstone kerbs along Carlisle Street, Rose Bay (shown in Figure 5-45)

#### Potential impacts to heritage listed items

Provided all mitigation measures are followed, the project would result in nil direct (physical) impacts and nil visual and vibration (indirect) impacts to the heritage significance of the following items:

- 3 Forest Red Gums, Sydney Pink Gum
- Vaucluse House
- Reservoir No 120 and Reservoir No 121
- 1950s House
- 1930s style bungalow

Provided all mitigation measures are followed, the project would result in minor (temporary) indirect (visual) impacts to the following item:

- Electricity Substation No. 94

The project would result in minor direct (physical) impact to the following item:

- Oceanview Avenue Conservation Area (road corridor)

The project would result in moderate indirect (temporary) visual impacts to the following items:

- Oceanview Avenue Conservation Area
- West Parsley Bay obelisk

The project would result in minor indirect visual impacts and minor (temporary direct impacts to the following item:

- Parsley Bay Swimming Enclosure

The project would result in negligible direct impacts and minor indirect visual impacts to the following item:

- Suspension Footbridge

The project would result in minor to moderate (direct) physical impacts and minor to moderate permanent indirect (visual) impacts to the following item:

- Sandstone Escarpment Conservation Area (Waverley LEP 2012 C37)

#### Potential impacts to unlisted heritage items

The project would result in minor to moderate (direct) physical impacts and minor to moderate permanent indirect (visual) impacts to the following unlisted heritage items of local significance:

- Landscape modification (chiselled steps and doorway) along the Coastal Sandstone Escarpment, Dover Heights (shown in Figure 5-44)

The project would result in minor to moderate (direct) physical impacts and moderate temporary indirect (visual) impacts to the following unlisted heritage item of local significance:

- Sandstone kerbs along Carlisle Street, Rose Bay (shown in Figure 5-45)

The proposed works would be located close to the following unlisted heritage items of local significance within the study area. Provided all mitigation measures are followed, the project would not directly impact the items:

- Landscape modifications (chiselled stairs) in Parsley Bay Reserve (shown in Figure 5-43)
- Surveyors mark in Parsley Bay Reserve – (shown in Figure 5-43)

#### Potential impacts to archaeological remains

The project would not impact potential archaeological remains within the study area as it has been assessed as containing nil archaeological potential (land within the construction footprint).

## Consultation

- As the works are located within the curtilage of, and in close proximity to, a number of local heritage items, Waverley and Woollahra Councils should be provided with this SoHI report for their consideration during the project's consultation phase.



## Mitigation measures and recommendations

The following mitigation measures and recommendations should be enacted to minimise heritage impacts during works.

- Any project redesign resulting in new ground disturbance or impacts to building fabric or the existing landscape must be assessed in an addendum to this SoHI
- All impacted areas should be reinstated as near as possible to their original appearance following the completion of works
- In order to reduce impacts to the heritage significance of the Sandstone Escarpment Conservation Area (Waverley LEP 2012 C37), it is recommended that:
  - An existing picket fence at Eastern Avenue proposed to be removed for the project would be retained or reinstated if feasible
  - Sandstone outcrops be protected and avoided where feasible
  - Evidence of landscape modification near 33 Kimberley Street and nearby properties along the sandstone escarpment coastal walk (as shown in Figure 5-44) be protected and avoided where feasible
- If impacts to unlisted sandstone kerbs along Carlisle Street are required for the project, they would be carefully removed, stored in a secure location and reinstated following the completion of works
- The design of proposed pumping stations would aim to be sympathetic to Parsley Bay Reserve and the Coastal Sandstone Escarpment Conservation Area's existing nature and designed to minimise physical and visual impacts towards these areas
- Direct impacts to an unlisted Surveyor's Mark identified within Parsley Bay Reserve during the site inspection for the project and shown in Figure 5-43 would be avoided during proposed path widening works. The item would be protected as per mitigation measures for listed and unlisted heritage items provided below
- Direct impacts to unlisted landscape modifications within the Coastal Sandstone Escarpment Conservation Area identified during the site inspection and shown in Figure 5-44 would be avoided during proposed works for the project where feasible. All landscape features would be protected as per mitigation measures for listed and unlisted heritage items provided below
- Prior to the commencement of works a heritage induction would be prepared for all contractors to complete. The induction would address significant fabric and heritage items (shown in Figure 3-1, Figure 5-43 - Figure 5-45) in the proximity of works. The induction would also stress that in the event significant fabric is impacted or archaeological remains are encountered, works must cease immediately, and the advice of an archaeologist and/or heritage consultant must be sought
- Areas of listed and unlisted significant fabric (shown in Figure 3-1, Figure 5-43 - Figure 5-45) would be identified to all site workers, and physically marked out with temporary hi-visibility markers if required. This includes unlisted heritage items identified in this document. These areas would be delineated with hi-visibility flagging and bollards where suitable, and any ground-

breaking work activity, storage of equipment, or vehicle parking would not occur within these zones

- During ground disturbing works, an unexpected finds procedure would be enacted. This procedure would consist of the following controls should unexpected archaeological finds or subsurface brick or sandstone heritage fabric be identified during works:
  - All work must immediately cease in the area of, and around, the location of the unexpected find
  - The contractor supervisor must notify the environmental manager for the project, and a qualified archaeologist must be notified
  - Should the unexpected find constitute a significant archaeological 'relic', work cannot continue in the area of location of the find until a S.146 Notification of the Discovery of a 'Relic' has been submitted to the NSW Heritage Division. Further approvals from the NSW Heritage Division may be required before works in this area can proceed.

## Document history and status

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
1	13/12/2019	Dr Sandra Wallace	Dr Sandra Wallace	13/12/2019	Internal review
2	17/01/2020	Dr Sandra Wallace	Dr Sandra Wallace	23/01/2020	GHD review
3	06/03/2020	Dr Sandra Wallace	Dr Sandra Wallace	10/03/2020	Mapping and impact updates

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<b>Project number:</b>	19174 Vaucluse Diamond Bay Ocean Outfalls Project
<b>Name of organisation:</b>	Artefact Heritage
<b>Document version:</b>	Final

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## ACRONYMS

Acronym	Definition
ARD	Archaeological Research Design
CBD	Central Business District
CHL	Commonwealth Heritage List
CMP	Conservation Management Plan
DCP	Development Control Plan
DPIE	Department of Planning, Infrastructure and Environment
EP&A Act	<i>Environmental and Planning Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
HMP	Heritage Management Plan
ICOMOS	International Council on Monuments and Sites
LEP	Local Environment Plan
LGA	Local Government Area
LRS	Land Records Services
NHL	National Heritage List
NLA	National Library of Australia
NSW	New South Wales
PAR	Photographic Archival Recording
REF	Review of Environmental Factors
REP	Regional Environment Plan
RNE	Register of National Estate
RNT	Register of the National Trust
SHI	State Heritage Inventory
SHR	State Heritage Register
SLNSW	State Library New South Wales
SoHI	Statement of Heritage Impact
TPZ	Temporary Protection Zone
WHL	World Heritage List



## 1.0 INTRODUCTION

### 1.1 Project background

In November 2018, the NSW Government announced its commitment to address the flow of untreated wastewater from three ocean outfalls at Vaucluse and Diamond Bay. To address this issue, Sydney Water proposes to construct and operate sewerage infrastructure at Vaucluse and Diamond Bay, which will redirect untreated wastewater through the wastewater network to the catchment of Bondi Wastewater Treatment Plant for treatment, mitigating the associated risks to water quality and public health. The location of the project and the existing outfalls is shown in Figure 1-1.

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- Wastewater mains connecting the pumping stations to the existing outfalls and network.

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Artefact Heritage has been engaged by GHD on behalf of Sydney Water to provide a non-Aboriginal (historic) Statement of Heritage Impact (SoHI) for the project. The aim of this SoHI is to identify heritage items and archaeological remains which may be impacted by the project, determine the level of heritage significance of each item, assess the potential impacts to those items, recommend mitigation measures to reduce the level of heritage impact and identify other management or statutory obligations.

The project is located within and near the curtilages of several heritage items listed on the Australasian Underwater Cultural Heritage Database, State Heritage Register (SHR), the Waverley Local Environment Plan (LEP) 2012, Woollahra LEP 2012, Register of the National Estate (RNE), Sydney Regional Environment Plan 2005 (Sydney REP 2005), Sydney Water s170 and Ausgrid s170 heritage registers.

### 1.2 Study area

The study area for the assessment encompasses land which will be subject to the installation of new pipelines (via trenching and directionally drilled pipelines), two new pumping stations (SP1216 and SP1217) and associated infrastructure required for the project, as shown in Figure 1-2. These works will take place below and above ground in the suburbs of Vaucluse, Dover Heights and Rose Bay, Sydney, NSW.

The study area is located within the Waverley and Woollahra local government areas (LGA), in the parish of Alexandria and county of Cumberland.

### 1.3 Limitations

The findings outlined in this document are based on historical research and field inspections. No physical archaeological investigation was undertaken during the preparation of this report.

Aboriginal cultural heritage assessment is beyond the scope of this report.

No private properties were accessed during the site inspection.

## 1.4 Authorship

This report was prepared by Sarah Hawkins (Heritage Consultant) and Adele Zubrzycka (Senior Heritage Consultant) with input and review provided by Dr Sandra Wallace (Director).

## 1.5 Acknowledgements

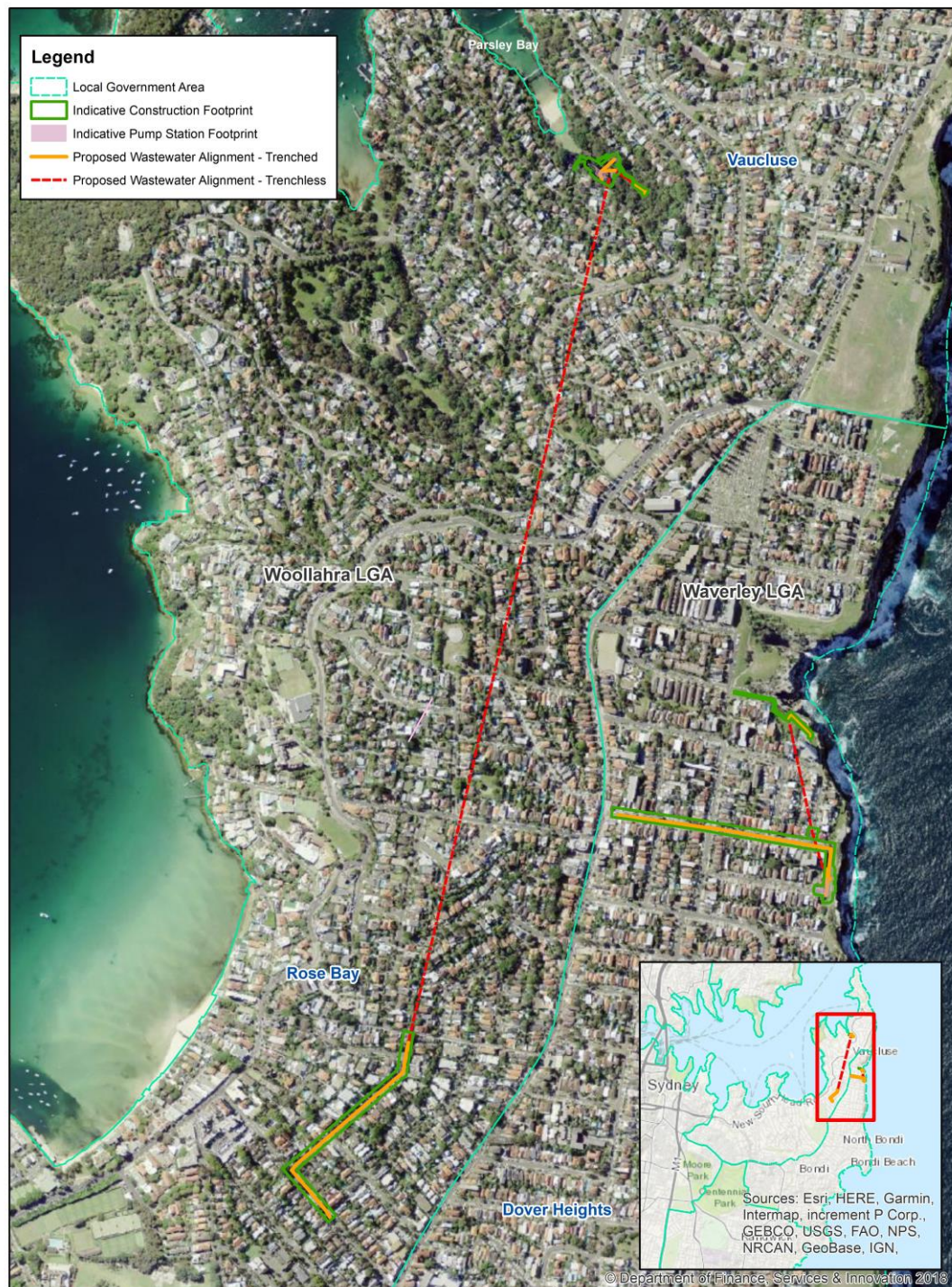
The authors would like to acknowledge the assistance of:


- Michael Goodall (Environmental Planner, GHD)
- Shona Lindsay (Heritage Officer, Woollahra Council)



Figure 1-1. Location of the project, study area and existing ocean outfalls at Diamond Bay.  
Source. GHD.





 **Study area**  
19174 Vaclude Diamond Bay Outfalls SoHI  
LGA: Woollahra and Waverley

SCALE 1:10,500  
SIZE A4  
DATE 6/04/2020



Figure 1-2. Location of the SoHI study area.

## 2.0 METHODOLOGY

This SoHI has been prepared in accordance with the following guidelines:

- *Statements of Heritage Impact* 2002, *NSW Heritage Manual* 2002 (NSW Heritage Office)
- *Historical Archaeology Code of Practice* 2006 (Heritage Office, Department of Planning)
- *Historical Archaeology Code of Practice* 2006 (Heritage Office, Department of Planning)
- *Assessing Significance for Historical Archaeological Sites and Relics* 2009 (Heritage Branch, Dept. of Planning)
- *Burra Charter* 2013 (Australia ICOMOS).

### 2.1 Significance assessments

Determining the significance of heritage items or a potential archaeological resource is undertaken by utilising a system of assessment centred on the *Burra Charter* of Australia ICOMOS. The principles of the charter are relevant to the assessment, conservation and management of sites and relics. The assessment of heritage significance is outlined through legislation in the Heritage Act and implemented through the *NSW Heritage Manual*, the *Archaeological Assessment Guidelines*<sup>1</sup> and the 2009 *Assessing Significance for Historical Archaeological Sites and 'Relics'*.<sup>2</sup>

If an item meets one of the seven heritage criteria, and retains the integrity of its key attributes, it can be considered to have heritage significance (see Table 2.1). The significance of an item or potential archaeological site can then be assessed as being of local or state significance. If a potential archaeological resource does not reach the local or state significance threshold, then it is not classified as a relic under the Heritage Act.

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

'*Local heritage significance*', in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.<sup>3</sup>

**Table 2.1: NSW heritage assessment criteria**

Criteria	Description
<b>A – Historical Significance</b>	An item is important in the course or pattern of the local area's cultural or natural history.
<b>B – Associative Significance</b>	An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history.
<b>C – Aesthetic or Technical Significance</b>	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.

<sup>1</sup> NSW Heritage Office 1996; 25-27

<sup>2</sup> NSW Heritage Branch, 2009.

<sup>3</sup> This section is an extract based on the Heritage Office *Assessing Significance for Historical Archaeological Sites and Relics* 2009:6.



Criteria	Description
<b>D – Social Significance</b>	An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.
<b>E – Research Potential</b>	An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history.
<b>F – Rarity</b>	An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history.
<b>G – Representativeness</b>	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area).

## 2.2 Archaeological potential

The identified levels of archaeological potential referred to in this SoHI are based on the definitions outlined in Table 2.2.

**Table 2.2 Definition of assessed archaeological potential.**

Grading	Definition
<b>High Potential</b>	Where there is evidence of multiple phases of historic development and structures, with minimal or localised twentieth-century development impacts, and where it is likely that archaeological resources would remain intact.
<b>Moderate Potential</b>	Where analysis has demonstrated known historical development with some previous impacts, but where it is likely that archaeological remains would survive with localised truncation and disturbance.
<b>Low Potential</b>	Where research has indicated little historical development, or where there have been substantial previous impacts which may not have removed deeper subsurface remains entirely.
<b>Nil to Low Potential</b>	Where there has only been low intensity historical activity, such as land clearance or informal land use, with little to no archaeological 'signature' expected; or where previous impacts were extensive, such as large-scale bulk excavation which would leave isolated and highly fragmented deposits.
<b>Nil Potential</b>	Where there is no evidence of historical development or use, or where previous impacts such as deep basement structures would have removed all archaeological potential.

## 2.1 Heritage impact assessments

The objective of this SoHI report is to evaluate whether the proposed works will affect the heritage value of the site and/or place. A SoHI should also address how the heritage value of the site/place can be conserved or maintained, or preferably enhanced by the proposed works.

This report has been prepared in accordance with the NSW Heritage Office & Department of Urban Affairs and Planning NSW *Heritage Manual* (1996) and NSW Heritage Office *Statements of Heritage Impact* (NSW Heritage Office, 2002). The guidelines pose a series of questions as prompts to aid in the consideration of impacts due to the project. The questions vary in the guideline, depending on the nature of the impact to the heritage site.

### 2.1.1 Terminology

A detailed assessment is provided for direct, potential direct, indirect and archaeological impacts. Each type of impact is described in Table 2.3 below.

**Table 2.3: Artefact Heritage terminology for heritage impact types**

Impact	Definition
<b>Direct</b>	Impacts resulting from works located within the curtilage boundaries of the heritage item.
<b>Potential direct</b>	Impacts resulting from increased noise, vibrations and construction works located outside the curtilage boundaries of the heritage item.
<b>Indirect</b>	Impact to views, vistas and setting of the heritage item resulting from proposed works outside the curtilage boundaries of the heritage item.
<b>Archaeological</b>	Impacts to potential archaeological remains located within the curtilage boundaries of the heritage item.

In order to consistently identify the magnitude of potential impact of the proposed works, the terminology contained in Table 2.4 has been referenced throughout this document. Terminology and definitions are based on those contained in guidelines prepared by the International Council on Monuments and Sites (ICOMOS).

**Table 2.4: Terminology for assessing the magnitude of heritage impact**

Grading	Definition
<b>Major</b>	<p>Actions that would have a long-term and substantial impact on the significance of a heritage item. Actions that would remove key historic building elements, key historic landscape features, or significant archaeological materials, thereby resulting in a change of historic character, or altering of a historical resource.</p> <p>These actions cannot be fully mitigated.</p>
<b>Moderate</b>	<p>Actions involving the modification of a heritage item, including altering the setting of a heritage item or landscape, partially removing archaeological resources, or the alteration of significant elements of fabric from historic structures.</p> <p>The impacts arising from such actions may be able to be partially mitigated.</p>
<b>Minor</b>	<p>Actions that would result in the slight alteration of heritage buildings, archaeological resources, or the setting of an historical item.</p> <p>The impacts arising from such actions can usually be mitigated.</p>
<b>Negligible</b>	Actions that would result in very minor changes to heritage items.
<b>Nil</b>	Actions that would have no heritage impact.

## 3.0 LEGISLATIVE CONTEXT

### 3.1 Introduction

There are several items of State and Commonwealth legislation that are relevant to the current study. A summary of these Acts and the potential legislative implications follow.

Heritage listed items within and directly adjacent to the study area were identified through a search of the relevant state and federal statutory heritage registers discussed below including:

- World Heritage List
- Commonwealth Heritage List
- National Heritage List
- Australasian Underwater Cultural Heritage Database
- State Heritage Register
- Waverley LEP 2012
- Woollahra LEP 2014
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Section 170 Heritage and Conservation Registers
- NSW State Heritage Inventory database.

Items listed on these registers have been previously assessed against the NSW Heritage Assessment guidelines (as outlined in Section 2.1). Statements of heritage significance, based on the NSW Heritage Assessment guidelines, as they appear in relevant heritage inventory sheets and documents, are provided in this assessment.

### 3.2 Commonwealth legislation

#### 3.2.1 Environment Protection and Biodiversity Conservation Act 1999

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

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

There are no items in or near the study area that are registered on the World Heritage List, CHL or NHL. As such, the heritage provisions of this act do not apply, and works for the project would not require referral to the Minister.

### 3.2.2 Commonwealth Heritage List

The Commonwealth Heritage List (CHL) was established by the EPBC Act to protect Indigenous, historic, and natural heritage places owned or controlled by the Australian Government. The CHL and EPBC Act contain provisions for the management and protection of listed places under Commonwealth ownership or control.

**There are no items on the Commonwealth Heritage List within the study area.**

### 3.2.3 National Heritage List

The National Heritage List (NHL) was established by the EPBC Act to protect places of significant natural or cultural heritage value at a National level. The EPBC Act requires NHL places to be managed in accordance with the National Heritage Management Principles. Under sections 15B and 15C of the EPBC Act, a referral must be made to the Department of the Environment and Energy for actions that are likely to have a significant impact on National Heritage listed properties.

**There are no items on the National Heritage List within the study area.**

### 3.2.4 Underwater Cultural Heritage Act 2018

The *Underwater Cultural Heritage Act 2018* (Underwater Heritage Act) was passed by the Australian Parliament on 24 August 2018 and came into effect on 1 July 2019. It replaced the *Historic Shipwrecks Act 1976* (Historic Shipwrecks Act). The Underwater Heritage Act protects Australia's shipwrecks, sunken aircraft and other types of underwater cultural heritage such as artefacts and is administered in collaboration between the Commonwealth and the States, Northern Territory and Norfolk Island. Shipwrecks, sunken aircraft and other underwater cultural heritage sites registered under the act are included in its Cultural Heritage Database which contains over 8,000 items.

There is one item listed on the Underwater Heritage Act includes a Cultural Heritage Database within close proximity to the study area:

- West Parsley Bay Obelisk (ID number. 10979)

## 3.3 State Legislation

### 3.3.1 Heritage Act 1977

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

#### 3.3.1.1 The 2009 'Relics provisions'

The Heritage Act also provides protection for 'relics', which includes archaeological material or deposits. According to Section 139 (Division 9: Section 139, 140-146):

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

- (3) This section does not apply to a relic that is subject to an interim heritage order made by the Minister or a listing on the State Heritage Register.
- (4) The Heritage Council may by order published in the Gazette create exceptions to this section, either unconditionally or subject to conditions, in respect of any of the following:
- Any relic of a specified kind or description,
  - Any disturbance or excavation of a specified kind or description,
  - Any disturbance or excavation of land in a specified location or having specified features or attributes,
  - Any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates that there is little likelihood of there being any relics in the land.

Section 4 (1) of the Heritage Act (as amended in 2009) defines a relic as:

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*...any deposit, artefact, object or material evidence that:*

*relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or local heritage significance*

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A relic has been further defined as:

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*Relevant case law and the general principles of statutory interpretation strongly indicate that a 'relic' is properly regarded as an object or chattel. A relic can, in some circumstances, become part of the land be regarded as a fixture (a chattel that becomes permanently affixed to land).<sup>4</sup>*

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Excavation permits are issued by the Heritage Council of NSW, or its Delegate, under Section 140 of the Heritage Act for relics not listed on the SHR or under Section 60 for relics listed on the SHR.

An application for an excavation permit must be supported by an Archaeological Research Design and Archaeological Assessment prepared in accordance with the NSW Department of Premier and Cabinet (NSW Heritage, DPC) (formerly the NSW Heritage Division) archaeological guidelines. Minor works that will have a minimal impact on archaeological relics may be granted an exception under Section 139 (4) or an exemption under Section 57 (2) of the Heritage Act.

### 3.3.2 The State Heritage Register

The SHR was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is administered by the NSW Heritage Division of the Department of Planning, Industry and Environment (DPIE) and includes a diverse range of over 1,500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

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<sup>4</sup> Assessing Significance for Archaeological Sites and 'Relics', Heritage Branch, Department of Planning, 2009:7.



To carry out activities within the curtilage of an item listed on the SHR, approval must be gained from the Heritage Council by securing a Section 60 permit. In some circumstances, under Section 57(2) of the Heritage Act, a Section 60 permit may not be required if works are undertaken in accordance with the NSW Heritage branch document *Standard Exemptions for Works Requiring Heritage Council Approval*<sup>5</sup> or in accordance with agency specific exemptions. This includes works that are only minor in nature and will have minimal impact on the heritage significance of the place.

There is one item listed on the SHR located next to the study area:

- Vaucluse House (SHR no. 00955)

### 3.3.3 Section 170 Heritage Registers

Under the Heritage Act all government agencies are required to identify, conserve and manage heritage items in their ownership or control. Section 170 (s170) requires all government agencies to maintain a Heritage and Conservation Register that lists all heritage assets and an assessment of the significance of each asset. They must also ensure that all items inscribed on its list are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the Government on advice of the NSW Heritage Council. These principles serve to protect and conserve the heritage significance of items and are based on NSW heritage legislation and guidelines.

There are three items within the study area listed on NSW Government agency s170 heritage registers:

- Electricity Substation No. 94 (Ausgrid s170 – SHI Database No. 3430453)
- Vaucluse Outfall (Sydney Water s170 – SHI Database No. 4574203)
- Diamond Bay Outfalls (No. 1 & No. 2) (Sydney Water s170 – SHI Database No. 4574204)

## 3.4 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The EP&A Act also requires that Local Governments prepare planning instruments (such as Local Environmental Plans [LEPs] and Development Control Plans [DCPs]) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required. The current study area falls within the boundaries of the Northern Beaches Council local government area (LGA).

### 3.4.1 Waverley Local Environment Plan 2012

The study area partially falls within the Waverley LGA. The Waverley LEP 2012 aims to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views; and to protect archaeological sites. The LEP stipulates development controls in relation to development proposed on or near heritage listed properties, archaeological sites, or Aboriginal places of heritage significance. The relevant DCP for the study area remains the Waverley DCP 2012.

The following heritage listed items on the Waverly LEP 2012 are located within the study area:

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<sup>5</sup> Heritage Council of New South Wales, 2009. *Standard Exemptions for Works Requiring Heritage Council Approval*.

- Oceanview Avenue Conservation Area (Item no. C54)
- Oceanview Sandstone Escarpment Conservation Area (Item no. C37)

The following heritage listed items are located in close proximity to the study area:

- '1950s house' (Item no. I438)
- '1930s style bungalow' (Item no. I441)

### 3.4.2 Woollahra Local Environment Plan 2014

The study area partially falls within the Woollahra LGA. The Woollahra LEP 2014 aims to conserve the heritage significance of heritage items and heritage conservation area, including associated fabric, settings and views; and to protect archaeological sites. The LEP stipulates development controls in relation to development proposed on or near heritage listed properties, archaeological sites, or Aboriginal places of heritage significance. The relevant DCP for the study area remains the Woollahra DCP 2014.

The following heritage listed item on the Woollahra LEP 2014 is located within the study area:

- 'Suspension footbridge' (Item no. I386)

The following heritage listed items are located in close proximity to the study area:

- 'West Parsley Bay obelisk' (Item no. I356)
- '3 Forest Red Gums, Sydney Pink Gum' (Item no. I388)
- 'House and interiors' (Item no. I366)
- 'Sydney Pink Gum, Swamp Mahogany, Red Mahogany' (Item no. I389)

### 3.4.3 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The *Sydney Regional Environmental Plan (REP) (Sydney Harbour Catchment) 2005* was prepared under the EP&A Act. The aim of the plan is to ensure that the catchment, foreshores, waterways, and islands of Sydney Harbour are recognised, protected, enhanced and maintained. Schedule 4 of the plan identifies items of heritage significance within the Sydney Harbour Catchment.

There is one items listed on the Sydney REP 2005 within close proximity to the study area:

- 'West Parsley Bay obelisk' (Item no. 44)

## 3.5 Non-statutory registers

### 3.5.1 Register of the National Estate

The Register of the National Estate (RNE) is a list of natural, Aboriginal and historic heritage places throughout Australia. It was originally established under the *Australian Heritage Commission Act 1975*. Under that Act, the Australian Heritage Commission entered more than 13,000 places in the register. Following amendments to the *Australian Heritage Council Act 2003*, the RNE was frozen on 19 February 2007 and ceased to be a statutory register in February 2012. The RNE is now maintained on a non-statutory basis as a publicly available archive and educational resource.

There is one item listed on the Register of the National Estate as an *indicative place* within the study area:

- 'Parsley Bay Swimming Enclosure' (103518)

Items listed on the RNE's *indicative place* list were publicly proposed for entry onto the register; however, the register closed before their nomination could be assessed.

There is one item within close proximity to the study area:

- 'Reservoir No 120 and Reservoir No 121, Clairvaux Road' (102243)

### 3.6 Summary of heritage listings

Table 3.1 provides a summary of heritage listed items within and near to the study area. Several heritage items in this assessment are listed on multiple heritage registers with differing curtilages, and these items have been grouped in the table below.

The locations of these heritage listed items are illustrated in Figure 3-1 - Figure 3-5.

**Table 3.1: Summary of listings for the heritage items in and near the study area**

Heritage item	Register listings	Address	Proximity to the study area	Significance
Parsley Bay Swimming Enclosure	RNE interim list (Item no. 103518)	Horler Ave, Vaucluse	200 m north-west of the study area	Not recorded
Suspension Footbridge	Woollahra LEP 2014 (I386)	Parsley Bay, Vaucluse	200 m north-west of the study area	Local
West Parsley Bay obelisk	Woollahra LEP 2014 (I356)  Sydney REP 2005 (Item no. 44)  Australian Underwater Cultural Heritage Database (ID number. 10979)	65 Fitzwilliam Road, Vaucluse	100 metres west of the study area	Local
Vaucluse Outfall	Sydney Water s170 (SHI 4574203)	Rockface outfall and the associated pipeline running from Christison Park, Dover Heights to Vaucluse	Within	Local
3 Forest Red Gums, Sydney Pink Gum	Woollahra LEP 2012 (I388)	5, 10, 11, 15, and 21 Parsley Road, within road reserve, Vaucluse	Immediately west of the study area	Local
House and interiors	Woollahra LEP 2012 (I366)	80A Hopetoun Avenue, Vaucluse	85 metres east of the study area	Local
Sydney Pink Gum, Swamp Mahogany, Red Mahogany	Woollahra LEP 2012 (I389)	Steps from Olola Avenue to Hopetoun Avenue, Petrarch Avenue (within road reserve), Vaucluse	Immediately next to the study area	Local
Vaucluse House	SHR (00955)	Wentworth Road, Vaucluse	Immediately east and west of the study area	State

Heritage item	Register listings	Address	Proximity to the study area	Significance
Reservoir No 120 and Reservoir No 121	RNE (Item 102243)	Clairvaux Road, Vaucluse	60 metres west of the study area	National
Oceanview Avenue Conservation Area	Waverley LEP 2012 (C54)	Oceanview Avenue, Dover Heights	Within	Local
Oceanview Sandstone Escarpment Conservation Area	Waverley LEP 2012 (C37)	Dover Height	Within	Local
Diamond Bay Outfalls (No. 1 & No. 2)	Sydney Water s170 (SHI 4574204)	No. 1 Rockface below Kimberley St, No. 2 Rockface below Oceanview Avenue	Within	Local
1950s House	Waverley LEP 2012 (I438)	7 Ethel Street, Vaucluse	90 metres north of the study area	Local
1930s style bungalow	Waverley LEP 2012 (I441)	313 Military Road, Vaucluse	80 metres north of the study area	Local
'Electricity Substation No. 94'	Ausgrid s170 (SHI 3430453)	30 Dover Road, Rose Bay	10 metres north of the study area	Local



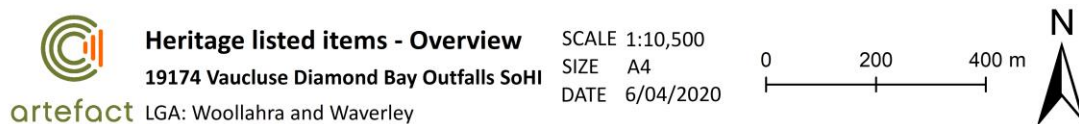


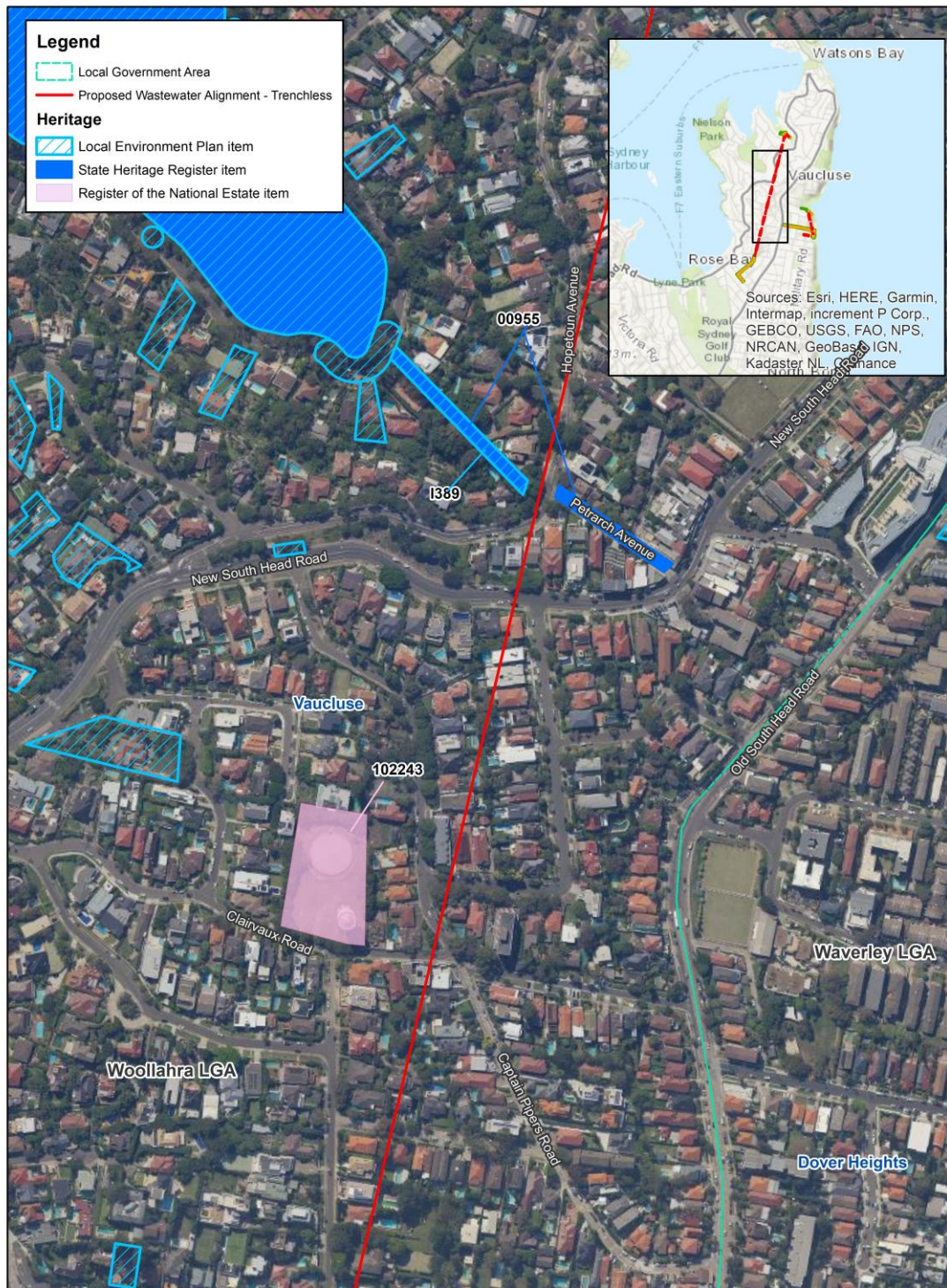
Figure 3-1. Overview of heritage listed items within and in the vicinity of the study area.





Figure 3-2. Detail of heritage listed items in and within the vicinity of the Parsley Bay portion of the study area.





Document Path: D:\GIS\GIS\_Mapping\19174 Vaucluse Diamond Bay\MXD\Heritage items Vaucluse\_v5\_200406.mxd



**Heritage listed items - Vaucluse**  
19174 Vaucluse Diamond Bay Outfalls SoHI  
LGA: Woollahra and Waverley

SCALE 1:4,000  
SIZE A4  
DATE 6/04/2020

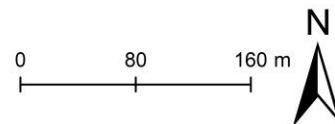


Figure 3-3. Detail of heritage listed items in the vicinity of the Vaucluse portion of the study area.





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**Heritage listed items - Rose Bay**  
19174 Vaucluse Diamond Bay Outfalls SoHI  
LGA: Woollahra

SCALE 1:2,000  
SIZE A4  
DATE 6/04/2020

0 25 50 m



Figure 3-4. Detail of heritage listed items in the vicinity of the Rose Bay portion of the study area.





**Heritage listed items - Dover Heights**  
**19174 Vaucluse Diamond Bay Outfalls SoHI**  
LGA: Waverley

SCALE 1:2,800  
SIZE A4  
DATE 6/04/2020

0 50 100 m



Figure 3-5 Detail of heritage listed items in and within the vicinity of the Dover Heights portion of the study area.

## 4.0 HISTORICAL CONTEXT

### 4.1 Early Settlement in Vaucluse (circa 1790 -1895)

#### 4.1.1 Early grants and Vaucluse House

Following European settlement in Port Jackson, the area surrounding Vaucluse and the study area experienced limited activity by Europeans and continued to be used by the Aboriginal people of the area,<sup>6</sup> the Gadigal and Birrabirrigal groups.<sup>7</sup> A flagstaff was erected at South Head however,<sup>8</sup> and some land grants were dedicated as early as the 1790s, including 80 acres to Thomas Laycock in 1793, 370 acres to William Charles Wentworth, 40 acres to Francis MacGlynn in 1829<sup>9</sup>, and 60 acres to Samuel Breakwell in 1831. The southern portion of the study area was originally part of a consolidated grant of Daniel Cooper and Solomon Levey, totalling 1130 acres and comprising much of Woollahra, which became solely owned by Daniel Cooper in 1847 and was known as the Point Piper Estate.<sup>10</sup>

##### 4.1.1.1 Sir Henry Browne Hayes

In 1803, Sir Henry Browne Hayes – a former Irish convict – purchased Laycock's grant and the adjacent grant of Robert Cardell, comprising of 25 acres (outside of the study area). He came to own the property during an auction held by Simeon Lord, and allegedly paid only £7 for the estate.<sup>11</sup> There was subsequent confusion surrounding the boundaries of the estate that Hayes purchased, resulting in the construction of the first Vaucluse House on Crown land. Hayes constructed a stone cottage in 1805 and supposedly surrounded the cottage with Irish peat to protect it from snakes.<sup>12</sup> The estate was named Vaucluse, after the French village Fontaine-de-Vaucluse where Petrarch, the Italian renaissance poet, had once lived. Hayes leased the estate to Captain John Piper until 1814, after which the tenants and use of the estate is unclear.<sup>13</sup>

##### 4.1.1.2 William Charles Wentworth

In 1827 the estate was purchased by William Charles Wentworth, likely from Piper. Wentworth was born at sea near Norfolk Island in 1790 to D'Arcy Wentworth – a surgeon migrating from England – and Catherine Crowley, a convict that D'Arcy had met on the ship to Australia.<sup>14</sup> After likely growing up on his father's estate Home Bush, William was sent to England to be educated and upon returning to Australia he was a barrister, journalist, author, and explorer, partaking in the famous crossing of the Blue Mountains with William Lawson and Gregory Blaxland in 1813. In 1827 D'Arcy Wentworth died and William inherited his estate, becoming one of the wealthiest men in New South Wales.<sup>15</sup> Wentworth may have already owned 370 acres in Vaucluse adjoining the property – the date this land was granted is uncertain, however Wentworth now owned 515 acres in Vaucluse, extending from Rose Bay to the location of the Macquarie Lighthouse. He began to construct Vaucluse House surrounding Hayes' original stone cottage, which was essentially cannibalised by the gothic mansion that Wentworth constructed.<sup>16</sup>

<sup>6</sup> OEH, 2000. 'Vaucluse House.' *NSW Office of Environment and Heritage*.

<sup>7</sup> Woollahra Municipal Council, n.d. 'A brief history of Woollahra.' *Woollahra Municipal Council*. Accessed online 5/12/2019 at: [https://www.woollahra.nsw.gov.au/library/local\\_history/a\\_brief\\_history\\_of\\_woollahra](https://www.woollahra.nsw.gov.au/library/local_history/a_brief_history_of_woollahra)

<sup>8</sup> Woollahra Municipal Council, n.d., 'A brief history of Woollahra.' *Woollahra Municipal Council*.

<sup>9</sup> *The Sydney Morning Herald*, November 1929. 'Vaucluse House.'

<sup>10</sup> Woollahra Municipal Council, n.d.

<sup>11</sup> *The Sydney Morning Herald*, November 1929. 'Vaucluse House.'

<sup>12</sup> Nicholas, J., n.d. 'Vaucluse House: A Brief History.' *Sydney Living Museums*. Accessed online 5/12/2019 at: <https://sydneylivingmuseums.com.au/stories/vaucluse-house-brief-history>

<sup>13</sup> OEH, 2000. 'Vaucluse House.' *NSW Office of Environment and Heritage*.

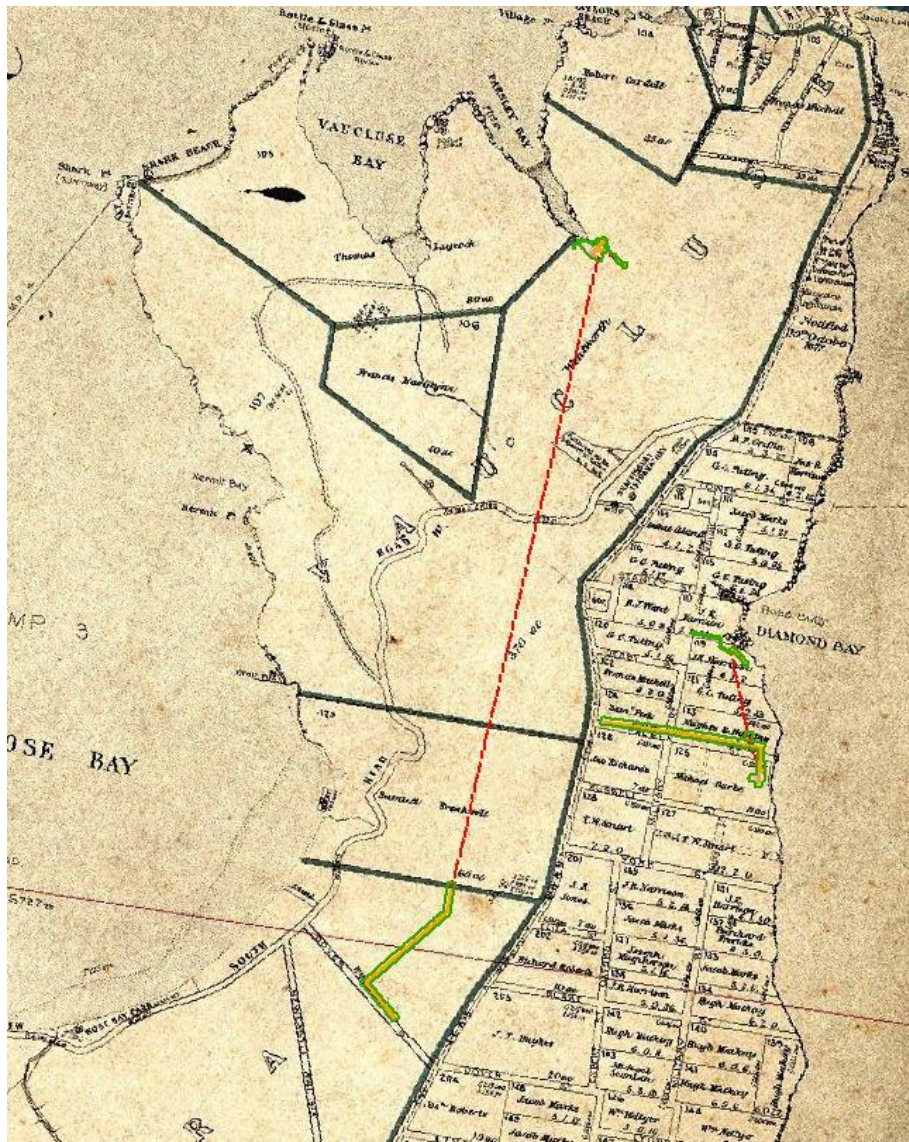
<sup>14</sup> OEH, 2000. 'Vaucluse House.' *NSW Office of Environment and Heritage*.

<sup>15</sup> OEH, 2000. 'Vaucluse House.' *NSW Office of Environment and Heritage*.

<sup>16</sup> Nicholas, J., n.d. 'Vaucluse House: A Brief History.' *Sydney Living Museums*.



By 1830 the Wentworth's had constructed turrets on the house, a sandstone stable, a large kitchen wing and convict barracks,<sup>17</sup> a men's quarters, fodder room, and coach house.<sup>18</sup> Additional work occurred in the 1840s however it is apparent that the house was never completed, likely due to the depression of the 1840s.<sup>19</sup> The house remained without a designated front door, and the ten Wentworth children were crammed into three bedrooms.<sup>20</sup> Wentworth became one of the most prominent figures in New South Wales, serving as an active political figure, lawyer, author, founder of *The Australian* newspaper<sup>21</sup> and the University of Sydney. He and his family however were not accepted into Sydney's upper-class colonial society on account of their convict ancestry; however William received the first state funeral in Australia upon his death in 1872. He died in England and was brought back to Sydney to be buried in a family mausoleum on the Vaucluse Estate.<sup>22</sup>



**Figure 4-1. Map of the Parish of Alexandria in 1900 showing the extent of development in and around the study area (outlined in red and green). Source. HLRV.**

<sup>17</sup> OEH, 2000. 'Vaucluse House.' NSW Office of Environment and Heritage.

<sup>18</sup> Nicholas, J., n.d. 'Vaucluse House: A Brief History.' Sydney Living Museums.

<sup>19</sup> OEH, 2000. 'Vaucluse House.' NSW Office of Environment and Heritage.

<sup>20</sup> Nicholas, J., n.d. 'Vaucluse House: A Brief History.' Sydney Living Museums.

<sup>21</sup> Not the existing Murdoch publication.

<sup>22</sup> Nicholas, J., n.d. 'Vaucluse House: A Brief History.' Sydney Living Museums.





**Figure 4-2. View of the harbour from South Head showing the entrance, Watsons Bay and Vaucluse, 1848. Source: Vaucluse House Collection**



**Figure 4-3. Vaucluse Bay showing the Vaucluse Estate. By George Edwards Peacock, c.1848-1950. Source: Sydney Living Museums.**

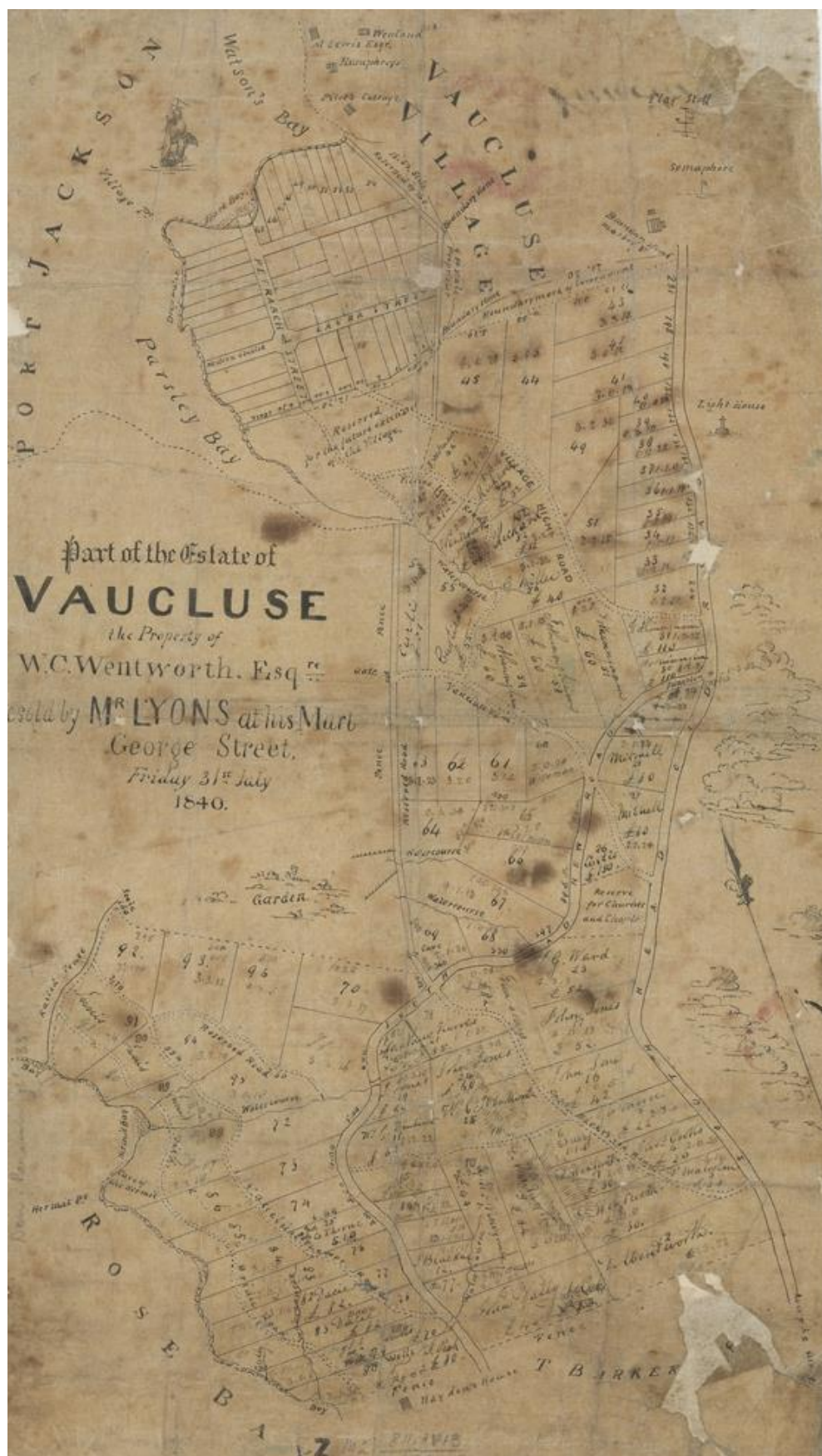


Figure 4-4. Subdivision Plan for Part of the Estate of Vaocluse, c.1840. Source: State Library of New South Wales.



#### 4.1.2 Establishment of Vaucluse Village

Outside of the activity surrounded with the Vaucluse Estate, still owned by Captain John Piper in the early 1810s, the Macquarie lighthouse was established on the eastern cliffs of Vaucluse to guide ships through the Heads. The lighthouse was the first in Australia, initiated by Governor Lachlan Macquarie and was designed by Francis Greenway, with the foundation stone laid in 1816.<sup>23</sup> A lighthouse keeper's cottage was constructed, accompanied by a guardhouse and military barracks.<sup>24</sup> South Head Road had been built shortly before Macquarie commissioned the lighthouse, which also enabled the construction of the lighthouse and subsequent settlement surrounding Vaucluse Estate.<sup>25</sup>

The northern parts of Vaucluse and Watson's Bay were inhabited by a series of groups by the 1800s, including small numbers of Government officials, fisherman, traders, and pilots. In the early 1800s, wealthy colonists began to visit South Head as tourists, including Elizabeth Macarthur, or as settlers establishing their estates, such as the Piper and Wentworth families.<sup>26</sup>

Throughout the 1830s, excluding the government reserves, land grants were gradually subdivided and connected the settlements at Watson's Bay and Vaucluse Estate. Following his purchase of the Vaucluse Estate, William Wentworth began to subdivide the eastern and northern portions of his 370-acre grant. This resulted in the establishment of several land parcels on the northern side of Parsley Bay and on either side of New South Head Road down to the northern extent of Rose Bay.

Several public and institutional buildings were erected in the mid- and late-1800s, including several churches, a reformatory, and notably, multiple recreational grounds were reserved.

## 4.2 Vaucluse in the 20th century (1895 – present)

### 4.2.1 Vaucluse

#### 4.2.1.1 Subdivision and suburban development

In 1895, residents of Vaucluse petitioned to be separated from the municipality of Woollahra, and the Borough of Vaucluse was formed.<sup>27</sup> This prompted the construction of several public buildings in the early 1900s, including a Council chambers, public school, and town hall.<sup>28</sup> Additional recreational areas and beaches were resumed for public use. Following the subdivision of the Vaucluse Estate in the late 1800s and the development of the village, further subdivision occurred throughout the suburb in the 1920s.

Many of the extant streets were formed in this time and these original alignments have largely been maintained, although major roads such as New South Head Road had been formed as early as the 1830s. By the 1920s several houses on the northern side of Parsley Bay were already established, while further subdivision occurred on the eastern side of Parsley Bay on Hopetoun Avenue and Kings Road. At the time a tram line ran along New South Head Road between Watson's Bay and Rose Bay. Subdivision plans showing Clairvaux Avenue and Dalley Avenue also show the location of Clairvaux House, including a fountain and fernhouse within the front yard.

<sup>23</sup> Derricourt, R., 2008a. 'Macquarie Lighthouse.' *Dictionary of Sydney*. Accessed online 5/12/2019 at: [https://dictionaryofsydney.org/entry/macquarie\\_lighthouse](https://dictionaryofsydney.org/entry/macquarie_lighthouse)

<sup>24</sup> Derricourt, R., 2008a. 'Macquarie Lighthouse.' *Dictionary of Sydney*.

<sup>25</sup> Ham, M., 2018. 'Sydney's iconic Macquarie Lighthouse celebrates 200 years.' *Macquarie University: The Lighthouse*. Accessed online 5/12/2019 at: <https://lighthouse.mq.edu.au/article/november/sydneys-iconic-macquarie-lighthouse-site-celebrates-200-years>

<sup>26</sup> Derricourt, R., 2008b. 'Watsons Bay.' *Dictionary of Sydney*. Accessed online 5/12/2019 at: [https://dictionaryofsydney.org/entry/watsons\\_bay](https://dictionaryofsydney.org/entry/watsons_bay)

<sup>27</sup> Woollahra Council, n.d. 'Local history fast facts – V.' *Woollahra Municipal Council*. Accessed online 9/12/2019 at: [https://www.woollahra.nsw.gov.au/library/local\\_history/local\\_history\\_fast\\_facts/v](https://www.woollahra.nsw.gov.au/library/local_history/local_history_fast_facts/v)

<sup>28</sup> Woollahra Council, n.d. 'Local history fact facts – V.' *Woollahra Municipal Council*.

Throughout the 20th century the area continued to experience dense suburban development, with residential properties extant today representing several decades and architectural styles of the 20th century, with Federation, Spanish Revival, and Post-War residences particularly prominent in the study area. Large contemporary 21st residential properties have also been constructed from the late 20th century onwards, with widespread renovation and development of new apartment blocks and houses continuing today.

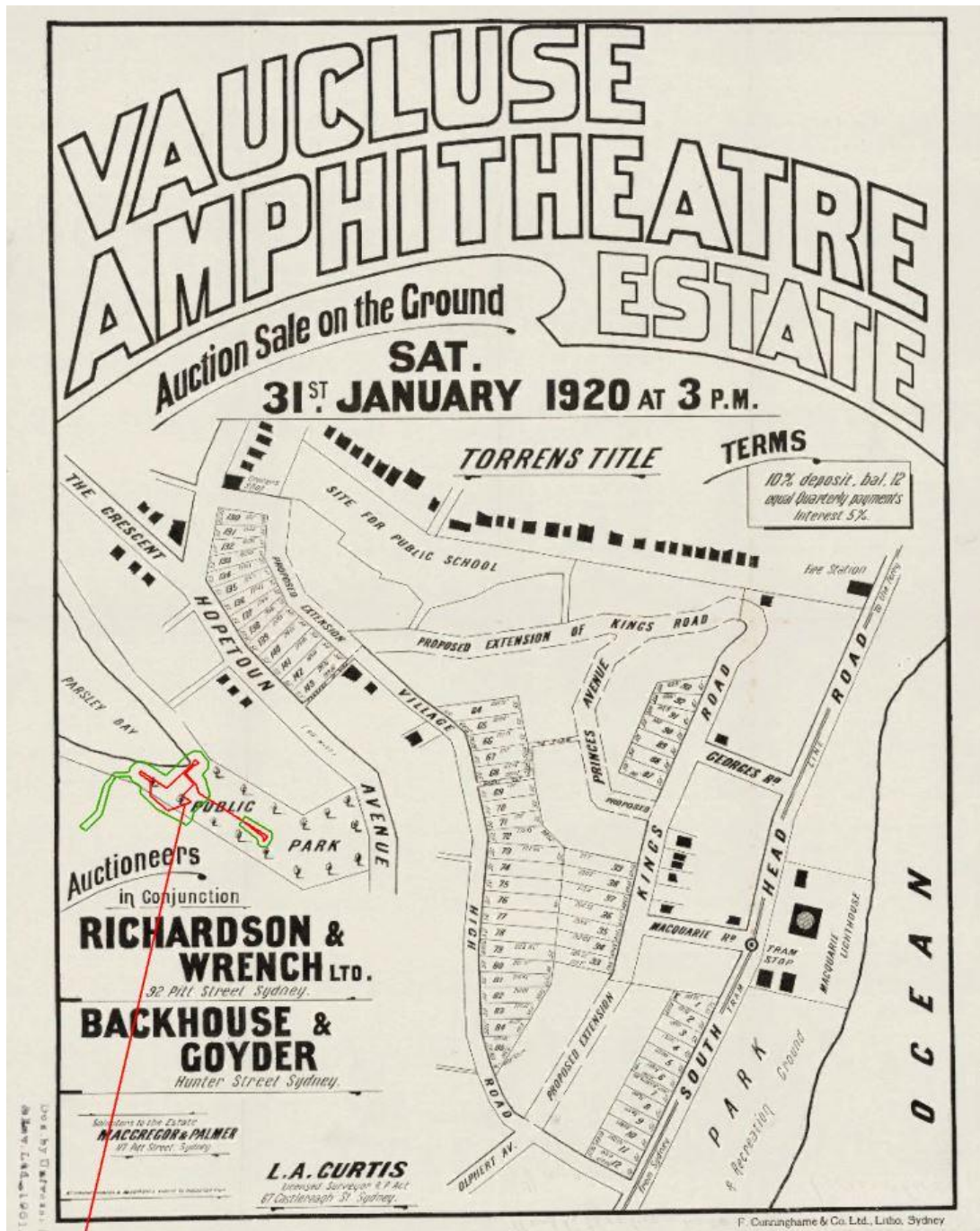


Figure 4-5. Vaucluse Amphitheatre Estate Subdivision Plan, 1920 showing indicative location of the study area. Source. State Library of New South Wales.<sup>29</sup>

<sup>29</sup> 'Vaucluse Amphitheatre Estate – The Crescent, Hopetoun Ave, Village High Road, Kings Rd, Princes Ave, South Head Rd, 1920.' State Library of New South Wales. Accessed online 9/12/2019 at: [http://digital.sl.nsw.gov.au/delivery/DeliveryManagerServlet?dps\\_pid=IE9122962&change\\_lng=](http://digital.sl.nsw.gov.au/delivery/DeliveryManagerServlet?dps_pid=IE9122962&change_lng=)





Figure 4-6 Dalley-Mansion Estate Subdivision, 1911. Source: State Library of NSW.<sup>30</sup>

<sup>30</sup> 'Dalley-Mansion-Estate, Rose Bay – New South Head Rd, Clairvaux Rd, Dalley Ave, Black St, 1911.' *State Library of NSW*. Accessed online 9/12/2019 at:  
[http://digital.sl.nsw.gov.au/delivery/DeliveryManagerServlet?dps\\_pid=IE9123354&change\\_lng=](http://digital.sl.nsw.gov.au/delivery/DeliveryManagerServlet?dps_pid=IE9123354&change_lng=)

#### 4.2.1.2 Water Supply

The eastern suburbs, including Vaucluse and Dover Heights had originally received their water supply from the Botany Swamps through the Crown Street Reservoir (Surry Hills, constructed in 1859), which used stream driven piston pumps to supply the eastern suburbs.<sup>31</sup> In the 1880s additional reservoirs were constructed at Woollahra (1880) and Waverley (1887). The Upper Nepean Scheme, developed in 1888, allowed amplification of the water supply system throughout the Eastern Suburbs, leading to the construction of an additional high level reservoir at Waverley, followed by the surface reservoir at Vaucluse, which was constructed in 1904. This reservoir was constructed as an open circular concrete tank, built partly in excavation and partially exposed. This construction type is typical of pre-circular concrete or steel tanks. In the 1860s an aluminium roof was added as part of a water supply program to prevent air borne pollution and contamination.<sup>32</sup>

The second Vaucluse Reservoir, No. 121, was constructed in 1930 as a reinforced concrete elevated reservoir. Water is pumped into the elevated reservoir through the surface reservoir.<sup>33</sup>

To accommodate the suburban boom throughout Vaucluse and Diamond Bay, the Vaucluse Municipality authorised a sewerage scheme throughout the area. This led to the construction of the main sewer and Vaucluse ocean outfall at Christison Park in 1916.<sup>34</sup> This outfall was built without treatment facilities, as were the Diamond Bay Outfalls. The outfall number 1, located beneath Kimberley Street, was constructed in 1932, and the No. 2 outfall, located beneath Oceanview Avenue, was constructed in 1936.<sup>35</sup> These were the last two outfalls to be built without treatment facilities.

#### 4.2.1.3 Fernleigh Castle

Fernleigh Castle is situated in the 60 acres land grant originally given to Samuel Breakwell in 1831. The land was sold by Breakwell for £450 and came to be owned by Charles Roberts in 1874. Here Roberts built a stone cottage which he named 'The Ferns.' In 1881 Frank Bennett purchased the property from Roberts for £4600, and he began to heavily modify the building. The works took 11 years, being completed in 1892 in the form of the Scottish-inspired castle currently located on the site. It features a Norman-style tower, smaller turreted towers, and wrought iron balconies. The original stone cottage comprises the lounge and dining rooms, with the rest of the building constructed surrounding the cottage.<sup>36</sup>

In 1966 the house was sold to the Commercial Banking Company of Sydney but was later sold as a private residence.<sup>37</sup>

<sup>31</sup> Australian Heritage Database, n.d. 'Reservoir No 120 and Reservoir No 121, Clairvaux Rd, Vaucluse, NSW, Australia.' *Australian Heritage Database Place Details*. Accessed online 9/12/2019 at: [http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place\\_detail;search=town%3Dvaucluse%3Bkeyword\\_PD%3Don%3Bkeyword\\_SS%3Don%3Bkeyword\\_PH%3Don%3Blatitude\\_1dir%3DS%3Blongitude\\_1dir%3DE%3Blongitude\\_2dir%3DE%3Blatitude\\_2dir%3DS%3Bin\\_region%3Dpart;place\\_id=102243](http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=town%3Dvaucluse%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=102243)

<sup>32</sup> *Op. Cit.*

<sup>33</sup> *Op. Cit.*

<sup>34</sup> NSW Office of Environment and Heritage, n.d. 'Vaucluse Outfall.' Accessed online 17/1/2020 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?id=4574203>

<sup>35</sup> NSW Office of Environment and Heritage, n.d. 'Diamond Bay Outfalls No. 1 & No. 2'. Accessed online 17/2/2020 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?id=4574204>

<sup>36</sup> *Op. Cit.*

<sup>37</sup> *Op. Cit.*

## 4.3 Parsley Bay

### 4.3.1 Reserve and Land Reclamation

Parsley Bay is a natural inlet within Sydney Harbour which is encompassed with sandstone overhangs and became part of the land of Thomas Laycock, when he received a land grant of 80 acres in 1792 (Figure 4-7).<sup>38</sup> At the time he was the Quartermaster of the New South Wales Corps, and the bay was first referred to in Laycock's official land grant documentation.<sup>39</sup> Laycock named the property *Woodmancote* and there is no historical documentation to suggest that he cleared or built upon the property. The estate was consolidated with surrounding grants and was eventually owned by Sir Henry Brown Hayes, Captain John Piper, and William Charles Wentworth, where it formed part of the Vaucluse Estate at its largest.<sup>40</sup>

While the foreshore was privately owned by the Wentworth's and subsequent owners until the early 1900s, evidence suggests that the bay was used frequently for picnics and camping by local residents.<sup>41</sup>

From 1905 the Harbour Foreshores Vigilance Committee, led by William Notting, petitioned for access to waterfronts around Sydney Harbour. Parsley Bay and nearby Neilsen Park were resumed for public land, however at the time Parsley Bay was partially estuarine marshland. Vaucluse Council requested that Parsley Bay was made accessible for swimming, which resulted in the NSW Department of Lands resuming the land at the head of the bay in 1906. This area is likely indicated by the sand/beach area, which is enclosed by a low sandstone retaining wall. The Sydney Harbour Trust rejected Council applications for a harbour pool or baths, and as such, a shark net was established across the Bay in 1924,<sup>42</sup> although it was considered by Council as early as 1914.<sup>43</sup> This structure was then replaced with a shark net enclosure in 1930, which was then replaced again in 1985.<sup>44</sup>

The reserve increased in popularity as a recreational park, resulting in the establishment of a kiosk and amenities. Vaucluse Council commissioned the architect Varney Parkes, son of Henry Parkes, to design a kiosk. Parkes' structure was a shingled timber kiosk inspired by Japanese Tearooms, built beside the creek. In the mid-1920s Parkes' structure had fallen into disrepair. A new kiosk was constructed in 1929, built further south than Parkes' tearoom, and incorporated a pavilion, kiosk and residency for the proprietor of the reserve.

In the 1920s several dressing sheds were constructed within the reserve, to serve as changing facilities for swimmers. These were replaced in the late 1980s with the extant amenities building, which is situated on a sandstone retaining walls and footings, accessed by a ramp. It is uncertain whether the sandstone walls date to the 1980s when the building was constructed or if they are older walls perhaps associated with Parkes' tearoom kiosk.

Throughout the 1930s, Vaucluse Council enacted several upgrades to the reserve, including the channelizing of the natural creek, further dredging work, and the construction of the sea wall. In the post-war period the bay and reserve were frequently used for community picnics and operated a life-saving group. Today, the bay continues to be used for recreational activities and swimming.

<sup>38</sup> Woollahra Library Local History Centre, 2005. 'Parsley Bay Reserve.' Accessed online 6/21/2019 at: [https://www.woollahra.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0018/16272/Parsley\\_Bay\\_Reserve\\_Web.pdf](https://www.woollahra.nsw.gov.au/__data/assets/pdf_file/0018/16272/Parsley_Bay_Reserve_Web.pdf)

<sup>39</sup> Woollahra Library Local History Centre, 2005. 'Parsley Bay Reserve.'

<sup>40</sup> Woollahra Library Local History Centre, 2005. 'Parsley Bay Reserve.'

<sup>41</sup> Woollahra Library Local History Centre, 2005. 'Parsley Bay Reserve.'

<sup>42</sup> Australian Heritage Database, n.d. 'Parsley Bay Swimming Enclosure, Horler Av, Vaucluse, NSW, Australia.' *Australian Heritage Database Place Details*.

<sup>43</sup> Woollahra Library Local History Centre, 2005. 'Parsley Bay Reserve.'

<sup>44</sup> Australian Heritage Database, n.d.

#### 4.3.1.1 Suspension Bridge

From 1906, Vaucluse Council considered the construction of a bridge across Parsley Bay to improve pedestrian access (shown in Figure 4-8 and Figure 4-9). In 1910 the construction was approved, and was designed by Edwin Sautelle, the engineer of Vaucluse. The design involved a narrow cable suspension bridge above the bay, which has become an iconic feature of the bay's landscape.

#### 4.3.1.2 The Shirase Japanese Camp

In 1910 a Japanese scientific expedition set out for Antarctica, led by Lieutenant Nobu Shirase. The expedition was unsuccessful, reaching Antarctica in the autumn where it would be too late to attempt to reach the South Pole before winter.<sup>45</sup> The expedition sailed north to Sydney, establishing a camp at Parsley Bay to wait for spring.

At the time, there was some anti-Japanese sentiment in Sydney and the crew found initial attempts to repair their ship and purchase equipment difficult, however eventually they established a close relationship with many locals.<sup>46</sup> Shirase also established a close friendship with Professor Edgeworth David, a geology professor at the University of Sydney, who assisted Shirase in the repair of the ship and shared knowledge from a previous expedition to Antarctica with Douglas Mawson.

In 1911 Parsley Bay had only been recently subdivided from the Wentworth Estate and there were less than twenty houses in Parsley Bay. The Japanese crew established the prefabricated hut intended for their camp in Antarctica and erected three tents (Figure 4-9).<sup>47</sup> The official expedition record describes the camp at Parsley Bay as:

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*"Surrounded by dense overgrown old trees...guava, bottlebrush, evergreen oak and pine. They give shelter from the breeze and make this a very peaceful spot. Standing on the rising ground behind the encampment you can gaze up at the hillside or turn to look at the sea below. Far across the water North Harbour, Manly and a number of other places are just visible through the mist and clouds. It is like a landscape painting come alive."*<sup>48</sup>

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On 19 November 1911 the crew departed for Antarctica, ultimately failing to reach the South Pole for the second time, but successfully traversing large areas of previously unexplored territory.<sup>49</sup>

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<sup>45</sup> Australian Museum, n.d. 'Japanese Antarctica expedition and the Shirase sword.' *Australian Museum*. Accessed online 6/12/2019 at: <https://australianmuseum.net.au/learn/collections/archives/historic-expeditions/shirase-sword/>

<sup>46</sup> Australian Museum, n.d.

<sup>47</sup> Australian Museum, n.d. 'Japanese Antarctica expedition and the Shirase sword.' *Australian Museum*

<sup>48</sup> *Expedition Record*, p. 86. Cited in Australian Museum, n.d. 'Japanese Antarctica expedition and the Shirase sword.' *Australian Museum*

<sup>49</sup> Australian Museum, n.d. 'Japanese Antarctica expedition and the Shirase sword.' *Australian Museum*





Figure 4-7. Parsley Bay, ca. 1845, painted by G. E. Peacock. Source. SLNSW.



Figure 4-8 Undated postcard titled 'Suspension Bridge Parsley Bay N.S.W.'. Source. National Museum of Australia.





**Figure 4-9. Children with a member of the Japanese Antarctic Expedition on Parsley Bay Suspension Bridge, 1911. Source. Woollahra Library.**

## 4.4 Dover Heights and East Vaucluse (1853 – present)

### 4.4.1 Early grants and subdivision

Land around Diamond Bay, Dover Heights and east Vaucluse was originally owned by the Crown and surveyed by George Legg in September 1853.<sup>50</sup> Lots were sold in December of the same year, comprising land along Kimberley Street, Military Road, and Old South Head Road. Old South Head Road had been previously formed in the early 1800s, however Kimberley Street (then Ocean Street), Derby Street (northern Military Road), Oceanview Avenue (then Palmer Street) and Eastern Avenue (then Russell Street) were developed by the 1853 subdivision, and possibly as early as the 1830s.<sup>51</sup>

### 4.4.2 The study area

Land parcels in the study area were purchased by George Tuting, James Harrison, Hughes/Hosking, and Samuel Peak, as shown in Figure 4-10. Tuting's grant was subdivided by 1887, and Harrison's now occupied by no. 33 Kimberley Street (discussed in Section 4.4.3 below) was partially subdivided by the end of the century, however neither estates nor their subdivisions were named.<sup>52</sup> There is no historical documentation to suggest that these land parcels were built upon by their original owners, however it is possible that cottages may have been constructed. It is highly unlikely that the land would have been utilised for any agricultural endeavours or land use beyond residential development due to the sandy nature of the area.

<sup>50</sup> Ibid, p. 42

<sup>51</sup> Ibid, p. 34

<sup>52</sup> Ibid, p. 42

Hughes and Hosking (first names unknown) jointly purchased a grant just south of Diamond Bay, on Palmer Street in 1839, suggesting that Oceanview Avenue was extant at its current alignment by the end of the 1830s.<sup>53</sup> This land was subdivided by 1887, creating the alignments of Ethel Street and Ray Street, and was later subdivided as the 'Pacific Estate'.<sup>54</sup> The men, business partners including Hoskin – the Mayor of Sydney – were well known for their land purchases and made great wealth from their subdivision.<sup>55</sup>

Samuel Peak purchased his land parcel in 1840 and was the owner of Samuel Peak & Co., Wholesale Grocery, Tea and Wine Merchants, located on George Street in Sydney.<sup>56</sup> There is apparent discrepancy regarding the spelling of his name, whether Peak or Peek, as several documents use either spelling. Peak lived on Nicholson Street in Balmain, with no suggestion in the historical record that he built at his Diamond Bay/Dover Heights grant.<sup>57</sup> He and his wife both died on the *Dunbar*, which was shipwrecked near South Head in 1857.<sup>58</sup>

The area first became known as Dover Heights in the 1860s, named for the resemblance of the sandstone cliffs to those in Dover, England.<sup>59</sup> The subdivision of the area throughout the 1880s appears to have continued throughout the 1910s and early 1920s, and the land boundaries and road alignments appear to have remained faithful to these subdivisions. Eastern Avenue as it appeared in 1930 is shown in Figure 4-12.

The area experienced an increase in residential development throughout the 20th century houses representing various architectural styles and periods present. 1943 aerial imagery of the area shows that by that time much of the area was densely built, with few lots undeveloped (Figure 4-13).

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<sup>53</sup> Ibid, p. 34

<sup>54</sup> *Op. Cit*

<sup>55</sup> *Op. Cit.*

<sup>56</sup> Ibid, p. 34

<sup>57</sup> Sydney Alderman, n.d. 'Samuel Peek.' *City of Sydney Council Sydney's Alderman*. Accessed online 10/12/2019 at: <https://www.sydneyaldermen.com.au/alderman/samuel-peek/>

<sup>58</sup> Ibid, p. 34

<sup>59</sup> Waverley Council, n.d. 'Dover Heights.' *Waverley Council*. Accessed online 10/12/2019 at: [https://www.waverley.nsw.gov.au/residents/precinct\\_committees/contacts,\\_meetings,\\_dates,\\_agenda\\_-\\_and\\_-\\_minutes/dover\\_heights](https://www.waverley.nsw.gov.au/residents/precinct_committees/contacts,_meetings,_dates,_agenda_-_and_-_minutes/dover_heights)

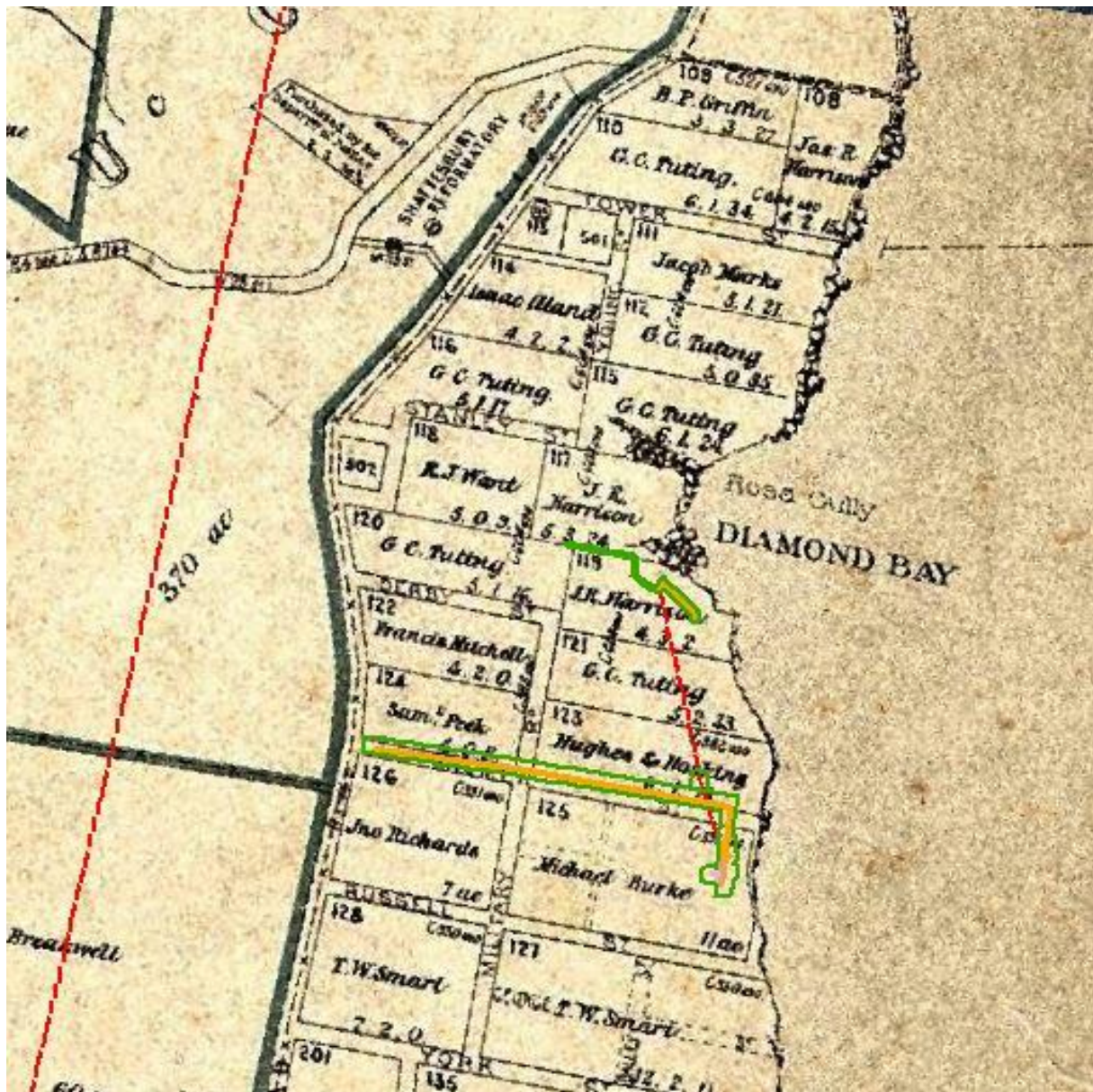


Figure 4-10. Detail of Parish Map of Alexandria, showing Diamond Bay land owners, n.d.  
Source: HLRV.



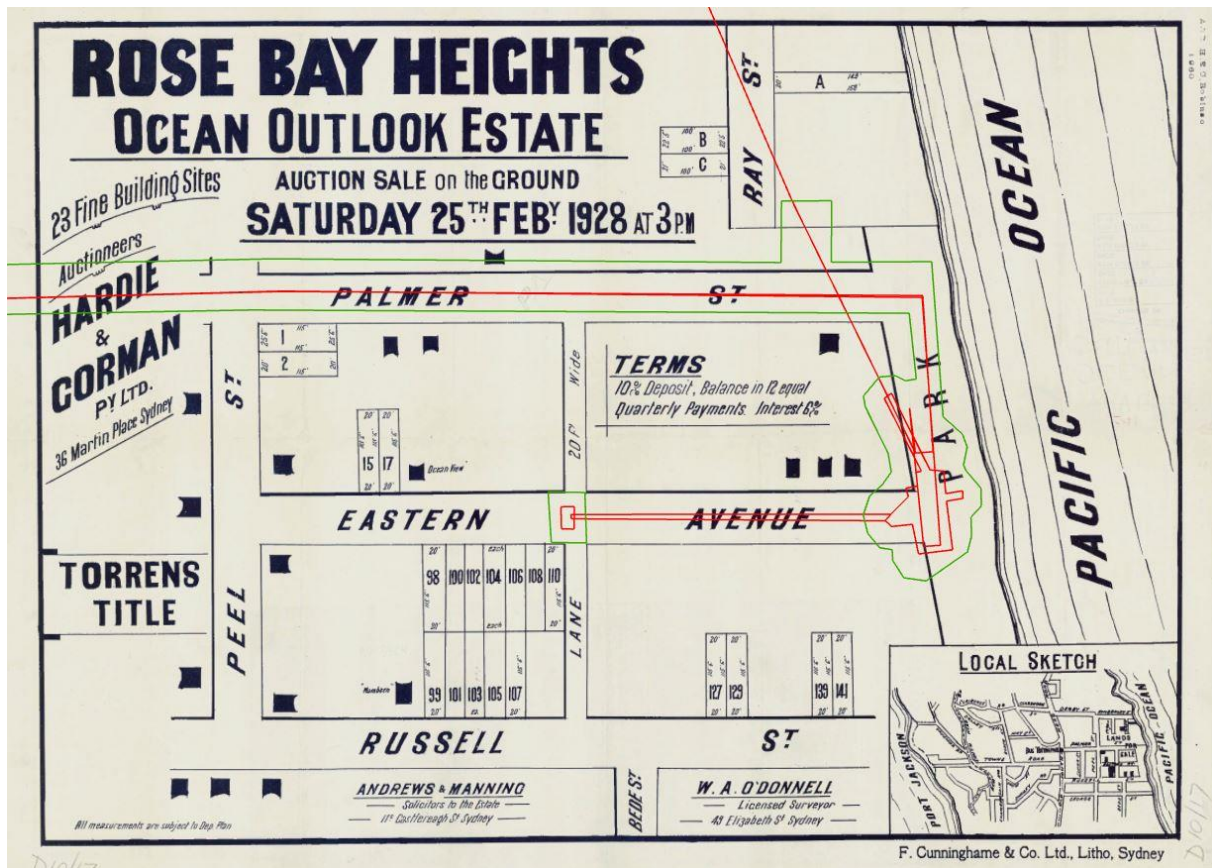


Figure 4-11. Subdivision plan for Rose Bay Heights, Ocean Outlook Estate – showing Peel St, Russell St, Palmer St (now Oceanview Avenue), Eastern Ave, Bede St, Ray St in 1928. The indicative location of the study area is outlined in red and green Source. State Library of NSW.



Figure 4-12. Eastern Avenue, Dover Heights, looking east towards the ocean in 1930. Source. Waverley Library.



**Figure 4-13. Aerial Imagery of Dover Heights, 1943 showing the extent of development at the time, including a large residence now occupied by Seidler's Diamond Bay apartments (circled), Source: SixMaps.**

#### 4.4.3 Mid-20th century development

Although the majority of land within the study area and Dover Heights has remained largely intact and true to its original layout, it underwent some significant development following the Second World War. This primarily comprised of the demolition of 19th century residences and construction of contemporary homes and apartments.

##### 4.4.3.1 33 Kimberley Street, Vaucluse

The most prominent and substantial example of this re-development occurred in 1962/3 when Harry Seidler's 10-storey Diamond Bay apartment block was established at 33 Kimberley Street (shown in Figure 4-14). The building, which houses 60 apartments is considered one of Seidler's major works<sup>60</sup> and was designed and built during Sydney's 1960s development boom.

The apartment block replaced a large residence and grounds that occupied a triangular shaped lot bounded by Kimberley Street to the south, the escarpment to the north and east and residential subdivisions to the west, as shown in an aerial photograph taken of the area in 1943 (Figure 4-13). The property was bordered on either side by what may have been a stone wall. Evidence of a wall and other landscape modifications such as steps chiselled into sandstone outcrops were identified during the site inspection for this SoHI (Section 5.3). These may represent the only surviving evidence of the property in the area. At the time the 1943 aerial photograph was taken, the property was in the ownership of George Saunders, a bookmaker and Zionist,<sup>61</sup> and his wife Sophia.<sup>62</sup>

<sup>60</sup> NSW Government, 2010. Major works of Harry Seidler. Accessed online at: [http://www.teachingheritage.nsw.edu.au/section07/wc1\\_seidworks.php](http://www.teachingheritage.nsw.edu.au/section07/wc1_seidworks.php) on 12/12/2019.

<sup>61</sup> Land Registry Services, NSW Certificate of Title, Application Number 139, Register Book Vol. 4601 Fol. 11.

<sup>62</sup> The Hebrew Standard of Australasia, Thu 5 May 1938. UNION OF SYDNEY ZIONISTS, p. 5.



George passed away in 1953 and was survived by Sophia and his son John Milman. His residence was recorded as 33 Kimberley Street, suggesting the family continued to reside in the house until this date.<sup>63</sup> Details regarding the construction date of the former 33 Kimberley Street property are unknown.



**Figure 4-14. Harry Seidler's Diamond Bay Apartments, Dover Heights in 1962, photographed by Max Dupain Source. National Gallery of Australia.**

<sup>63</sup> The Sydney Morning Herald Wed 4 Feb 1953, Family Notices, p. 28.

## 5.0 PHYSICAL CONTEXT

### 5.1 Introduction

An inspection of the study area was undertaken by Adele Zubrzycka (Senior Heritage Consultant, Artefact Heritage) and Sarah Hawkins (Heritage Consultant, Artefact Heritage) on Friday 6 December 2019. The inspection was carried out on foot and a photographic record was made.

The aim of the inspection was to assess any potential direct and indirect impacts to listed and unlisted heritage items in the study area, within view of the study area and/or in close proximity to the construction locations. Evidence for potential archaeological remains within the study area was also investigated.

The route of the study area was followed south from its northern extent in Parsley Bay, Vaucluse to its southern extent at Dover Road, Rose Bay.

Unlisted heritage items identified during site inspection area shown in Figure 5-43, Figure 5-44 and Figure 5-45.

### 5.2 Parsley Bay

Parsley Bay is located at the northern extent of the study area, and comprises of Parsley Bay Beach, Parsley Bay Reserve (Figure 5-1 and Figure 5-2), a carpark, café/kiosk, children's playground, and a gully area with lower canopy vegetation and walking tracks along either side of a narrow creek (Figure 5-9 - Figure 5-14). Parsley Bay is bordered on either side by the natural sandstone cliff faces, which are occupied by late-19th, 20th and 21st century houses (Figure 5-3). A clifftop walk is present along the northern side of the Bay, leading to the residential development and a jetty. The Australasian Underwater Cultural Heritage Database (ID no. 10979), Woollahra LEP 2015 (I356), Sydney REP 2005 listed West Parsley Bay obelisk (Item no. 44) occupies the western side of Parsley Bay, and is shown in Figure 5-3.

Parsley Bay features a shark net at the western extent of the bay, which is included in the RNE listing for the Parsley Bay Swimming Enclosure (item no. 103518), and separates the swimming areas of the bay from the area in which boats are moored. The suspension bridge, listed on the Woollahra LEP 2012 (I386), is a cable suspension bridge dating to 1905 and has significant views into Parsley Bay and out towards the Harbour. The bridge is painted white, includes a timber decking platform, and identical timber towers symmetrically placed at either end (Figure 5-7 and Figure 5-8).

Parsley Bay Beach is located at the north-western side of the reserve, and is separated from the grassed area by a low sandstone retaining wall with steps, which may represent an original element of the reserve and land reclamation activities.

The reserve itself features a large grassed area with mature established trees, including eucalypts and fig trees, and sandstone outcrops on either side. A modern children's playground is established at the boundary of the grassed reserve, carpark, and gully. Landscape modification in the form of steps chiselled into sandstone bedrock was identified along the eastern periphery of the reserve in this area, also shown in Figure 5-14.

Within the carpark an amenities building likely from the post-war period to late 20th century is extant (Figure 5-6), and is constructed from machine-pressed bricks on a sandstone wall and is accessible by a ramp. At the eastern extent of the carpark and amenities building is the gully which includes a narrow creek, several timber bridges crossing the creek (Figure 5-9 and Figure 5-13), and extensive sandstone outcrops including worked sandstone and modified bedrock featuring a carved surveyor's mark (Figure 5-10).

Heritage listed items within the study area's 50 metre buffer zone comprise of the Woollahra LEP 2012 heritage listed 3 Forest Red Gums, Sydney Pink Gum located along Parsley Road and House and interiors located at 80A Hopetoun Avenue, Vaucluse, shown in Figure 5-15 and Figure 5-16, respectively.

### 5.2.1 Findings

A total of two unlisted heritage items were identified during the site inspection:

- Surveyors mark, Parsley Bay Reserve Gully (Figure 5-10, Figure 5-11 and Figure 5-43)
- Landscape modifications (chiselled stairs) - Parsley Bay Reserve (Figure 5-14 and Figure 5-43)

No evidence of potential archaeological remains within the Reserve was identified during the site inspection.



**Figure 5-1. Parsley Bay Reserve, viewed from the Woollahra LEP 2014 heritage listed *Suspension Footbridge* (I386).**



**Figure 5-2. Grassed area in the Parsley Bay Reserve, looking southeast towards the kiosk and children's playground.**



**Figure 5-3. View northwest towards Parsley Bay, surrounding residences and the heritage listed West Parsley Bay obelisk indicated with the red arrow.**



**Figure 5-4. Example of residences located along the north-eastern edge of Parsley Bay.**





Figure 5-5. The Parsley Bay Kiosk constructed in 1910.



Figure 5-6. The existing toilet block at Parsley Bay Reserve.



Figure 5-7. View west along the Woollahra LEP 2014 heritage listed *Suspension Footbridge* (I386).



Figure 5-8. View of the Woollahra LEP 2014 heritage listed *Suspension Footbridge* (I386) and study area from the Parsley Bay Reserve.



Figure 5-9. General nature of the Parsley Bay Reserve gully looking south towards the waterfall.



Figure 5-10. Detail of surveyor's mark located on sandstone boulder along the north-western edge of the Parsley Bay Reserve gully.





Figure 5-11. General view of boulder associated with the surveyor's mark along the north-western edge of the Parsley Bay Reserve gully.



Figure 5-12. Detail of existing paths within the Parsley Bay Reserve gully.



Figure 5-13. Decorative posts located at the entrance to the Parsley Bay Reserve gully.



Figure 5-14. Example of steps chiselled into sandstone outcrop within the northern periphery of Parsley Bay Reserve.



Figure 5-15. Woollahra LEP 2012 heritage listed 3 *Forest Red Gums*, *Sydney Pink Gum* occupying Parsley Road, within the study area's buffer zone.



Figure 5-16. Woollahra LEP 2012 heritage listed *House and interiors* located at 80A Hopetoun Avenue, Vaucluse, within the study area's buffer zone.

### 5.3 Oceanview Avenue and Ocean Sandstone Escarpment Conservation Areas, Vaucluse and Diamond Bay

The eastern portion of the study area include Eastern Avenue and Oceanview Avenue, Dover Heights and properties facing onto Kimberley Street and Craig Street, Vaucluse. This includes the rear of 33 Kimberley Street, Vaucluse – Harry Seidler's Diamond Bay apartments.

The Dover Heights portion of the study area passes through the Oceanview Avenue Conservation Area (C54) and the Ocean Sandstone Escarpment Conservation Area (C37), both listed on the Waverley LEP 2012. Oceanview Avenue is an east-west aligned road with a steep decline towards the reserve and sandstone escarpment at the eastern extent of the study area (Figure 5-17 and Figure 5-18). The descent of the street enables an uninterrupted view towards the Pacific Ocean from the western extent of the road. The road is sealed with modern asphalt and concrete kerbs, with no sandstone kerbing noted within the conservation area. Utility and service pits were observed within the road corridor and road reserve.

Private dwellings on either side of the conservation area are primarily comprised of 20th and 21st century houses, featuring Spanish Revival, Inter-War, Post-War and 21st century modern and contemporary architectural styles. Eastern Avenue and Oceanview Avenue lead to Eastern Avenue Reserve and the Ocean Sandstone Escarpment Conservation Area (C37), which is bordered by a white picket fence and gates. The proposed pumping station would be located in this area.

The escarpment reserve is grassed, with several sandstone outcroppings evident close to the cliff edge. A metal fence borders the western side of the reserve, separating the sandstone cliff-face from the grassed area. Extensive native vegetation has been planted along the fence.

As the escarpment curves to the northwest, towards Craig Avenue, access along the cliff is made via an elevated timber deck and stairs which are located within the study area (Figure 5-25). The timber stairs extend over a rugged portion of the escarpment which contains features associated with early land use comprising of a doorway constructed of sandstone blocks (Figure 5-24) and stairs chiselled into the bedrock (Figure 5-25). The rear of properties which front onto Craig Avenue, Ray Street and Kimberley Street comprise of a range of architectural styles dating to the 20th and 21st centuries.

The heritage listed houses at 7 Ethel Street (Figure 5-30) and 313 Military Road (Figure 5-29) were both inspected, and were both determined to have been modified and to not have significant views towards the study area or ground disturbance footprint.

#### 5.3.1 Findings

A total of two unlisted heritage items were identified during the site inspection:

- Sandstone doorway - Sandstone Escarpment (Figure 5-24)
- Landscape modifications (chiselled stairs) - Sandstone Escarpment (Figure 5-25)

These may represent architectural features and landscape modifications associated with the former property at 33 Kimberley Street, Vaucluse, now occupied by Seidler's Diamond Bay apartments (Figure 5-23).

No evidence of potential archaeological remains within this portion of the study area were identified during the site inspection.





Figure 5-17. View east along Eastern Avenue looking towards the study area and Coastal Sandstone Escarpment Conservation Area (C37).



Figure 5-18. View west from the Coastal Sandstone Escarpment Conservation Area (C37) towards Eastern Avenue and its associated residential development and fence.



Figure 5-19. View north towards the study area and the Coastal Sandstone Escarpment Conservation Area (C37) showing the general nature of the landscape.



Figure 5-20. View south towards the study area and Coastal Sandstone Escarpment Conservation Area (C37) showing the general nature of the landscape.



Figure 5-21. Detail of sandstone outcrops within the Coastal Sandstone Escarpment Conservation Area (C37).

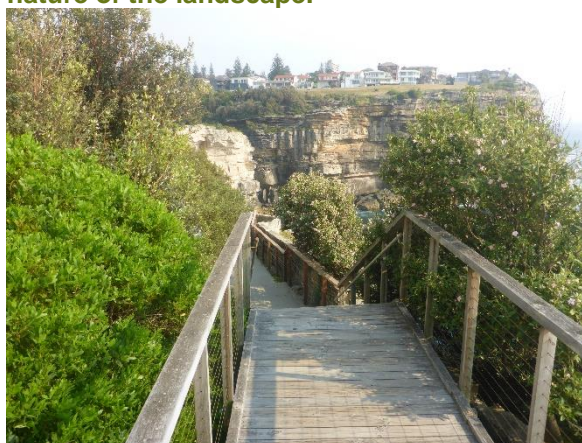


Figure 5-22. View north-west of existing elevated deck and stairs within the study area and Coastal Sandstone Escarpment Conservation Area (C37)





Figure 5-23. View south-west towards the study area and *Coastal Sandstone Escarpment Conservation Area (C37)*. Harry Seidler's Diamond Bay apartments can be seen in the background.



Figure 5-24. Example of sandstone doorway along the *Coastal Sandstone Escarpment Conservation Area (C37)*, possibly associated with the former property at 33 Kimberley Street, Vaucluse.



Figure 5-25. Example of chiselled stairs situated along the public walkway and *Coastal Sandstone Escarpment Conservation Area (C37)* possibly associated with the former property at 33 Kimberley Street, Vaucluse.



Figure 5-26. View south towards the study area and rear of Craig Avenue residences from the *Coastal Sandstone Escarpment Conservation Area (C37)*.



Figure 5-27. View west along Oceanview Avenue towards the study area and *Oceanview Avenue Conservation Area (C54)* showing general nature of the road corridor and surrounding development.



Figure 5-28. View east along the *Oceanview Avenue Conservation Area (C54)* towards the *Coastal Sandstone Escarpment Conservation Area (C37)*.



**Figure 5-29. Waverley LEP 2012 listed 1930s style bungalow (I441) at 313 Military Road, Vaucluse.**



**Figure 5-30. Waverley LEP 2012 listed 1950s House (I438) at 7 Ethel Street, Vaucluse.**

## 5.4 Parsley Road, Vaucluse to Farleigh Avenue, Rose Bay

This portion of the study area comprises a trenchless section of the project, where no open cut trenching or other excavation would occur. It encompasses an approximately 1.8 kilometre long, north/south aligned route which runs below the suburbs of Vaucluse, Dover Heights and Rose Bay, between Parsley Bay, Vaucluse and Dover Road, Rose Bay.

The alignment route was not investigated in full, however heritage listed items along the route were inspected. These consist of the following:

- Vaucluse House - SHR (00955), Woollahra LEP 2014 (I408) and RNE (2502), shown in Figure 5-31 and Figure 5-32
- Reservoir No 120 and Reservoir No 121 – RNE (102243), shown in Figure 5-33

### 5.4.1 Vaucluse House

The portion of the SHR, LEP and RNE curtilage located on either side of the study area comprises of Petrarch Avenue and an avenue of trees occupying either side of the Petrarch Avenue road corridor and a pedestrian path leading west towards Vaucluse House (Figure 5-31 and Figure 5-32).

### 5.4.2 Reservoir No 120 and Reservoir No 121

The Clairvaux Street reservoirs are listed on the Register of the National Estate and include two reservoirs: the below-ground Reservoir No. 120 and the above ground reinforced concrete Reservoir No 121. The reservoirs are enclosed behind a tall metal fence and are located on an otherwise vacant block with grassed lawns and limited vegetation. The above ground Reservoir is shown in Figure 5-33.

### 5.4.3 Findings

No evidence of potential archaeological remains or unlisted heritage items were identified within this portion of the study area during the site inspection.

Both heritage listed items located in close proximity to the study area comprise of above ground structures with the exception of the RNE listed Reservoir No 120.





**Figure 5-31. View northwest towards Petrarch Avenue and the SHR (00955), Woollahra LEP 2014 (I408) and RNE (2502) listed curtilage for Vaucluse House.**



**Figure 5-32. View southeast towards Petrarch Avenue and the SHR (00955) curtilage for Vaucluse House.**



**Figure 5-33. The RNE listed Reservoir No 121 viewed from Clairvaux Road.**



**Figure 5-34. View east towards the RNE listed Reservoir No 120 and Reservoir No 121 (102243) from Clairvaux Road.**

#### 5.4.4 Dover Road and Carlisle Street, Rose Bay

Dover Road is an east to west aligned sealed road with concrete kerbing. The street features several trees, mostly in private properties but medium-sized plantings are located along the street within the council strip. Located at 30 Dover Road is 'Electricity Substation No. 94', listed on the Ausgrid s170 heritage register. The building appears to be an Inter-War single storey private house, with no visible evidence of its function as a substation visible from the street.

Carlisle Street is north-east to south-west aligned and steeply inclines to the north. Private dwellings included a range of 20th and 21st century architectural styles, including modern terrace/apartment buildings. Public buildings on Carlisle Street also included the St Andrew's Scots Presbyterian Church at the intersection of Dover Road, and the McAuley Catholic Primary School. At the south-western end of Carlisle Street sandstone kerbing was noted on both sides of the road (Figure 5-37 and Figure 5-38). The remainder of the street contains modern concrete kerbs (Figure 5-39 and Figure 5-40). Established eucalyptus trees were present.

#### 5.4.5 Findings

One unlisted heritage item was identified during the site inspection:

- Sandstone kerbs, Carlisle Street (Figure 5-37 and Figure 5-38)

No evidence of potential archaeological remains within this portion of the study area were identified during the site inspection.

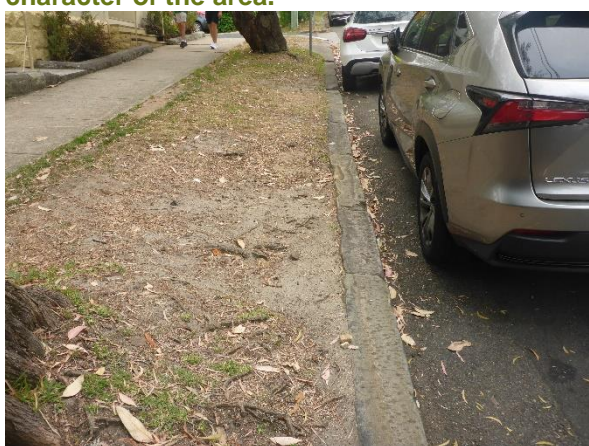




**Figure 5-35. View north along Carlisle Street towards the study area showing general character of the area.**



**Figure 5-36. Example of residential housing on Carlisle Street and established trees flanking the road corridor.**



**Figure 5-37. Example of sandstone kerbs along the southern end of Carlisle Street.**



**Figure 5-38. Detail of sandstone kerbs along the southern end of Carlisle Street**



**Figure 5-39. Example of concrete kerbs along the northern end of Carlisle Street.**



**Figure 5-40. Example of concrete kerbs along the northern end of Carlisle Street.**

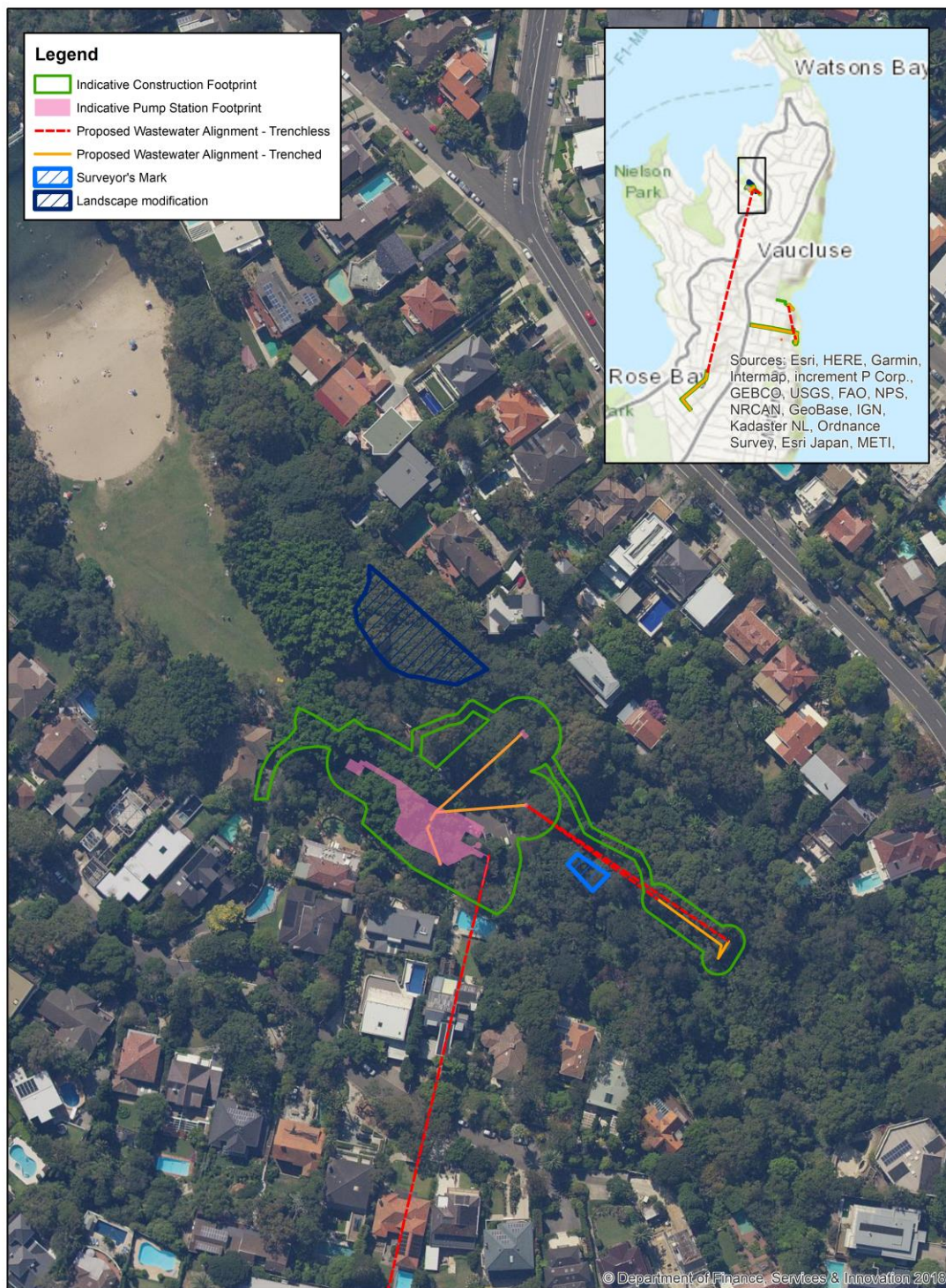


**Figure 5-41. General view south along portion of Dover Road within the study area.**



**Figure 5-42. Example of residential development along Dover Road with the study area, viewed from Carlisle Street.**





**Unlisted heritage items - Parsley Bay**  
19174 Vaucluse Diamond Bay Outfalls SoHI  
LGA: Woollahra

SCALE 1:1,600  
SIZE A4  
DATE 6/04/2020

0 30 60 m



Figure 5-43. Unlisted heritage items identified in Parsley Bay.





**Unlisted heritage items - Dover Heights**  
**19174 Vaucluse Diamond Bay Outfalls SoHI**  
LGA: Waverley

SCALE 1:1,000  
SIZE A4  
DATE 6/04/2020

0 20 40 m



Figure 5-44. Unlisted heritage items identified in Dover Heights/Vaucluse.





Document Path: D:\GIS\GIS\_Mapping\19174 Vaucluse Diamond Bay\MXD\Unlisted items Rose Bay\_v3\_200406.mxd



**Unlisted heritage items - Rose Bay**  
19174 Vaucluse Diamond Bay Outfalls SoHI  
LGA: Woollahra

SCALE 1:2,000  
SIZE A4  
DATE 6/04/2020

0 40 80 m



Figure 5-45. Unlisted heritage items identified in Rose Bay.



## 6.0 SIGNIFICANCE ASSESSMENT

### 6.1 Introduction

The following section provides an overview description and statement of significance for heritage items within the study area or its 100 metre buffer zone.

Information for each item has been extracted from their respective State Heritage Inventory database listings on their website and any other relevant heritage resources. Where these significance descriptions are incomplete Artefact have updated the assessments of significance for these items.

In-depth significance assessments for each item are provided in Appendix A and assessed against the criteria outlined in the *NSW Heritage Manual: Assessing heritage significance* (NSW Heritage Office 2001), shown in Table 2.1.

### 6.2 Listed heritage items within the study area

#### 6.2.1 Parsley Bay Swimming Enclosure

The Parsley Bay Swimming enclosure is listed on the RNE (item no. 103518) as an indicative place. It is about 200 m north-west of the study area.

**Table 6.1. Statement of Significance for Parsley Bay Swimming Enclosure**

Parsley Bay Swimming Enclosure <sup>64</sup>	
<b>Significance</b>	Not recorded
<b>Description</b>	<i>The pool has been simply formed by the installation of a nylon net mesh stretching from shore to shore and effectively enclosing half of Parsley Bay. Little else has been done to modify the inlet with the exception of a low sandstone seawall at the edge of the park. A 1200mm wide concrete path has been provided on the eastern side of the bay which appears to have been recently resurfaced and upgraded. Ramped and stepped access points have been located at various points along the walkway. At the southern end of the pool there is a broad, gently graded sandy beach giving people the opportunity to sit on the beach or on the nearby turf of the park. Facilities for the pool are shared with the park. The only remnant of earlier nets are previous fixing points for steel cables that are no longer in use. Generally the area seems well patronised and well maintained.</i>
<b>Statement of significance</b>	<i>The pool has significance for the following reasons; it has high aesthetic value resulting from its siting and use of natural landforms to create a sense of enclosure; it has been a popular and well-used facility for many generations; and it is one of a few examples where a large portion of the foreshore has been enclosed to form a swimming area of large proportions.</i>

<sup>64</sup> Australian Heritage Database, n.d. 'Parsley Bay Swimming Enclosure, Horler Av, Vaucluse, NSW, Australia.' *Australian Heritage Database Place Details*. Accessed online 5/12/2019 at: [http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place\\_detail;search=town%3Dvaucluse%3Bkeyword\\_PD%3Don%3Bkeyword\\_SS%3Don%3Bkeyword\\_PH%3Don%3Blatitude\\_1dir%3DS%3Blongitude\\_1dir%3DE%3Blongitude\\_2dir%3DE%3Blatitude\\_2dir%3DS%3Bin\\_region%3Dpart;place\\_id=103518](http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=town%3Dvaucluse%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=103518)

### 6.2.2 Suspension Footbridge

The Suspension Footbridge is listed on the Woollahra LEP 2014 (item no. I386) as a locally significant item. It is about 200 m north-west of the study area.

**Table 6.2. Statement of Significance for Suspension Footbridge (Woollahra LEP 2014)**

Parsley Bay Swimming Enclosure	
<b>Significance</b>	Local
<b>Description</b>	<p>The Suspension Footbridge was constructed in 1910 at a cost of £500 to enable pedestrian access across Parsley Bay. It was designed by Town Clerk and Engineer Edwin Sautelle, who would go on to become the Woollahra Alderman.<sup>65</sup></p> <p>The footbridge comprises of a cable suspension bridge constructed with timber planked walkway suspended by heavy wire ropes, cables and steel rod hangers from four free standing twin posts. The span between each post is 40 metres and the walkway's total length is 60 metres. At high tide it is 5 metres above the water level. Posts for the bridge are supported by concrete pad footings set on the underlying rock shelf.<sup>66</sup></p>
<b>Statement of significance</b>	<i>The suspension bridge at Parsley Bay is the only example of its type in Sydney. It has considerable social interest and continues to fulfil a useful function. The bridge has significant visual and technological significance as a charming example of a characteristics period design.</i> <sup>67</sup>

### 6.2.3 Oceanview Avenue Conservation Area

The Oceanview Avenue Conservation Area is listed on the Waverley LEP 2012 (item no. C54) as the Oceanview Avenue (east of Military Road) Landscape Conservation Area. The study area is located within its heritage curtilage.

**Table 6.3. Statement of Significance for Oceanview Avenue Conservation Area**

Oceanview Avenue Conservation Area <sup>68</sup>	
<b>Significance</b>	Local
<b>Description</b>	<p>The Oceanview Avenue (east of Military Road) Landscape Conservation Area comprises 230 metres of the Oceanview Avenue road corridor between Military Road (to the east) and the Waverley LEP 2012 listed Coastal Sandstone Escarpment Landscape Conservation Area (C37), to the west. It is located in the suburb of Dover Heights. It is bounded by residential development to the north and south and slopes steeply to the west, providing unobstructed views towards the Pacific Ocean.</p> <p>The SHI listing for the item includes the following description: <i>Avenue planting of New Zealand Christmas trees, now reaching 7m high. Tree selection typical for coastal areas in period c. 1965-1970, preceding emphasis on local native species. Vista down street to ocean.</i></p>
<b>Statement of significance</b>	<i>Tree planting in exposed coastal situation, characteristic of the late 1960's. Local significance.</i>

<sup>65</sup> Woollahra Library Local History Centre, June 2005. *Parsley Bay Reserve*. Accessed online at: [https://www.woollahra.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0018/16272/Parsley\\_Bay\\_Reserve\\_Web.pdf](https://www.woollahra.nsw.gov.au/__data/assets/pdf_file/0018/16272/Parsley_Bay_Reserve_Web.pdf) on 11/12/2019.

<sup>66</sup> This information has been derived from the Woollahra Heritage Studied prepared in 1984 by Hughes, Trueman, Ludlow Pty Ltd with Howard Tanner and Associated Pty Ltd with Prof Iain Jack and William Ashton for *Parsley Bay Suspension Bridge*. Provided to Artefact Heritage by Woollahra Council on 11/12/2019.

<sup>67</sup> Ibid.

<sup>68</sup> The following statement of significance and description has been derived from the SHI inventory listing for Street Trees. Accessed online at 17/01/2020 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620330>

#### 6.2.4 Sandstone Escarpment Conservation Area

The Sandstone Escarpment Conservation Area is listed on the Waverley LEP 2012 (item no. C37) and located between Clark Reserve (Diamond Bay) and Rodney Reserve, Dover Heights. The study area is located within its heritage curtilage.

**Table 6.4. Statement of significance for the Sandstone Escarpment Conservation Area**

Sandstone Escarpment Conservation Area <sup>69</sup>	
<b>Significance</b>	Local
<b>Description</b>	<i>Southern escarpment of Sydney's coastline. Great sandstone cliffs up to 80m above sea. Some native vegetation still remains on clifftops in small patches often being overrun by weeds. Otherwise native vegetation completely devoid in this area. Some replanting with local species in recent years is noticeable. The exposed sandstone base-rock geology derives from the Triassic period (20 million years ago). Rosa Gully reserve has natural sandstone rock shelves and some sympathetic native planting (though this could be extended). The overpowering presence of an eleven storey building on the cliff edge is regrettable. Bulga Road Reserve and Lancaster Road Reserve include views of cliffs to north, and remnant Banksia ericifolia and Westringia rosmarinifolia.</i>
<b>Statement of Significance</b>	<i>Natural landscape escarpment of considerable scenic value. Part of the character of Sydney's eastern beaches and foreshore. Regional significance.</i>

#### 6.2.5 Diamond Bay Outfalls (No. 1 & No. 2)

The Diamond Bay Outfalls (No. 1 & No. 2) item is listed on the Sydney Water s170 register (SHI 4574204). Each outfall is located on the Diamond Bay cliff face, with No. 1 located beneath Kimberley Street and outfall No. 2 located beneath Oceanview Avenue with its curtilage defined as the rockface outfall and the associated pipeline. This is shown in Figure 3-3.

**Table 6.5. Statement of significance for the Diamond Bay Outfalls**

Diamond Bay Outfalls (No. 1 & No. 2) <sup>70</sup>	
<b>Significance</b>	Local
<b>Description</b>	<i>The two Diamond Bay outfalls are comparatively small. Due to the solid nature of the sandstone cliffs near vertical holes were bored down to rock ledges. The bores did not need concrete lining. From the rock shelf the sewerage enters the ocean by means of a shaft and then via a tunnel to the ocean. The No. 2 outfall also has a 300 mm cast iron pipe which is encased in concrete at the point where it meets the ocean.</i>  <i>The operational curtilage of this item is defined by its width and length of the structure, and includes all structural elements of the outfall.</i>
<b>Statement of Significance</b>	<i>Diamond Outfall is one of six smaller systems which services the metropolitan region of Sydney which functioned along with the three major systems which serviced the city (BOOS, SWOOS and NSOOS). It was one of three ocean outfalls that did not treat sewerage prior to disposal. The</i>

<sup>69</sup> The following statement of significance and description has been derived from the SHI inventory listing for Coastal Sandstone Escarpment. Accessed online at 11/12/2019 at:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620400>.

<sup>70</sup> NSW Office of Environment and Heritage, 2000. 'Diamond Bay Outfalls (No. 1 & No. 2).' Accessed online 17/1/2020 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?id=4574204>



## Diamond Bay Outfalls (No. 1 & No. 2)<sup>70</sup>

*other two were Vaucluse and Manly. Cronulla was the other minor ocean outfall that actually treated sewerage before disposal.*

*The outfalls present little in visual impact to the surrounding area as the outfall locations are not readily accessible. The curtilage of the outfalls is defined as the rockface outfalls and the associated pipeworks.*

### 6.2.6 Vaucluse Outfall

Vaucluse Outfall is listed on the Sydney Water s170 register (SHI 4574203). It is located on Old South Head Road below Christison Park with its curtilage defined as the rockface outfall and the associated pipeline. This is shown in Figure 3-2.

**Table 6.6. Statement of significance for Vaucluse Outfall**

Vaucluse Outfall <sup>71</sup>	
<b>Significance</b>	Local
<b>Description</b>	<p><i>The original outfall was 3' 3" x 2' 2" decreasing to 2' 1" x 1' 6.5". The outfall is constructed of brick and concrete. The outfall area is 3 feet in diameter. The main sewer extends from Parsley park to Wentworth Road, near Vaucluse Park. The Watsons Bay branch extends from the main sewer in Parsley Bay Reserve along the foreshore at Cliff Street, Watsons Bay.</i></p> <p><i>The outfall is located on the cliff face and is submerged during period of high tide. As such it has very limited visual impact on the surrounding area. There are no vantage points from which the outfall can be readily observed from.</i></p> <p><i>There are 5 sewage pumping stations within the Vaucluse system which collect and lift the sewage to gravitational sewers for ultimate discharge at the outfall. They are SPS49 (constructed in 192), SPS 50 (1923), SPS 51 (1922), SPS 114E (1938) and SPS 188E (1956).</i></p>
<b>Statement of Significance</b>	<p><i>Vaucluse Outfall is one of six smaller systems which services the metropolitan region of Sydney which functioned along with the three major systems which serviced the city (BOOS, SWSOOS and NSOOS). It was one of three ocean outfalls that did not treat sewage prior to disposal. The other two were Diamond Bay (No. 1 and No. 2) and Manly. Cronulla was the other minor ocean outfall system that actually treated sewage before disposal.</i></p>

<sup>71</sup> The following statement of significance and description has been derived from the Sydney Water inventory listing for Vaucluse Outfall Accessed online at 23/01/2020 at: <https://www.sydneywater.com.au/SW/water-the-environment/what-we-re-doing/Heritage-search/heritage-detail/index.htm?heritageid=4574203&FromPage=searchresults>

## 6.3 Unlisted heritage items within the study area

### 6.3.1 Surveyors mark – Parsley Bay Reserve

The surveyors mark at Parsley Bay Reserve is etched on a large stone boulder located on the northern side of the reserve creek, adjacent to the existing track.

**Table 6.7. Statement of significance for Surveyors mark – Parsley Bay Reserve**

Surveyors mark – Parsley Bay Reserve	
<b>Significance</b>	Local
<b>Description</b>	Surveyors Mark engraved into large stone boulder on northern side of Parsley Bay Reserve Creek.
<b>Statement of Significance</b>	The Parsley Bay Reserve Surveyors Mark is significant as a symbol of early settlement and surveying activities in the Vaucluse area.

### 6.3.2 Landscape modification (chiselled steps and doorway) – Sandstone Escarpment, Dover Heights

The chiselled steps and stone doorway form part of the Diamond Bay Cliff Walk and are located within the Sandstone Escarpment Conservation Area.

**Table 6.8. Statement of significance for landscape modifications (chiselled steps and doorway) – Sandstone Escarpment, Dover Heights**

Landscape modifications (chiselled steps and doorway) – Sandstone Escarpment, Dover Heights	
<b>Significance</b>	Local
<b>Description</b>	The chiselled steps are carved into the natural landform of the sandstone cliff face at Diamond Bay, and the stone doorway has been created of remnant sandstone and stands at the edge of the cliff face. The construction of the doorway may be associated with a former mansion standing at the eastern end of Kimberley Street until the mid-20th century when the Diamond Bay apartments were constructed.
<b>Statement of Significance</b>	The chiselled steps at Diamond Bay represent a significant example of landscape modification, demonstrating technical achievement for modifying the sandstone cliff formation and becoming a high contributing element to the setting and character of the cliff walk. The creation of the sandstone doorway and the stairs may be associated with the former mansion located on Kimberley Street. The archway is an interesting example of creating an advantageous viewpoint and the form of the doorway likely draws inspiration from Mediterranean architecture. The Mediterranean influence unintentionally links the doorway to the surrounding Mediterranean Revival architecture present throughout the Dover Heights area.

### 6.3.3 Sandstone kerbs - Carlisle Street

The sandstone kerbs on Carlisle Street are located primarily at the southern extent of the street, notably at the intersection of Dover Road and outside the Presbyterian Church.

**Table 6.9. Statement of significance for sandstone kerbs - Carlisle Street**

Sandstone kerbs - Carlisle Street	
<b>Significance</b>	Local
<b>Description</b>	Rectangular sandstone kerbs located on either side of Carlisle Street, particularly at the southern extent.
<b>Statement of Significance</b>	The sandstone kerbs on Carlisle Street are a significant remnant of the early formation and alignment of roads within the Vaucluse and Rose Bay area, and are linked to early subdivisions in the area from the late 19th and early 20th centuries. Furthermore, the presence of sandstone kerbs, amongst many other features, are often linked to efforts of early local communities and residents to beautify their streets and suburbs.

## 6.4 Items in close proximity to the study area

### 6.4.1 West Parsley Bay obelisk

The West Parsley Bay obelisk enclosure is listed on the Woollahra LEP 2015 (I356), Sydney REP 2005 (item no. 44) and Australian Underwater Cultural Heritage Database (ID number. 10979). It is located 100 metres west of the study area.

**Table 6.10. Statement of Significance for West Parsley Bay obelisk**

West Parsley Bay obelisk	
<b>Significance</b>	Local
<b>Description</b>	The West Parsley Bay obelisk comprises a stone monument occupying the headland on the western side of Parsley Bay. It lines up with an 1850s obelisk located on the eastern side of the bay, which assisted in ship navigation in the 19th century.
<b>Statement of significance</b>	<i>Of environmental significance as part of a group of obelisks in Sydney Harbour. Of historical significance for its associations with the navigation aids employed during the 19th century.<sup>72</sup></i>

<sup>72</sup> Anglin 1990:3013)



## 6.4.2 House and Interiors

The House and interiors is listed on the Woollahra LEP 2014 (item no. I366) and occupies 80A Hopetoun Avenue, Vaucluse. It is located approximately 100 metres southeast of the study area.

**Table 6.11. Statement of significance for House and Interiors**

House and Interiors <sup>73</sup>	
<b>Significance</b>	Local
<b>Description</b>	<p>80A Hopetoun Avenue, Vaucluse, is a two-storey building constructed in the rendered Mediterranean style overlooking Parsley Bay. The site is accessed via a battleaxe drive, arriving at a forecourt designed into the corner of a roughly 'T' shaped building. The roof form displays the stepped gable manner common to the Mediterranean style of domestic architecture. The garage sits under the main floor level, taking advantage of the natural fall across the block.</p> <p>The low-pitched roof is clad in Marseillaise tiles with Spanish style ridge cap tiles. Entry to the house is up a short flight of steps winding around the circular turret. The turret contains the main internal stair and is separately roofed under a segmented 'cap' style structure. The timber multi paned sash windows have a small neat moulded sill run in the tender.</p> <p>The rear of the house has been substantially modified through the construction of a deck, garden and studio rooms at garage level, the addition of a pool along with major landscaping works including a new colonnade.</p>
<b>Statement of significance</b>	<p>80A Hopetoun Avenue, Vaucluse, is a significant building as part of the body of residential works in the Mediterranean Revival style carried out by the English architect Leslie Wilkinson in the Woollahra area during the Inter War period. Wilkinson was one of the most influential architects of the Inter War period in Australia, in particular in his approach to domestic architecture and its response to the climate.</p> <p>Whilst this building has been compromised through alterations and additions carried out since 1975 it still retains a high degree of significance as an identifiable Wilkinson design. The elements of the Mediterranean style design which are of a high degree of aesthetic significance include the entry elevation and forecourt, the general form, detailing and choice of materials and finishes. The building contains a moderate degree of social significance as an example of the group of Wilkinson houses, which help make up the built character of the Woollahra area. 80A Hopetoun Avenue contains a moderate degree of technical significance for its ability to demonstrate Wilkinson's detailing and construction techniques.</p>

<sup>73</sup> OEHL, 2004. 'House.' NSW Office of Environment and Heritage. Accessed online 5/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2711182>

### 6.4.3 3 Forest Red Gums, Sydney Pink Gum

The three Forest Red Gums, Sydney Pink Gum are listed on the Woollahra LEP 2014 (I388) and occupy Parsley Road, Vaucluse within the road reserve. They are located at the addresses of 5 Parsley Road (Red Gum), 10 Parsley Road (Red Gum), 11 Parsley Road (Red Gum); 15 Parsley Road (Pink Gum), and at 21 Parsley Road (Pink Gum and Red Gum), immediately west of the study area.

**Table 6.12. Statement of significance for 3 Forest Red Gums, Sydney Pink Gum**

3 Forest Red Gums, Sydney Pink Gum <sup>74</sup>	
<b>Significance</b>	Local
<b>Description</b>	The three Forest Red Gums, Sydney Pink Gum are located along Parsley Bay Road, Vaucluse on either side of the road corridor. They represent Indigenous remnant street trees and were first identified as items of heritage significance in 1991 when they were registered on the Woollahra Municipal Council's <i>Register of Significant Trees</i> .
<b>Statement of significance</b>	<p><i>This area would have originally supported a complex vegetation community including linoral and depauperate rain forest elements. The richer shale derived soils, topping sandstone in the Vaucluse Bay area, still for the basis of the Municipality's only remaining Forest Red Gum (Eucalyptus tereticornis) dominated forest. Swamp Mahogany (E. robusta), Turpentine (Syncarpia glommulifera) and Sydney Pink Gum (Angophora costata) are important co-dominants, the latter becoming dominant further up the valley slopes near Nielsen Park on Hawkesbury Sandstone.</i></p> <p><i>These Street Trees are located in a random layout along the lawn verges of the listed streets. Together with the indigenous trees listed on adjacent properties, they form significantly the largest single component of the Municipality's remaining indigenous trees outside the major parks such as Vaucluse Park, Nielsen Park, Parsley Bay Reserve and Cooper Park.</i></p>

<sup>74</sup> This information has been derived from the Woollahra Municipal Council's *Register of Significant Trees* data sheet prepared on 22/5/1991 for the Parsley Bay/Vaucluse Bay/Nelsen Park Precinct: Indigenous Remnant Trees. Provided by Woollahra Council on 10/12/2019.

#### 6.4.4 Vaucluse House

The portion of the Vaucluse House heritage curtilage within the study area is listed on the SHR (00955). The SHR listing for the item includes the house itself, along with its associated buildings, gardens, landscapes and plantings. Vaucluse House is located approximately 450 metres east of the study area.

Tunnelling for the project will occur below Petrarch Avenue, in a portion of the Hopetoun Avenue road corridor excluded from the item's SHR curtilage. The SHR curtilage is located approximately 10 metres outside of the study area.

**Table 6.13. Statement of significance and description for Vaucluse House**

Vaucluse House <sup>75</sup>	
<b>Significance</b>	State
<b>Description</b>	<p><i>Vaucluse House includes expensive grounds with several precincts, including the main entry, 'pleasure garden', pastoral land, vineyard and orchard, the former orangery, vegetable/kitchen gardens, and the bushland vegetation. The garden area retains remnant indigenous plantings, original drive and path layouts, and the 19<sup>th</sup> century garden with lawn, shrubbery and carriage loop. Plants throughout the garden include imported species from the Americas, Europe and Asia.</i></p> <p><i>Vaucluse House is a Gothic style residence built around a smaller house dating to 1805 and expanded over its history until the 1860s. The house features crenelated parapets, turrets and a verandah around three sides of the house. Outbuildings include a scullery, dairy, larder, store, cottage, laundry and guardhouse.</i></p>
<b>Statement of Significance</b>	<p><i>Today Vaucluse House is one of the few 19<sup>th</sup> century houses on Sydney Harbour retaining a significant part of its original estate setting. One distinguishing surviving characteristic of the 19<sup>th</sup> century estate is its careful division into specific areas, both functional and ornamental, such as pleasure garden, kitchen garden, rear service yard, paddocks, carriageway, creek, estate backdrop, beach paddock.</i></p> <p><i>Vaucluse House is significant because of its association with the Wentworth family and their aspirations. It has a large collection of surviving original documentary evidence relating to the house, its contents and occupants. There are a number of extant buildings and gardens and the house retains relative intactness of form, interior space and detailing predating 1900.</i></p> <p><i>A large early Victorian garden and shrubbery, laid out to compliment a gothic revival house belonging to the family of the important colonial pioneer and politician W.C. Wentworth.</i></p> <p><i>There appears little early documentation of the garden but it can be presumed to have been designed to complement the mid-19<sup>th</sup> century additions to the house and to have been established by the 1860's.</i></p>

<sup>75</sup> OEH, 2000. 'Vaucluse House.' NSW Office of Environment and Heritage. Accessed online 4/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045008>



#### 6.4.5 Sydney Pink Gum, Swamp Mahogany, Red Mahogany

The Sydney Pink Gum, Swamp Mahogany, Red Mahogany are listed on the Woollahra LEP 2014 (I389) and occupy Petrarch Avenue, Vaucluse within the road reserve.

They are located along the stairs between Olola Avenue and Hopetoun Avenue, immediately west of the study area and east of the Vaucluse House Woollahra LEP 2014 (I408) heritage curtilage.

**Table 6.14. Statement of significance for Sydney Pink Gum, Swamp Mahogany, Red Mahogany**

Sydney Pink Gum, Swamp Mahogany, Red Mahogany <sup>76</sup>	
<b>Significance</b>	Local
<b>Description</b>	The Sydney Pink Gum, Swamp Mahogany, Red Mahogany occupy Petrarch Avenue, Vaucluse and were first identified as items of heritage significance in 1991 when they were registered on the Woollahra Municipal Council's <i>Register of Significant Trees</i> .
<b>Statement of significance</b>	<p><i>This area would have originally supported a complex vegetation community including linoral and depauperate rain forest elements. The richer shale derived soils, topping sandstone in the Vaucluse Bay area, still form the basis of the Municipality's only remaining Forest Red Gum (Eucalyptus tereticornis) dominated forest. Swamp Mahogany (E. robusta), Turpentine (Syncarpia glomulifera) and Sydney Pink Gum (Angophora costata) are important co-dominants, the latter becoming dominant further up the valley slopes near Nielsen Park on Hawkesbury Sandstone.</i></p> <p><i>These Street Trees are located in a random layout along the lawn verges of the listed streets. Together with the indigenous trees listed on adjacent properties, they form significantly the largest single component of the Municipality's remaining indigenous trees outside the major parks such as Vaucluse Park, Nielsen Park, Parsley Bay Reserve and Cooper Park.</i></p>

#### 6.4.6 1950s House

The 1950s House is located at 7 Ethel Street, Vaucluse and listed on the Waverly LEP 2012 (I438). It is located approximately 90 metres north and west of the study area.

**Table 6.15. Statement of significance for '1950s House'**

1950s House <sup>77</sup>	
<b>Significance</b>	Local
<b>Description</b>	<i>Good 1950's house with basement garage. Original garage doors of special note. Large rounded bay on one side. Small concrete window hood continues across and over French doors. All brick parapet.</i>
<b>Statement of Significance</b>	<i>Intact example of 1950's house displaying feature typical of the period. Of special note for the thoughtful integration of the garage into the house, a new concept at this time. Local significance.</i>

<sup>76</sup> Ibid.

<sup>77</sup> OEH, 1999. 'Item'. NSW Office of Environment and Heritage. Accessed online 5/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620137>

#### 6.4.7 1930s style bungalow

The 1930s Style Bungalow is located at 313 Military Road, Vaucluse and listed on the Waverly LEP 2012 (1438). It is located approximately 80 metres north of the study area.

**Table 6.16. Statement of Significance for 1930s style bungalow**

1930s style bungalow or 'Koolperrie' <sup>78</sup>	
<b>Significance</b>	Local
<b>Description</b>	<i>Inter-War Bungalow. Standard double gabled type, probably 1930's. Integrity good except for porch enclosure and lack of maintenance. Liver brick with tiled roof. Half timbered gables with shingled apexes. Solid brick verandah piers. Triple casement windows with good leadlight. Note period wrought iron gates, c. 1950.</i>
<b>Statement of Significance</b>	<i>Good example of a standard 1930's style Bungalow. Many were built in this area but few survive unaltered. Local significance.</i>

#### 6.4.8 Reservoir No 120 and Reservoir No 121

Reservoir No 120 and Reservoir No 121 are listed on the RNE and located north of Clairvaux Road, east of Nulla Street and west of Captain Pipers Road Vaucluse.

They are located approximately 60 metres west of the study area.

**Table 6.17. Statement of Significance for Reservoir No 120 and Reservoir No 121**

Reservoir No 120 and Reservoir No 121 <sup>79</sup>	
<b>Significance</b>	Not recorded
<b>Description</b>	Reservoir 120 was constructed in 1904 as an open circular concrete reservoir, and Reservoir 121 was constructed in 1930 as a reinforced concrete elevated reservoir.
<b>Statement of significance</b>	<p><i>Vaucluse Surface Reservoir is one of the relatively few remaining reservoirs which were built partly in excavation and partly in bank with the concrete wall supported by the surrounding earth. Modern construction methods are quite different.</i></p> <p><i>It is at the end of the line as reservoirs were built progressively eastwards and upwards from Crown Street Reservoir when assured supply became available with the advent of the Upper Nepean Scheme.</i></p> <p><i>Vaucluse Elevated Reservoir became necessary when development finally spread to the highest parts of Vaucluse/Rose Bay area.</i></p> <p><i>Vaucluse Elevated Reservoir is one of the very few elevated reservoirs built entirely with reinforced concrete for support structure, walls, and floor of the tank.</i></p> <p><i>It is an outstanding Sydney landmark, visible from many distance [sic] parts of Sydney with quite an aesthetic appeal.</i></p> <p><i>It has the unusual secondary role in helping define an accurate measured distance out to sea for the calibrating of ships logs and conducting of speed trials.</i></p>

<sup>78</sup> OEH, 1999. 'Koolperrie.' NSW Office of Environment and Heritage. Accessed online 5/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620210>

<sup>79</sup> Australian Heritage Database, n.d. 'Reservoir No 120 and Reservoir No 121, Clairvaux Rd, Vaucluse, NSW, Australia.' *Australian Heritage Database Place Details*. Accessed online 5/12/2019 at: [http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place\\_detail;search=town%3Dvaucluse%3Blist\\_code%3DRNE%3Bkeyword\\_PD%3Don%3Bkeyword\\_SS%3Don%3Bkeyword\\_PH%3Don%3Blatitude\\_1dir%3DS%3Blongitude\\_1dir%3DE%3Blongitude\\_2dir%3DE%3Blatitude\\_2dir%3DS%3Bin\\_region%3Dpart;place\\_id=102243](http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=town%3Dvaucluse%3Blist_code%3DRNE%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=102243)

#### 6.4.9 Electricity Substation No. 94

The Electricity Substation no. 94 is located at 30 Dover Road, Rose Bay and listed on the Ausgrid s170 heritage register (SHI no. 3430453).

It is located immediately north-east of the study area.

**Table 6.18. Statement of significance for Electricity Substation No. 94**

Electricity Substation No. 94 <sup>80</sup>	
<b>Significance</b>	Local
<b>Description</b>	<p><i>The Dover Road substation is a single storey tuck pointed face brick structure with a gabled roof. Designed in the Interwar California Bungalow style. The symmetrical façade is dominated by the gable roof line and timber battened detailing applied to the rendered wall area. A central plant access door is flanked by two multi paned windows and surmounted by a rendered lintel cornice. Other elements include rendered brick buttresses to the street façade and a raised ventilation turret and 'chimney.'</i></p> <p><i>The Dover Road substation is constructed using load bearing face brick and incorporates a hipped roof and cement rendered lintel cornice.</i></p>
<b>Statement of significance</b>	<p><i>The Dover Road substation is a rare and representative example of an Interwar purpose designed building that has features of the Californian Bungalow style evident in the dominating gable roof and timber battened under eaves wall area. It was built by the Municipal Council of Sydney during the period of rapid expansion of the electricity network to the suburbs.</i></p>

<sup>80</sup> OEH, n.d. 'Electricity Substation No. 94.' NSW Office of Environment and Heritage. Accessed online 4/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageltemDetails.aspx?ID=3430453>



## 7.0 ARCHAEOLOGICAL ASSESSMENT

### 7.1 Archaeological potential assessment

This section discusses the study area's potential to contain historical archaeological resources. The potential for the survival of archaeological remains is significantly affected by activities which may have caused ground disturbance. This assessment is therefore based on consideration of current ground conditions, and analysis of the historical development of the study area.

'Archaeological potential' refers to the likelihood that an area contains physical remains associated with an earlier phase of occupation, activity or development of that area. This is distinct from 'archaeological significance' and 'archaeological research potential'. These designations refer to the cultural value of potential archaeological remains and are the primary basis of the recommended management actions included in this document. Identified levels of archaeological potential referred to in this section are based on the definitions outlined in Table 2.2.

Only land subject to open cut, subsurface excavations as a result of the project has been assessed in this section.

#### 7.1.1 Land use summary

The European occupation of the study area has been divided into three general phases of historical activity, which are outlined in Table 7.1 below.

**Table 7.1: Historical land use within the study area**

Phase	Discussion
<b>Phase 1</b> Early land grants and occupation (1788-1830)	<p>The majority of the west Vaucluse and Rose Bay portions of the study area were originally encompassed by grants given to Thomas Laycock, Samuel Breakwell and others in the late 1790s and early 1800s. These were later consolidated and subsequently purchased by William Charles Wentworth in 1827. No structures are known to have occupied land within the study area at this time as the majority of development focussed on Vaucluse House and its immediate grounds, which are located 500 metres – 1.5 kilometres away from the project's construction footprint.</p> <p>Land within the Dover Heights and east Vaucluse portion of the study area was owned by the Crown during this phase, and there is no evidence to suggest it was occupied or used for significant purposes.</p>
<b>Phase 2</b> Subdivisions and grants (1830-1900)	<p>Land within the Vaucluse Estate (west Vaucluse and Rose Bay portions of the study area) was gradually subdivided and purchased by various landholders from the 1830's onwards. Several new roads were established during this phase, including Dover Street and Carlisle Street, Rose Bay. No structures are known to have occupied land within the west Vaucluse and Rose Bay portion of the study area at this time.</p> <p>Land within the Dover Heights and east Vaucluse portion of the study area was surveyed, subdivided and granted to James Harrison, Hughes and Hoskins and Michael Burke in c1854. These grants sat between the newly established Palmer Street (now Oceanview Avenue), Eastern Avenue and Ocean Street (now Kimberley Street).</p> <p>No structures are known to have occupied land within the Eastern Avenue, Oceanview Avenue road corridors or along the escarpment prior to, or during, this period. However, land within James Harrison's grant, now occupied by 33 Kimberley Street, Vaucluse, may have been used for residential purposes, although no cartographic evidence of such land use was found during the preparation of this document.</p>

Phase	Discussion
<b>Phase 3</b> Urbanisation and recreational land (1900-present)	<p>Following the initial subdivision of the first land grants in Vaucluse, Rose Bay and Dover Heights, dense suburban development occurred throughout the study area and has continued into the present. Road surface upgrades and service installation along Dover Street, Carlisle Street, Eastern Avenue, Oceanview Avenue and the Coastal Sandstone Escarpment would have occurred in this period.</p> <p>During the early 1900s parts of Parsley Bay were reclaimed and the beach was formed, with the construction of stone wall and seawall. The first recreational kiosk was built and later demolished. The Japanese Antarctic Expedition camped at Parsley Bay with temporary structures, notably tents. The extant amenities and kiosk buildings were also constructed. There is no evidence to suggest that any of these structures were located within the study area.</p> <p>Land within east Vaucluse, specifically at 33 Kimberley Street, was occupied by a substantial residence and grounds from at least 1943. The residence itself fronted onto Kimberley Street in the same location as the current modern apartment building designed by architect Harry Seidler, which replaced the house in 1962/3. No structures associated with the former residence are located within the study area, with the exception of walls bordering the property's edge, outside the proposed trenching footprint.</p>

## 7.1.2 Previous impacts

### 7.1.2.1 Road corridors

Land within the Oceanview Avenue, Eastern Avenue, Dover Road and Carlisle Street road corridors are likely to have been disturbed by road construction activities, road upgrades and service installation over time. However, small, localised areas within the study area may contain largely intact subsurface features.

### 7.1.2.2 Coastal Escarpment

Land within the Sandstone Escarpment Conservation Area in Dover Heights/Vaucluse and the rear of properties facing onto Kimberley Street, Vaucluse within the study area has remained undeveloped since European occupation began in the early 19th century. However, they may have been subject to land clearing and service installation, which would have removed undisturbed any evidence of early European land use in the area.

In addition, evidence of service pits and service corridors was observed in the grassed escarpment area during the site inspection between Eastern Avenue and Oceanview Avenue. The establishment of these features may have removed evidence of previous land use along their alignments.

### 7.1.2.3 Parsley Bay Reserve

Land within Parsley Bay Reserve has also remained largely undeveloped since the settlement of Europeans in the area in the early 19th century. However, land currently occupied by a public toilet and access roads to the reserve is likely to have been disturbed during their construction and establishment.

## 7.1.3 Potential archaeological remains

Based on known land use described in Section 7.1.1 and previous disturbance activities described in Section 7.1.2, there is nil potential for archaeological evidence of structures or land use to exist or survive within the study area.

## 8.0 HERITAGE IMPACT ASSESSMENT

This section will assess potential impacts to listed and unlisted heritage items within and close to the study area alongside potential archaeological remains that may occur as a result of the project. The methodology and terminology used to evaluate and describe these impacts is discussed in Section 2.1.

Unlisted heritage items addressed in this section were identified during the site inspection, outlined in Section 5.0.

### 8.1 Proposed works

The project will include the construction and operation of the following key components:

- Sewage pumping station at Parsley Bay, Vaucluse (SP1216).
- Sewage pumping station at Eastern Avenue Reserve, Diamond Bay (SP1217).
- Wastewater mains connecting the pumping stations to the existing outfalls and network.

The two sewage pumping stations at Vaucluse and Diamond Bay would be constructed mainly below existing ground level. The wastewater mains would be constructed by a mix of open trenching and trenchless methods such as horizontal directional drilling or microtunneling.

During normal operation, the project will redirect untreated wastewater through the wastewater network to the catchment of Bondi Wastewater Treatment Plant for treatment. During wet weather, when the catchment is at full capacity, wastewater may continue to flow through ocean outfalls.

The proposal may require localised vegetation removal within the *Coastal Sandstone Escarpment Conservation Area* and at Parsley Bay Reserve. The pipe stockpiling and construction of the pump station at Parsley Bay would result in amenity impacts and the possible closure of access to the park.

The project will require the following subsurface excavations and potential impacts to fabric or natural landscapes:

- Some level of surface disturbance throughout construction footprint
- Open trenched areas - 1 to 5 metres deep, 5 metres wide
- Trenchless areas - No surface disturbance; Tunnel 1 metre wide, 10 - 100 metres deep
- Coastal Escarpment pumping station - maximum of 10 metre deep, across an area of approximately 20 x 5 metres
- Parsley Bay Reserve pumping station - maximum of 10 metres deep, across an area of approximately 20 x 10 metres
- Removal of an existing picket fence between Eastern Avenue and the Coastal Sandstone Escarpment Conservation Area
- Ancillary activities within the construction footprint or adjacent open areas such as storage of equipment and material or pipe stringing activities

The location and nature of works required for the project are illustrated in Appendix B.



### 8.1.1 Justification

The project is required as wastewater currently being discharged from outfalls within the Vaucluse and Diamond Bay catchments is being released into the Tasman Sea without any wastewater treatment processes. These three outfalls are the last remaining untreated wastewater discharge sites in NSW. Their continued operation in a stretch of the coast between the popular South Head National Park in the north and Bondi Beach in the south impacts one of NSW's most iconic coastal areas.

The release of untreated wastewater is considered a rare occurrence in Australia and stakeholder engagement in April 2018 revealed that the practice is becoming increasingly unacceptable amongst the local community due to changing attitudes towards the environment.<sup>81</sup>

### 8.1.2 Options assessment

The following options have been assessed for the project.

#### 8.1.2.1 Previous options (2018)

Prior to the current designs being prepared, an options assessment Sydney Water carried out a detailed planning phase in October 2018 to identify and assess four broad options for the project.

Option	Description
<b>Option 1 – New treatment plant/s</b>	Build new primary or secondary treatment facilities within the catchments
<b>Option 2 - Transfer dry weather flows to the existing Rose Bay Submain and then to Bondi Treatment Plant</b>	This option involved transfer of flows to the existing carrier via two newly constructed pumping stations and a combination of trenching and directionally drilled pipelines
<b>Option 3 - Transfer dry weather flows and part of the wet weather flows to Bondi Treatment Plant via a new direct route</b>	This option involved the transfer of flows to Bondi Treatment Plant via a small "direct" pipe to be built using trenchless technology
<b>Option 4 - Transfer dry weather flows to Bondi Treatment Plant via new rising main along the cliff-face or seabed</b>	This option involved the transfer of flows to Bondi Treatment Plant via a newly built pumping station at Christison Park and a new rising main either along the coast or sea bed.

In December 2018, Sydney Water selected Option 2 as its preferred option. This option required the construction of a new pumping station at Vaucluse Bay to transfer dry weather flows from the Vaucluse catchment to the western arm of the Rose Bay submain via a new rising main. Similarly, a new pumping station at Eastern Reserve would be established to transfer flow from the Diamond Bay two-sub catchments to the Bondi Treatment Plant by connecting it to the eastern arm of the Rose Bay submain.

The construction of a pumping station in Vaucluse Bay under Option 2 would have occurred within the SHR curtilage of Vaucluse House, and had potential to impact the heritage significance of the item.

#### 8.1.2.2 Revised (current) option (2019)

In 2019, in order to avoid impacts to the SHR curtilage of Vaucluse House, the proposed Option 2 Vaucluse pumping station was repositioned to its current location in Parsley Bay. This has significantly reduced the overall heritage impacts that would have occurred as a result of the project.

<sup>81</sup> Sydney Water, 2018. Professional Services Brief, Refresh Vaucluse Diamond Bay Project: Concept Design and Environment Approval Phase, p. 5.

## 8.2 Assessment of heritage impact to items within the study area

### 8.2.1 Parsley Bay Swimming Enclosure

#### 8.2.1.1 Direct Impacts

The proposed works would not have any direct impacts on Parsley Bay Swimming Enclosure or the containing shark net. Construction activities would be limited to the construction footprint while any adjacent ancillary activities such as storage of equipment and material or pipe stringing activities would be contained to open areas in Parsley Bay Reserve and would not occur over the water.

Therefore, the proposed works result in a **negligible** impact.

#### 8.2.1.2 Indirect Impacts

The proposed works would involve the establishment of a pumping station as well as ancillary activities such as storage of equipment and material or pipe stringing activities within Parsley Bay Reserve. While the proposed works would not have any direct impact on Parsley Bay Swimming Enclosure, the establishment of a pumping station would have some effect on the existing views from the item, which would constitute a **minor** impact. The ancillary activities would also have an effect on the existing views from the item, but would constitute a **negligible** impact as they are temporary.

### 8.2.2 Parsley Bay Suspension Footbridge

#### 8.2.2.1 Direct Impacts

The proposed works would not have any direct impacts on Parsley Bay Suspension Footbridge. Construction activities would be limited to the construction footprint while any ancillary activities such as storage of equipment and material or pipe stringing activities would be contained to open areas in Parsley Bay Reserve and would not occur over the water or in proximity to the footbridge.

Therefore, there would be **negligible** direct impacts to the Parsley Bay Suspension Footbridge heritage item.

#### 8.2.2.2 Indirect Impacts

The proposed works would involve the establishment of a pumping station as well as ancillary activities such as storage of equipment and material or pipe stringing activities within Parsley Bay Reserve. While the proposed works would not have any direct impact on Parsley Bay Suspension Footbridge, the establishment of a pumping station would have some effect on the existing views from the item, which would constitute a **minor** impact. The ancillary activities would also have an effect on the existing views from the item, but would constitute a **negligible** impact as they are temporary.

### 8.2.3 Oceanview Avenue Conservation Area

#### 8.2.3.1 Direct Impacts

The proposed works would involve open trenching within the Oceanview Avenue Conservation Area. It is expected that the works would impact the road surface only, which is not a significant element of the Conservation Area. No sandstone kerbing was sighted on Oceanview Avenue during the site inspection. It is assumed that the works would not impact any kerbing, vegetation within the council strips, or residential properties that contribute to the heritage item.

As such, there would be a **minor** direct impact to the Oceanview Avenue Conservation Area, but it is not anticipated that any long term significant fabric or views would be impacted by the proposed works.

#### 8.2.3.2 Indirect Impacts

The proposed works would involve excavation and construction within the Oceanview Avenue Conservation Area. It is expected that the works would impact the road surface only, and that the road surface would be restored to its pre-existing condition following the completion of works.

The proposed works would have a **moderate** (temporary) visual impact to the Oceanview Avenue Conservation Area heritage item.

#### 8.2.4 Coastal Sandstone Escarpment Conservation Area

The proposed works would involve the following works within the Coastal Sandstone Escarpment Conservation Area:

- Open trenching on a north-south alignment within the Sandstone Escarpment Conservation Area between Oceanview Avenue and Eastern Avenue, Dover Heights
- Open trenching on a north-west to south-east alignment at the rear of properties facing onto Kimberley Street, Vaucluse
- The establishment of a pumping station within the heritage curtilage for the item, immediately east of Eastern Avenue including underground tanks and some relatively small surface infrastructure including an above ground electrical kiosk
- The removal of an existing picket fence at the Eastern Avenue entrance to the escarpment (shown in Figure 5-18)

##### 8.2.4.1 Direct Impacts

There is potential for the north-south and north-west to south-east trenching activities to impact intact sandstone outcrops and natural landscape formations within the Coastal Sandstone Escarpment Conservation Area. Localised areas of vegetation may be removed for the proposed works.

There is also potential for excavations required for the proposed pumping station to impact and modify underlying sandstone bedrock. These would be considered a direct impact to features associated with the conservation area. However given the overall extent of the item, these would be considered to have minor to moderate overall impact to the conservation area.

The proposed removal of an existing picket fence along Eastern Avenue would be considered a minor to moderate impact to the conservation area as the fence is considered to be contributory element to the item's overall landscape.

Therefore, provided all mitigation measures are followed, the proposed works would have a **minor – moderate** direct impact to the Sandstone Escarpment Conservation Area.

##### 8.2.4.2 Indirect Impacts

The proposed establishment of a pumping station immediately east of Eastern Avenue is unlikely to result in substantial impacts to the conservation area as the majority of new infrastructure would be located below ground, with only service pits or other relatively small infrastructure visible to members of the public. The above ground electrical kiosk associated with the pumping station would be placed flush along an existing fence line between a residential property at 57 Eastern Avenue, Dover Heights and the grassed escarpment area. This would be relatively obscured from view by vegetation and the presence of the fence. Therefore, works associated with the pumping station would be considered a minor impact to the overall heritage of the item.



However, the removal of an existing picket fence would be considered a minor to moderate impact to the overall significance of the Coastal Sandstone Escarpment Conservation Area as it is considered to represent a contributory element of the overall landscape. Furthermore, the removal of vegetation in localised areas will alter the character and setting of the environment.

Therefore, the proposed works would have a **minor - moderate** indirect impact to the Sandstone Escarpment Conservation Area.

### 8.2.5 Vaucluse Outfall

#### 8.2.5.1 Direct Impacts

The proposed works would result in the removal of approximately 20 metres of the outfall beneath the footprint of the proposed pump station at Parsley Bay. The outfall is constructed of brick and concrete and has previously had its size decreased. The removal of 20 metres of the outfall would not be considered a large impact in terms of the overall size of the outfall sewage system, however the removal of brick and concrete elements would result in the loss of significant fabric likely associated with the early construction of the outfall at Parsley Bay.

Therefore, the proposed works would have a **moderate** direct impact to significant fabric of the Vaucluse Outfall at Parsley Bay.

#### 8.2.5.2 Indirect Impacts

There are no above ground features of the outfall to be observed. Therefore, the proposed works would result in **nil** visual impact to the Vaucluse Outfall.

### 8.2.6 Diamond Bay Outfalls (No. 1 and No. 2)

#### 8.2.6.1 Direct Impacts

The proposed works would not involve any works on the existing outfalls including Diamond Bay Outfalls (No. 1 and No. 2). As such, material impacts on these heritage items are not predicted.

#### 8.2.6.2 Indirect Impacts

There are no above ground features of the outfall to be observed. Therefore, the proposed works would result in **nil** visual impact to the Diamond Bay Outfalls.

## 8.3 Assessment of heritage impact to items outside of the study area

### 8.3.1 3 Forest Red Gums, Sydney Pink Gum

#### 8.3.1.1 Direct Impacts

The proposed works would involve below-ground directional boring in the vicinity of the 3 Forest Gums and Sydney Pink Gum heritage curtilage, however these works would not enter the curtilage of the heritage listed trees and would not involve any impacts to the trees themselves. Particular care should be taken to ensure that the directional boring occurs at a depth that would not impact the root systems of these significant trees and works in the area should follow the recommendations of an ecologist/arborist assessment.

The heritage listed trees are located within the road reserves at the addresses of 5, 10, 11, 15, and 21 Parsley Road and shown in Figure 3-2. The proposed works location will not directly impact any of these properties, and it is assumed that the trees and their root systems will also be avoided.

The project would result in a **nil** direct impact to the 3 Forest Gums, Sydney Pink Gum heritage item.

#### 8.3.1.2 Indirect Impacts

The proposed directional boring works would not result in any ground disturbance works within the vicinity of the heritage listed trees.

The project would therefore result in a **nil** visual impact to the 3 Forest Gums, Sydney Pink Gum heritage item.

### 8.3.2 Sydney Pink Gum, Swamp Mahogany, Red Mahogany

#### 8.3.2.1 Direct Impacts

The proposed works would involve directional boring in the vicinity of the significant Sydney Pink Gum, Swamp Mahogany and Red Mahogany trees. The works would not occur within the heritage curtilages of these trees and would not involve impacts to the trees themselves. Particular care should be taken to ensure that the directional boring occurs at a depth that would not impact the root systems of these significant trees and works in the area should follow the recommendations of an ecologist/arborist assessment.

These trees are located along the stairway west from Hopetoun Avenue to Olola Avenue on Petrarch Avenue as shown in Figure 3-3. The indicated plans for micro-tunnelling comes in close proximity to the western footpath of Hopetoun Avenue at Petrarch Avenue; however, it is not expected that the works in this location would impact any of the trees or their root systems.

The project would therefore result in a **nil** direct impact to the Sydney Pink Gum, Swamp Mahogany and Red Mahogany heritage item.

#### 8.3.2.2 Indirect Impacts

The proposed directional boring works would occur beneath the visible ground surface and it is expected that no ground disturbance would occur within the vicinity of the trees. The project would therefore result in a **nil** visual impact to the Sydney Pink Gum, Swamp Mahogany and Red Mahogany heritage item.

### 8.3.3 House and Interiors

#### 8.3.3.1 Direct Impacts

The proposed works in the vicinity of the House and Interiors heritage item would involve the installation of pipes through Parsley Bay. These works would not occur within the curtilage of the item itself, and would not impact any significant fabric associated with the item.

Therefore, the project would have a **nil** direct impact to the House and Interiors heritage item.

#### 8.3.3.2 Indirect Impacts

It is expected that the proposed installation of the pipelines through Parsley Bay would occur beneath the ground surface and that the pipes would not be visible, excluding potential temporary ground disturbance for installation. It is also expected that following any ground disturbance within Parsley Bay, beach, and reserve, the ground surface would be restored to its pre-existing condition. The pumping station at Parsley Bay would not be visible from publicly accessible areas within the curtilage of this item, and potential visual impacts from interiors of the house could not be assessed by Artefact.

The proposed works would result in a **nil** visual impact to the House and Interiors heritage item.

### 8.3.4 Vaucluse House

#### 8.3.4.1 Direct Impacts

The proposed works would not be situated within the SHR curtilage of Vaucluse House and would not impact any significant fabric associated with the heritage item.

Therefore, the proposed works would have a **nil** direct (physical) impact to the Vaucluse House heritage item.

#### 8.3.4.2 Visual Impacts

Proposed works within the vicinity of the curtilages of Vaucluse House would involve directional boring beneath the ground surface, and as such, would not involve any ground disturbance or open trenching along New South Head Road.

The proposed works would have a **nil** indirect (visual) impact to the Vaucluse House heritage item.

### 8.3.5 1950s House

#### 8.3.5.1 Direct Impacts

The proposed works would involve directional boring approximately 55 metres from the '1950s House' at 7 Ethel Street, Dover Heights. The works would not occur within the heritage curtilage of the item and would not impact any significant fabric associated with the item.

Therefore, the proposed works would result in a **nil** direct impact to the '1950s House' heritage item.

#### 8.3.5.2 Indirect Impacts

The proposed works would involve directional boring beneath the road surface beneath houses on the western side of Ray Street and the eastern side of Ethel Street, in addition to open-trenching on Oceanview Avenue. As the directional boring works would not involve any ground disturbance, these works would not result in visual impacts when viewed from the 1950s house. Ethel Street is a cul-de-sac which backs onto private residences on Oceanview Avenue, views of the road corridor at Oceanview Avenue from the front lawn of 7 Ethel Street are obscured by these residences. Southern facing windows on the upper storey of the house may have partial views of Oceanview Avenue, however it is anticipated that any views are obscured by the double-storey residences on Oceanview Avenue. Furthermore, it is expected that the road surface will be restored to its pre-existing condition following the completion of works.

Therefore, the proposed works would result in a **nil** visual (indirect) impact to the '1950s House' heritage item.

### 8.3.6 1930s Style Bungalow

#### 8.3.6.1 Direct Impacts

The proposed works would involve open trenching at the intersection of Oceanview Avenue and Military Road, approximately 75 metres from the '1930s Style Bungalow' heritage item at 313 Military Road. The works would not impact the curtilage of the item and would not impact any significant fabric.

Therefore, the project would result in a **nil** direct impact to the '1930s Style Bungalow' heritage item.

#### 8.3.6.2 Indirect Impacts

The proposed open-trenching works at the intersection of Oceanview Avenue and Military Road may be partially visible from the front yard of the residence at 313 Military Road. However, it is expected



that the road surface will be restored to its original condition following the completion of works and therefore any visual impacts would be temporary.

Therefore, the proposed works would result in a **nil** visual (indirect) impact to the '1930s Style Bungalow' heritage item.

### 8.3.7 Reservoir No 120 and Reservoir No 121

#### 8.3.7.1 Direct Impacts

Proposed works in the vicinity of the Reservoir No 120 and Reservoir No 121 would involve directional boring approximately 58 metres from the Reservoir heritage curtilage. The works would not occur within the curtilage of the heritage items and would not involve impacts to any fabric associated with the reservoirs.

Therefore, the project would result in a **nil** visual impact to the Reservoir No 120 and Reservoir No 121 heritage items.

#### 8.3.7.2 Indirect Impacts

The proposed directional boring works to occur within the vicinity of the Reservoir No 120 and No 121 heritage item would not involve any visible ground disturbance and would therefore result in a **nil** visual impact to the Reservoir No 120 and Reservoir No 121 heritage item.

The noise and vibration assessment (GHD 2020) identified that the largest vibration safe work buffer distance required to avoid structural damage to a heritage building or other structure was 44 metres. Accordingly, the proposed works would not be expected to have a material impact on these items.

### 8.3.8 Electricity Substation No. 94

#### 8.3.8.1 Direct Impacts

The proposed works would involve open trenching along Dover Road, Rose Bay, directly in front of the heritage item 'Electricity Substation No 94' at 30 Dover Road. As an s170 item, registered by Ausgrid, the exact curtilage of the item is not indicated within the State Heritage Inventory, however it is not expected that the proposed works would enter the curtilage of the item. Furthermore, during the site inspection a residential property was evident on the site and there was no evidence of a substation structure visible from publicly accessible areas.

Comparison of photographs of the substation suggest that it may have been demolished and replaced by the extant residence, or that it has been absorbed into a renovation of the property.

The proposed works would have a **nil** direct (physical) impact to the Electricity Substation No. 94 heritage item.

#### 8.3.8.2 Indirect Impacts

The proposed works would involve open trenching along Dover Road in close vicinity to the heritage item. However, as discussed above, no evidence of significant fabric associated with the substation was located during the site inspection for the project. Furthermore, it is expected that following the completion of works, the road surface on Dover Road would be restored to its pre-existing condition and as such, there would not be any enduring negative visual impacts to the Electricity Substation No. 94 heritage item. The noise and vibration assessment (GHD 2020) identified that the substation would be within the vibration buffer distance and recommended measures to avoid, mitigate and manage potential vibration impacts including using a hand-held jack hammer if rock breaking is required.

Assuming the item is present, with the implementation of the proposed measures, impacts to the fabric of the heritage item resulting from vibration during construction are not predicted.

The proposed works would have a **minor** (temporary) indirect (visual) impact to the Electricity Substation No. 94 heritage item. Upon the completion of works, indirect impacts would be **nil**.

## 8.4 Assessment of heritage impact to unlisted items within the study area

### 8.4.1 Surveyor's mark – Parsley Bay Reserve

#### 8.4.1.1 Direct impacts

The location of the surveyor's mark is within or in close proximity to proposed path widening works for the project. No direct impacts to the surveyor's mark or associated boulder are anticipated by the proposed works. As a surveyor's mark, the location of the stone is significant to the purpose of the mark and relocation of the mark would result in loss of context and significance.

It is recommended that the stone is retained and protected while project works are in progress within the reserve.

Provided mitigation measures outlined in Section 9.0 of this document are followed, the project would result in **neutral** direct impacts to the item.

#### 8.4.1.2 Indirect impacts

The project may require path widening works in the vicinity of the item. Provided these are carried out in a sympathetic manner and the item is retained and projected impacts would be considered **neutral**.

### 8.4.2 Landscape modifications (chiselled steps) – Parsley Bay Reserve

#### 8.4.2.1 Direct impacts

The project works will occur approximately 10 m away from the landscape modifications. Therefore no direct impacts are anticipated.

Therefore, the proposed works may result in a **nil** direct impact to the landscape modifications (chiselled steps) unlisted heritage item.

#### 8.4.2.2 Indirect impacts

The project works will occur approximately 10 m away from the landscape modifications. They are unlikely to significantly alter landscape features that contribute to the heritage significance of the unlisted item. Therefore no indirect (visual) impacts are anticipated and the proposed works may result in a **nil** indirect impact to the item.

### 8.4.3 Landscape modification (chiselled steps and doorway) – Sandstone Escarpment, Dover Heights

#### 8.4.3.1 Direct impacts

The proposed works in the proximity of the sandstone escarpment are not anticipated to result in direct impacts to the chiselled steps and doorway at Dover Heights.

Therefore, the proposed works will result in a **neutral** direct impact to the landscape modification (chiselled steps and doorway) at Dover Heights.

#### 8.4.3.2 Indirect impacts

If required, any partial removal of the boardwalk and vegetation in localised areas along the Diamond Bay cliffwalk would result in the alteration of the setting and character of the chiselled steps and

doorway heritage item. These impacts would be temporary assuming the reinstatement of the boardwalk and replanting of all vegetation.

Therefore, the proposed works may result in a **minor** temporary visual impact to the landscape modification (chiselled steps and doorway) at Dover Heights.

#### 8.4.4 Sandstone kerbs – Carlisle Street, Rose Bay

##### 8.4.4.1 Direct impacts

Proposed works in the vicinity of sandstone kerbs along Carlisle Street, Rose Bay would involve open cut trenching within the Carlisle Street road corridor. It is understood that this would occur approximately 2.5 metres north and south of the sandstone kerbs, however the sandstone kerbing may be impacted as part of the proposal if pipe alignments are modified. As it is plausible for the kerbs to be removed without damage, and reinstated following the completion of works, these impacts would be temporary.

Therefore, provided mitigation measures outlined in Section 9.0 of this document are followed, the project would result in a **minor** temporary impact to the sandstone kerbs along Carlisle Street.

##### 8.4.4.1 Indirect Impacts

The proposed open cut trenching within Carlisle Street will not result in permanent changes to the existing street layout or its appearance.

However, there is potential for sandstone kerbs on either side of the road corridor to be temporarily removed in the event of modifications to the proposed trench alignment. This would alter the existing nature of the street and remove a visual reminder of its historical development. However, provided mitigation measures outlined in Section 9.0 of this document are followed this will be temporary and the street returned to its original condition following the completion of the project.

Therefore, the project would result in a **nil** visual impact to the unlisted item.

### 8.5 Archaeological impacts

The archaeological assessment carried out in Section 7.0 of this report concluded that there was nil potential for land within the study area to contain significant archaeological remains.

Therefore, the project would not result in archaeological impacts.

However, an unexpected finds policy would be incorporated into the construction program should such remains be encountered during subsurface excavations for the project.

### 8.6 Summary of heritage impacts

An assessment of the potential impact of the proposed works on the heritage significance of heritage listed items within the study area, and study area buffer, is included in Table 8.1.

**Table 8.1: Assessment of heritage impact**

Item	Direct (physical)	Indirect (visual/vibration)	Archaeological	Approvals
Listed items				



Item	Direct (physical)	Indirect (visual/vibration)	Archaeological	Approvals
Parsley Bay Swimming Enclosure	Negligible	Negligible (temporary) Minor (permanent)	N/A	N/A
Suspension Footbridge	Negligible	Negligible (temporary) Minor (permanent)	N/A	N/A
West Parsley Bay obelisk	Nil	Moderate (temporary)	N/A	N/A
3 Forest Red Gums, Sydney Pink Gum	Nil	Nil	N/A	N/A
House and interiors	Nil	Nil	N/A	N/A
Sydney Pink Gum, Nil Swamp Mahogany, Red Mahogany	Nil	Nil	N/A	N/A
Vaucluse House	Nil	Nil	Nil	N/A
Reservoir No 120 and Reservoir No 121	Nil	Nil	N/A	N/A
Oceanview Avenue Conservation Area	Minor (temporary)	Moderate (temporary)	Nil	N/A
Sandstone Escarpment Conservation Area	Minor to moderate	Minor to moderate	Nil	N/A
1950s House	Nil	Nil	N/A	N/A
1930s style bungalow	Nil	Nil	N/A	N/A
'Electricity Substation No. 94'	Nil	Minor (temporary)	N/A	N/A
Unlisted items				
Surveyors mark – Parsley Bay Reserve	Neutral	Neutral	N/A	N/A
Landscape modifications (chiselled stairs) - Parsley Bay Reserve	Nil	Nil	N/A	N/A

Item	Direct (physical)	Indirect (visual/vibration)	Archaeological	Approvals
Landscape modification (chiselled steps and doorway) – Sandstone Escarpment, Dover Heights	Minor to moderate	Minor to moderate	N/A	N/A
Sandstone kerbs Carlisle Street	Minor (temporary)	Minor (temporary)	N/A	N/A

## 8.7 Statement of Heritage Impact

The SoHI summarised in Table 8.2 has been developed from the Heritage Division's guidelines for *Statements of Heritage Impact* (2002).

**Table 8.2: Statement of heritage impact for the project**

Heritage Consideration	Discussion
<b>What aspects of the project respect or enhance the heritage significance of the study area and nearby heritage items?</b>	<p>The aim of the project is to terminate the discharge of untreated wastewater from outfalls at Vaucluse and Diamond Bay into the Tasman Sea. These are some of the last outfalls in NSW to release untreated waste into the ocean, a practice that can be hazardous to human health and pollutes the environment through the introduction of bacteria, paper and plastics into the sea.</p> <p>Once complete, the project would generally enhance the heritage significance of the Waverly LEP 2012 listed Coastal Sandstone Escarpment Conservation Area by preventing discharge of untreated wastewater from the ocean outfalls.</p>
<b>What aspects of the project could have a detrimental impact on the heritage significance of the study area and nearby heritage items?</b>	<p>The proposed pumping station immediately east of Eastern Avenue would be located in an area that is highly visible in the existing landscape and located within the Waverly LEP 2012 listed Coastal Sandstone Escarpment Conservation Area. Its construction would result in a minor to moderate direct (physical) and indirect (visual) impact to the item as it would modify the existing landscape through the establishment of electrical kiosks and removal of an existing picket fence.</p> <p>In addition, pipe stringing activities within Parsley Bay would result in a moderate, yet temporary, impacts to views and vistas towards the Woollahra LEP 2014 listed Suspension Footbridge and RNE listed Parsley Bay Swimming enclosure.</p>
<b>How is the impact of the new development on the heritage significance of the item or area to be minimised?</b>	<p>Previous options investigated for the project involved direct impacts to the SHR listed curtilage of Vaucluse House. The current design has aimed to avoid any impacts to this item.</p>
<b>Why is the new development required to be adjacent to, or within, a heritage item?</b>	<p>The proposed pumping station in Parsley Bay Reserve would be established immediately south-east of the Woollahra LEP 2014 listed suspension bridge and RNE listed Parsley Bay Swimming Enclosure as it is one of the only alternative options available in order to avoid the heritage listed Vaucluse House curtilage.</p> <p>The proposed pumping station in the Waverley LEP 2012 listed Sandstone Escarpment Conservation Area (C37) would be established in this area as the two existing outfalls proposed to be utilised for the project are located in this area.</p>



## 9.0 CONCLUSIONS AND RECOMMENDATIONS

### 9.1 Conclusions

The project is located within the curtilage of four heritage listed items:

- Oceanview Avenue Conservation Area (Waverley LEP 2012 C54)
- Sandstone Escarpment Conservation Area (Waverley LEP 2012 C37)
- Diamond Bay Outfalls (No. 1 & No. 2) (Sydney Water s170 SHI 4574204)
- Vaucluse Outfall (Sydney Water s170 SHI 4574203)

The project is located adjacent to or nearby nine heritage items:

- West Parsley Bay obelisk (Woollahra LEP 2014 I356, Sydney REP 2005 Item no. 44, Australian Underwater Cultural Heritage Database ID number. 10979)
- 3 Forest Red Gums, Sydney Pink Gum (Woollahra LEP 2012 I388)
- Vaucluse House (SHR 00955)
- Reservoir No 120 and Reservoir No 121 (RNE Item 102243)
- 1950s House (Waverley LEP 2012 I438)
- 1930s style bungalow (Waverley LEP 2012 I441)
- Electricity Substation No. 94 (Ausgrid s170 SHI 3430453)
- Parsley Bay Swimming Enclosure (RNE Item no. 103518)
- Suspension Footbridge (Woollahra LEP 2014 I386)

A total of four unlisted heritage items were also identified within or in close proximity to the study area during the site inspection for the project:

- Landscape modifications (chiselled stairs) in Parsley Bay Reserve (shown in Figure 5-43)
- Surveyors mark in Parsley Bay Reserve – (shown in Figure 5-43)
- Landscape modification (chiselled steps and doorway) along the Coastal Sandstone Escarpment, Dover Heights (shown in Figure 5-44)
- Sandstone kerbs along Carlisle Street, Rose Bay (shown in Figure 5-45)

#### Potential impacts to heritage listed items

Provided all mitigation measures are followed, the project would result in nil direct (physical) impacts and nil visual and vibration (indirect) impacts to the heritage significance of the following items:

- 3 Forest Red Gums, Sydney Pink Gum

- Vaucluse House
- Reservoir No 120 and Reservoir No 121
- 1950s House
- 1930s style bungalow

Provided all mitigation measures are followed, the project would result in minor (temporary) indirect (visual) impacts to the following item:

- Electricity Substation No. 94

The project would result in minor direct (physical) impact to the following item:

- Oceanview Avenue Conservation Area (road corridor)

The project would result in moderate indirect (temporary) visual impacts to the following items:

- Oceanview Avenue Conservation Area
- West Parsley Bay obelisk

The project would result in negligible direct impacts and minor visual impacts to the following items:

- Parsley Bay Swimming Enclosure
- Suspension Footbridge

The project would result in minor to moderate (direct) physical impacts and minor to moderate permanent indirect (visual) impacts to the following item:

- Sandstone Escarpment Conservation Area (Waverley LEP 2012 C37)

#### 9.1.1 Potential impacts to unlisted heritage items

The project would result in minor to moderate (direct) physical impacts and minor to moderate permanent indirect (visual) impacts to the following unlisted heritage items of local significance:

- Landscape modification (chiselled steps and doorway) along the Coastal Sandstone Escarpment, Dover Heights (shown in Figure 5-44)

The project would result in minor to moderate (direct) physical impacts and moderate temporary indirect (visual) impacts to the following unlisted heritage item of local significance:

- Sandstone kerbs along Carlisle Street, Rose Bay (shown in Figure 5-45)

The proposed works would be located close to the following unlisted heritage items of local significance within the study area. Provided all mitigation measures are followed, the project would not directly impact the items:

- Landscape modifications (chiselled stairs) in Parsley Bay Reserve (shown in Figure 5-43)
- Surveyors mark in Parsley Bay Reserve – (shown in Figure 5-43)

### 9.1.2 Potential impacts to archaeological remains

The project would not impact potential archaeological remains within the study area as it has been assessed as containing nil archaeological potential (land within the construction footprint).

## 9.2 Consultation

- As the works are located within the curtilage of, and in close proximity to, a number of local heritage items, Waverley and Woollahra Councils should be provided with this SoHI report for their consideration during the project's consultation phase.

## 9.3 Mitigation measures and recommendations

The following mitigation measures and recommendations should be enacted to minimise heritage impacts during works.

- Any project redesign resulting in new ground disturbance or impacts to building fabric or the existing landscape must be assessed in an addendum to this SoHI
- All impacted areas should be reinstated as near as possible to their original appearance following the completion of works
- In order to reduce impacts to the heritage significance of the Sandstone Escarpment Conservation Area (Waverley LEP 2012 C37), it is recommended that:
  - An existing picket fence at Eastern Avenue proposed to be removed for the project would be retained or reinstated if feasible
  - Sandstone outcrops be protected and avoided where feasible
  - Evidence of landscape modification near 33 Kimberley Street and nearby properties along the sandstone escarpment coastal walk (as shown in Figure 5-44) be protected and avoided where feasible
- If impacts to unlisted sandstone kerbs along Carlisle Street are required for the project, they would be carefully removed, stored in a secure location and reinstated following the completion of works
- The design of proposed pumping stations would aim to be sympathetic to Parsley Bay Reserve and the Coastal Sandstone Escarpment Conservation Area's existing nature and designed to minimise physical and visual impacts towards these areas
- Direct impacts to an unlisted Surveyor's Mark identified within Parsley Bay Reserve during the site inspection for the project and shown in Figure 5-43 would be avoided during proposed path widening works. The item would be protected as per mitigation measures for listed and unlisted heritage items provided below
- Direct impacts to unlisted landscape modifications within the Coastal Sandstone Escarpment Conservation Area identified during the site inspection and shown in Figure 5-44 would be avoided during proposed works for the project where feasible. All landscape features would be protected as per mitigation measures for listed and unlisted heritage items provided below
- Prior to the commencement of works a heritage induction would be prepared for all contractors to complete. The induction would address significant fabric and heritage items (shown in Figure 3-1,



Figure 5-43 - Figure 5-45) in the proximity of works. The induction would also stress that in the event significant fabric is impacted or archaeological remains are encountered, works must cease immediately and the advice of an archaeologist and/or heritage consultant must be sought

- Areas of listed and unlisted significant fabric (shown in Figure 3-1, Figure 5-43 - Figure 5-45) would be identified to all site workers, and physically marked out with temporary hi-visibility markers if required. This includes unlisted heritage items identified in this document. These areas would be delineated with hi-visibility flagging and bollards where suitable, and any ground breaking work activity, storage of equipment, or vehicle parking would not occur within these zones
- During ground disturbing works, an unexpected finds procedure would be enacted. This procedure would consist of the following controls should unexpected archaeological finds or subsurface brick or sandstone heritage fabric be identified during works:
  - All work must immediately cease in the area of, and around, the location of the unexpected find
  - The contractor supervisor must notify the environmental manager for the project, and a qualified archaeologist must be notified
  - Should the unexpected find constitute a significant archaeological 'relic', work cannot continue in the area of location of the find until a S.146 Notification of the Discovery of a 'Relic' has been submitted to the NSW Heritage Division. Further approvals from the NSW Heritage Division may be required before works in this area can proceed.

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## APPENDIX A

### 10.1 Heritage significance assessments

#### 10.1.1 Significance assessment for Parsley Bay Swimming Enclosure

##### Parsley Bay Swimming Enclosure

<b>Criteria C) Aesthetic Significance</b>	High aesthetic value resulting from its siting and use of natural landforms to create a sense of enclosure
<b>Criteria D) Social Significance</b>	It has been a popular and well-used facility for many generations
<b>Criteria F) Rarity</b>	One of few examples where a large portion of foreshore has been enclosed to form a swimming area of large proportions

### 10.1.2 Significance assessment for Suspension Footbridge

#### Suspension Footbridge

<b>Criteria C) Aesthetic Significance</b>	<i>The bridge has significant visual and technological significance as a charming example of a characteristic period design.</i>
<b>Criteria D) Social Significance</b>	<i>It has considerable social interest and continues to fulfil a useful function.</i>
<b>Criteria F) Rarity</b>	<i>The suspension bridge at Parsley Bay is the only example of its type in Sydney.</i>

### 10.1.1 Significance assessment for 3 Forest Red Gums, Sydney Pink Gum

#### 3 Forest Red Gums, Sydney Pink Gum

<b>Criteria C) Aesthetic Significance</b>	The street trees create a unique visual and environmental quality to the Vaucluse area.
<b>Criteria F) Rarity</b>	The Vaucluse area contains the Eastern Suburb's only remaining Forest Red Gum dominated forest. Many former indigenous trees in the area have been removed in association with development or to enhance harbour views.
<b>Criteria G) Representativeness</b>	These street trees form the largest component of the municipality's remaining indigenous trees outside of the major parks such as Vaucluse Park, Nielsen Park, Parsley Bay Reserve and Copper Park.



### 10.1.1 Significance assessment for Sydney Pink Gum, Swamp Mahogany, Red Mahogany

#### Sydney Pink Gum, Swamp Mahogany, Red Mahogany

<b>Criteria C) Aesthetic Significance</b>	The street trees create a unique visual and environmental quality to the Vaucluse area.
<b>Criteria F) Rarity</b>	The Vaucluse area contains the Eastern Suburb's only remaining Forest Red Gum dominated forest. Many former indigenous trees in the area have been removed in association with development or to enhance harbour views.
<b>Criteria G) Representativeness</b>	These street trees form the largest component of the municipality's remaining indigenous trees outside of the major parks such as Vaucluse Park, Nielsen Park, Parsley Bay Reserve and Copper Park.

### 10.1.1 Significance assessment for House and interiors

#### House and interiors

<b>Criteria B) Associative Significance</b>	<p><i>80A Hopetoun Avenue contains a moderate degree of historical significance for its association with Leslie Wilkison, the founding professor at the University of Sydney, and in the role he played in the history of Australian architecture.</i></p> <p><i>Leslie Wilkinson, an English trained architect, was one of the most influential architects of the Inter-War period in Australia. He was appointed the first professor of the School of Architecture at Sydney University in 1920.</i></p> <p><i>80A Hopetoun Avenue, Vaucluse, is part of the body of residential works carried out by Wilkinson in the Woollahra area. Whilst the building has been compromised through alterations and additions carried out since 1975 it still retains a high degree of comparative value as an identifiable Wilkinson design.</i></p>
<b>Criteria C) Aesthetic Significance</b>	<p><i>The extent of the alterations to the property have compromised the integrity of the original Wilkinson design, however the building maintains high degree of aesthetic significance through the large amount of original fabric still within the building, and in particular the entry façade and roof form.</i></p> <p><i>The primary elements of the design, which are of aesthetic significance, are the entry elevation and forecourt, the general form, detailing and choice of materials and finishes.</i></p>
<b>Criteria D) Social Significance</b>	<p><i>This building contains a moderate degree of social significance as an example of the group of Wilkinson houses that were constructed throughout the Woollahra area and as such help make up the built character of the area. As a group they continue to be influential in society and have strong community esteem. This level of significance is evidenced by the identification of the property on a number of heritage registers.</i></p>
<b>Criteria E) Research Potential</b>	<p><i>80A Hopetoun Avenue contains a moderate degree of technical significance for its ability to demonstrate Wilkinson's 'Mediterranean Revival' detailing and construction techniques.</i></p>
<b>Criteria G) Representativeness</b>	<p><i>80A Hopetoun Avenue is significant for its role as a representative example of a body of built examples of the work of the architect Leslie Wilkinson and in the stock of Inter War Mediterranean style designs in the Woollahra Municipality generally. The significance is at a local level.</i></p>

### 10.1.2 Significance assessment for Vaucluse House

#### Vaucluse House<sup>82</sup>

<b>Criteria A) Historical significance</b>	<p><i>Vaucluse House was the family home of William Charles and Sarah Wentworth and their family, mainly from 1827-1853, and as such reflects the aspirations of a prominent political figure in mid-19th century NSW. It was during this period that Wentworth was arguably at his most prominent and influential in Australian society.</i></p> <p><i>It is Australia's first 'House Museum', an important example of rare and forward thinking, public 'preservation' and recreational planning of the early 20th century.</i></p> <p><i>With its family provenanced collection it demonstrates the way of life of the Wentworths, their taste incorporated with the taste of their time, social standing and status. The property, but particularly the house, reflects a statement of where the Wentworths aspired to be, as opposed to where they were placed because of their family history (perception of Sarah and William Charles Wentworth's family convict origins by Sydney society).</i></p> <p><i>Extant buildings offer both "master and servant" perspectives on mid 19th century life.</i></p> <p><i>The financial effects of the 1849s depression in Australia are apparent through the incompleteness of the building.</i></p> <p><i>The building is an example of English Gothic Romanticism in Australia and reflects the aspirations of the Wentworths in asserting their social status.</i></p> <p><i>The Vaucluse Site is significant because:</i></p> <p><i>It is an example of a designed 'Picturesque' landscape, including fountain and shrubbery, of the colonial period belonging to a prominent colonial family.</i></p> <p><i>It contains remnants and features of a 'gardened site' begun in 1804 and shows the development of gardening styles, taste and necessity over fifty years.</i></p> <p><i>It has strong association with the Wentworth family such as the Mausoleum and Greycliffe House</i></p>
<b>Criteria C) Aesthetic Significance</b>	<p><i>The Vaucluse Site is significant because it provides the opportunity to demonstrate the architectural and functional interdependence of house, estate buildings and landscape setting in a colonial rural estate and therefore enables an understanding of the social and cultural values of the owners and their period.</i></p> <p><i>It provides an appropriately scaled setting for an important historic house.</i></p>
<b>Criteria D) Social Significance</b>	<p><i>The Vaucluse Site is significant because the grounds, including the Beach Paddock, Tearooms and South Paddock stairs have provided a significant community recreational facility developed by Trustees for local residents and visitors since 1910.</i></p> <p><i>The grounds have provided work for the local community since the early 19<sup>th</sup> century and reflected [sic] major social changes such as the 1930s depression.</i></p> <p><i>It provides extensive free access to the waterfront.</i></p>
<b>Criteria E) Research Potential</b>	<p><i>The house is significant because of the large surviving collection of original documentary evidence pertaining to the house, its occupants and the existence of provenanced objects.</i></p> <p><i>The Vaucluse Site is significant because:</i></p> <p><i>The garden contains remnants of some native plantings now established, such as a c. 1950 Norfolk island Hibiscus and c. 1859 Port Jackson Fig.</i></p> <p><i>The Olola Avenue perimeter retains remnants of the indigenous vegetation.</i></p>

<sup>82</sup> OEH, 2000. 'Vaucluse House.'



Vaucluse House<sup>82</sup>

**Criteria F) Rarity**

*The house is a rare example of a 19<sup>th</sup> century marine villa with some extant buildings. The garden is a rare extant example of a garden belonging to a 19<sup>th</sup> century mansion adjacent to the harbour which has not been entirely subdivided and which substantial [sic].*

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### 10.1.1 Significance assessment for Reservoir No 120 and Reservoir No 121

#### Reservoir No 120 and Reservoir No 121

<b>Criteria A) Historical significance</b>	<i>The reservoirs were built progressively eastwards and upwards from Crown Street Reservoir when assured supply became available with the advent of the Upper Nepean Scheme. Vaucluse Elevated Reservoir became necessary when development finally spread to the highest parts of Vaucluse/Rose Bay area.</i>
<b>Criteria C) Aesthetic Significance</b>	<i>Vaucluse Elevated Reservoir is an outstanding Sydney landmark, visible from many distance parts of Sydney with quite an aesthetic appeal. It has the unusual secondary role in helping define an accurate measured distance out to sea for the calibrating of ships logs and conducting of speed trials.</i>
<b>Criteria F) Rarity</b>	<i>Vaucluse Surface Reservoir is one of the relatively few remaining reservoirs which were built partly in excavation and partly in bank with the concrete wall supported by the surrounding earth. Modern construction methods are quite different.</i>  <i>Vaucluse Elevated Reservoir is one of the very few elevated reservoirs built entirely with reinforced concrete for support structure, walls, and floor of the tank.</i>

### 10.1.2 Significance assessment for Oceanview Avenue (east of Military Road) Landscape Conservation Area<sup>83</sup>

#### Oceanview Avenue (east of Military Road) Landscape Conservation Area

**Criteria A) Historical significance**      *This item is of cultural significance.*

**Criteria C) Aesthetic Significance**      *This item is of aesthetic and streetscape/landscape significance.*

<sup>83</sup> The following significance assessment has been derived from the SHI inventory listing for Street Trees. Accessed online at 23/01/2020 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620400>.

### 10.1.3 Significance assessment for Coastal Sandstone Escarpment Landscape Conservation Area<sup>84</sup>

#### Coastal Sandstone Escarpment Landscape Conservation Area

<b>Criteria C) Aesthetic Significance</b>	<i>This item is of aesthetic and landmark significance</i>
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<b>Criteria E) Research Potential</b>	<i>This item is of scientific significance.</i>
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<sup>84</sup> The following significance assessment has been derived from the SHI inventory listing for Coastal Sandstone Escarpment. Accessed online at 11/12/2019 at:  
<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620330>.



### 10.1.1 Significance assessment for 1950s House

#### 1950s House<sup>85</sup>

<b>Criteria a) Historical significance</b>	<i>Intact example of 1950's house displaying features typical of the period. Of special note for the thoughtful integration of the garage into the house, a new concept at this time.</i>
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<sup>85</sup> OEH, 1999. 'Item'. NSW Office of Environment and Heritage. Accessed online 5/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620137>

### 10.1.1 Significance assessment for 1930s style bungalow<sup>86</sup>

#### 1930s style bungalow<sup>87</sup>

**Criteria c) Aesthetic significance**     *This item is of architectural, aesthetic and streetscape significance.*

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<sup>87</sup> OEH, 1999. 'Koolperrie.' *NSW Office of Environment and Heritage*. Accessed online 5/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2620210>

### 10.1.2 Significance assessment for the Electricity Substation No. 94

#### Electricity Substation No. 94<sup>88</sup>

<b>Criteria a) Historical Significance</b>	<i>The Dover Road substation is historically significant as an example of the infrastructure built by the Municipal Council of Sydney during the period of rapid expansion of the electricity network to the suburbs.</i>
<b>Criteria c) Aesthetic Significance</b>	<i>The Dover Road substation is a rare and representative example of an Interwar purpose designed building that has features of the Californian Bungalow style evident in the dominating gable roof and timber battened under eaves wall area.</i>
<b>Criteria g) Representativeness</b>	<i>Typical in form, scale and technical arrangement to distribution substations constructed throughout Sydney.</i>

<sup>88</sup> OEH, n.d. 'Electricity Substation No. 94.' NSW Office of Environment and Heritage. Accessed online 4/12/2019 at: <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=3430453>

### 10.1.1 Significance assessment for Diamond Bay Outfalls (No. 1 & No. 2)

#### Diamond Bay Outfalls (No. 1 & No. 2)

<b>Criteria a) Historical Significance</b>	<i>Diamond Bay outfall sewer is historically significant because it is a good example of a small scale sewer outfall.</i>
<b>Criteria c) Aesthetic Significance</b>	<i>The outfalls are located underground and under the ocean level and can not be seen. The drilling techniques used in these outfalls was important in the development of rock drilling.</i>
<b>Criteria d) Social Significance</b>	<i>The outfalls provided sewerage services to areas that had become well developed.</i>
<b>Criteria e) Research potential</b>	<i>The drilling techniques used in these outfalls was important in the development of rock drilling.</i>
<b>Criteria f) Rarity</b>	<i>One of six smaller ocean outfalls in SWC operations which serviced the metropolitan region of Sydney. Good example of a small scale sewer outfall.</i>
<b>Criteria g) Representativeness</b>	<i>Diamond Bay outfall is representative of a small sewer outfall. It is one of three ocean outfalls that did not treat sewage prior to disposal, the other two being Vaucluse and Manly's.</i>



### 10.1.2 Significance assessment for Vaucluse Outfall

Vaucluse Outfall	
<b>Criteria a) Historical Significance</b>	<i>Vaucluse Outfall is historically significant as it was one of two small outfall sewerage systems in the eastern suburbs that serviced the peninsula. It was one of three minor ocean outfall sewers that disposed of effluent in the Pacific Ocean without prior treatment.</i>
<b>Criteria c) Aesthetic Significance</b>	<i>The outfall sewer is located below ground and the outfall discharges below the water level at the rockface. There are no above ground features to be observed.</i>
<b>Criteria d) Social Significance</b>	<i>Vaucluse outfall is socially significant to the local area as it provided a means of effluent disposal away from the Harbour.</i>
<b>Criteria e) Research Potential</b>	<i>It is tangible evidence of sewerage engineering practices at the time of construction.</i>
<b>Criteria f) Rarity</b>	<i>One of six minor sewer systems in SWC operations and one of three similar ocean outfall sewers that did not treat sewage prior to disposal. One of two small ocean outfall sewers in the eastern suburbs which serviced the peninsula.</i>
<b>Criteria g) Representativeness</b>	<i>Representative of the ocean outfall method of sewage treatment.</i>

### 10.1.3 Significance assessment for surveyor's mark – Parsley Bay Reserve

#### Surveyor's mark – Parsley Bay Reserve

**Criteria a) Historical  
Significance**

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**Criteria c) Aesthetic  
Significance**

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**Criteria g)  
Representativeness**

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### 10.1.1 Significance assessment for the landscape modification (chiselled stairs and doorway), Sandstone Escarpment

#### Landscape modification (chiselled stairs and doorway), Sandstone Escarpment

<b>Criteria c) Aesthetic Significance</b>	The landscape modification for the creation of stairs and a stone doorway at Diamond Bay demonstrates technical achievement in relation to the modification of the sandstone cliff face. Likely created to serve a practical purpose, the creation of the stairs and archway has inadvertently created an aesthetically pleasing setting now associated with the character of the Diamond Bay cliffs, and is reminiscent of Mediterranean architecture. The Mediterranean character of the doorway in particular is cohesive with the streetscape of Mediterranean Revival residential housing which backs onto Diamond Bay Reserve, accessed from Craig Street or Kimberley Street.
<b>Criteria f) Rarity</b>	The presence of staircases chiselled into sandstone landforms as significant as the Diamond Bay escarpment is rare within the Eastern Suburbs and Sydney in general, with coastal walks and stairways often created with the addition of man-made materials to the cliff face. The presence of the sandstone doorway is a rare example of the construction of architectural features for aesthetic purposes in a clifftop setting, and is rarely seen throughout Sydney.

### 10.1.1 Significance assessment for the sandstone kerbs, Carlisle Street

#### Landscape modification (chiselled stairs and doorway), Sandstone Escarpment

<b>Criteria a) Historical Significance</b>	The sandstone kerbs on Carlisle Street, Rose Bay, are associated with the original establishment of the road alignments in the area during late 19th century subdivision in the area.
<b>Criteria c) Aesthetic Significance</b>	The sandstone kerbs contribute to the setting and character of Carlisle Street, notably at the location of the historic Presbyterian Church at the corner of Carlisle Street and Dover Avenue and is association with Federation era residential buildings on Carlisle Street.
<b>Criteria g) Representativeness</b>	Sandstone kerbs similar to those at Carlisle Street are representative of the early alignment of roads in association with subdivision in the late 19th century across the Eastern Suburbs and broader Sydney area.



APPENDIX B

10.2 Proposed works







- Legend**
- Indicative construction footprint
  - Diamond Bay proposed pump station indicative footprint
  - Proposed underground wastewater pipeline (open trench construction)
  - Proposed underground wastewater pipeline (trenchless construction)
  - Cadastre



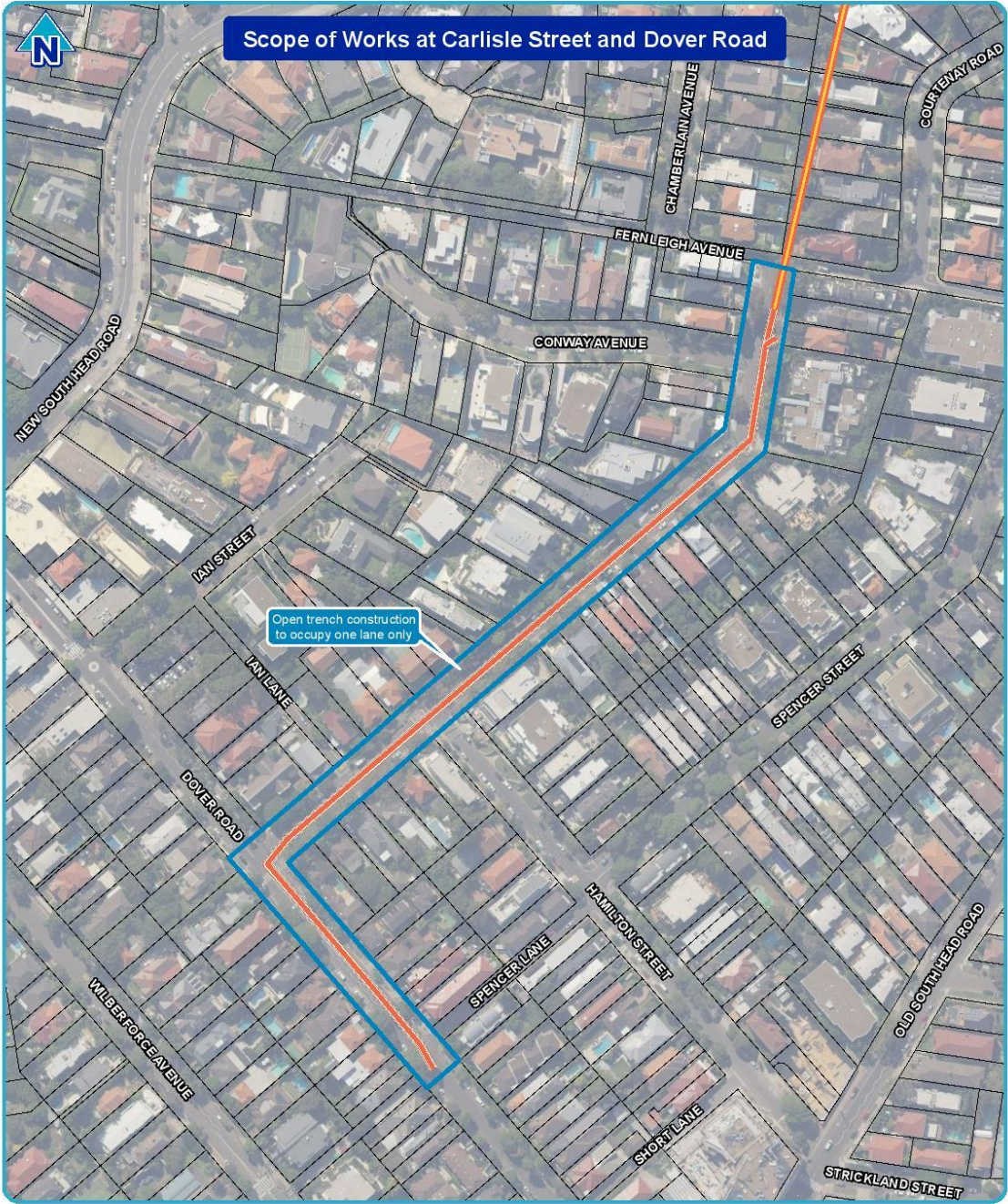
Sydney  
**WATER**

Map is indicative and not to scale – proposed locations  
are subject to change during the detailed design phase

DATA SOURCES:  
NSW LPI DTDB/DCDC 2018  
SIXMAPS 2020  
SYDNEY WATER 2020

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