



Pyrmont Peninsula Place Strategy

Contamination and Acid Sulfate Soil Study

NSW Department of Planning, Industry and Environment

August 2020

→ **The Power of Commitment**



GHD Pty Ltd ABN 39 008 488 373

133 Castlereagh Street, Level 15

Sydney, NSW 2000, Australia

T +61 2 9239 7100 | F +61 2 9239 7199 | E sydmal@ghd.com | ghd.com

Printed date	24/08/2021 4:10:00 PM
Last saved date	24 August 2021 4:10 PM
File name	https://projectsportal.ghd.com/sites/pp15_02/dpieagileplanningadv/ProjectDocs/Pymont/Contam Report_DRAFT_Rev B.docx
Author	Barry Houston & Julia Griffin
Project manager	Chris Lombardo
Client name	NSW Department of Planning, Industry and Environment
Project name	Pymont Peninsula
Document title	Pymont Peninsula Place Strategy Contamination and Acid Sulfate Soil Study
Revision version	Rev 0
Project number	12550958

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S4	0	B. Houston	A. Kohlrusch	On file	Ian Teda	On File	24/08/2021

© GHD 2021

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.



Acknowledgment of Country

We acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Owners of all lands throughout Australia on which we do business, and we pay our respects to Elders, past, present and emerging.

Contents

1. Introduction	1
1.1 Purpose of this report	1
1.2 Objectives	1
1.3 The Site	1
1.4 Scope	1
1.5 Limitations	2
1.6 Assumptions	2
2. Legislative context	3
2.1 Planning regime	3
2.2 Contaminated land regime	6
2.3 Acid sulfate soil	7
3. Basis of assessment	8
3.1 Contamination and ASS	8
3.2 Methodology	8
4. Site environmental setting	10
4.1 Pymont Peninsula	10
4.2 Topography and drainage	10
4.3 Soil landscapes	10
4.4 Geology	11
4.5 Hydrogeology	11
4.6 Acid sulfate soils	12
5. History	14
5.1 Historical aerial photographs	14
5.2 Publicly available environmental reports	17
6. Regulatory searches	19
6.1 List of NSW contaminated sites notified to the EPA	19
6.2 Contaminated land record of notices	19
6.3 Former gasworks	20
6.4 POEO Act 1997	20
6.5 Delicensed and former licenced activities	21
6.6 Waste management and liquid fuel sites	22
6.7 PFAS investigation & management sites	23
7. Results	24
8. Discussion	25
8.1 Contamination assessment	25
9. Conclusions	27
9.1 Recommendations	27

Table index

Table 1	Key Datasets and Relevance to Study	9
Table 2	Summary of Soil Landscapes	10
Table 3	Summary of site geology	11
Table 4	ASS presence within the Site	12
Table 5	Historical Aerial Photography Review Summary	14
Table 6	Publicly Available Contaminated Land Report Review Summary	17
Table 7	Sites Notified to the NSW EPA Under the CLM Act 1997	19
Table 8	Sites on the EPA Contaminated Land Record of Notices	20
Table 9	Current licenced activities under the POEO Act 1997	20
Table 10	Former licenced activities under the POEO Act 1997, now revoked or surrendered	21
Table 11	Delicensed activities still regulated by the EPA	22

Appendices

Appendix A	Figures
Appendix B	Lotsearch Reports
Appendix C	Key Site Constraints (Table A)

1. Introduction

1.1 Purpose of this report

This study provides advice and assistance in identifying the potential for and management of land contamination and acid sulfate soils within the Pyrmont Peninsula. It forms part of a multi-disciplinary study to support the implementation of the Pyrmont Peninsula Place Strategy (PPPS), led by the NSW Department of Planning, Industry & Environment (DPIE) and SJB Planning.

The PPPS is a framework to guide the forecasted growth and changes across the Pyrmont Peninsula over the next twenty years in ways that balance new developments with the area's character, amenity and heritage. Changes will include intensifying land uses on 'key sites' and 'sites capable of change' identified under the PPPS and other place outcomes.

1.2 Objectives

This study undertakes a preliminary contamination and acid sulfate soil assessment of the Pyrmont Peninsula in support of sub-precinct master plans and will inform DPIE about the impact of updating planning controls in the Sydney Local Environment Plan 2012 (LEP 2012) and Development Control Plan 2012 (DCP 2012) as part of implementing the PPPS.

1.3 The Site

The Site (study area) incorporates the suburbs of Pyrmont and Ultimo and the north western portion of Glebe, adjacent to Pyrmont at Wentworth Park (refer to Appendix A) and is located immediately to the west of the Sydney City central business district (CBD).

The study area is identified in the Sydney Local Environmental Plan (LEP) 2012 as Ultimo-Pyrmont. The notional centre of the peninsula is located at 33.871°S, 151.195°E, (56H 333,065 mE, 6250655 mS).

The PPPS splits the Pyrmont Peninsula into the following seven sub-precincts and detailed in Figure 1.

- Darling Island
- Pirrama
- Blackwattle Bay
- Pyrmont Village
- Wentworth Park
- Tumbalong Park
- Ultimo.

1.4 Scope

The scope of the study is to undertake a preliminary contaminated land assessment (including acid sulfate soil) within the Site, specifically within the area covered by the PPPS. At the same time, taking into consideration land-use intensification and outcomes in sub-precinct master plans across the Pyrmont peninsula.

Given the preliminary context of the overall PPPS, i.e., at the planning proposal stage, the study is a preliminary desktop review of known and potential contaminated sites and the presence of acid sulfate soils (ASS).

The preliminary contamination study will involve reviewing publicly available information in conjunction with acquiring environmental risk report(s) from third-party suppliers to identify both contaminated sites and ASS. Sources of publicly available information includes:

- NSW EPA contaminated sites register (record of notices and notified sites).
- NSW EPA Protection of the Environment Operations (POEO) Act (register of regulated sites).
- Geological maps.

- Soil landscape maps.
- Historical aerial imagery.
- Review of groundwater bore information, if available.
- Publicly available contaminated land and environmental-related reports (a review of five reports, if made available).

1.5 Limitations

GHD has prepared this report for the Department of Planning, Industry and Environment (DPIE). It may only be used and relied on by DPIE for the purpose agreed between GHD and DPIE as set out in sections 1.1 and 1.4 of this report.

GHD otherwise disclaims responsibility to any person other than DPIE arising in connection with this report. GHD also excludes implied warranties and conditions to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.

The opinions, conclusions, and recommendations in this report are based on assumptions made by GHD and described throughout this report. Specifically, assumptions listed in sections 1.4 and 1.6 of this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report based on the DPIE information and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report caused by errors or omissions in that information.

1.6 Assumptions

This study is based on the contamination and acid sulfate soil study scoping document issued to GHD and the outcomes of a meeting between DPIE, SJB Planning and GHD on 27 April 2021. The outcome included the refinement of the GHD proposal based on the provision of specific locations within the Pymont Peninsula identified for intensification of land use and redevelopment.

The study reviews key sites provided by DPIE, of which GHD assumes that the location and addresses are accurate.

This study is a preliminary contamination and acid sulfate soil desktop assessment only.

This assessment has used information from several reports prepared by others, and GHD has not checked the accuracy of this information.

Identifying all contaminated sites was not part of this study, and it is assumed that the reviewed datasets are current.

2. Legislative context

2.1 Planning regime

2.1.1 Ministerial directions

The Minister issues ministerial Directions for Planning to relevant planning authorities under Section 9.1 of the EP&A Act 1997. Ministerial Directions apply to planning proposals lodged with DPIE on or after the date a direction is issued.

Ministerial Directions cover various planning categories under broad headings such as 'employment and resources' or 'environment and heritage'. For this study, the two specific Ministerial Directions applicable are:

1. 2.6 Remediation of Contaminated Land (effective 17 April 2020).
2. 4.1 Acid Sulfate Soils (effective 1 July 2009).

These two Ministerial Directions are described in more detail following.

2.1.1.1 Ministerial directions – contaminated land

The aim of this direction *'is to reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered by planning proposal authorities'*.

Further, it *'applies when a planning proposal authority prepares a planning proposal applying to land specified within paragraph (2)'*.

The direction clarifies that inclusion of land within a particular zone (land zoning) must not occur if the inclusion of that land would permit a change in use of the land, unless:

- 'contamination' has been considered.
- And if the land is contaminated, the planning proposal authority is satisfied that the land is suitable in its contaminated state or will be after remediation for a particular land zoning.
- If the land requires remediation to make it suitable for a particular land zoning, that the remediation will occur before the land is used for that purpose.

The direction clarifies that the planning proposal authority must, before including land within a particular zone, obtain reports specifying the findings of a preliminary investigation of land carried out under the contaminated land planning guidelines (which are specified within SEPP 55).

Implication for Pyrmont Peninsula:

The Ministerial Directions mimic State Environmental Planning Policy No. 55 (SEPP 55) (refer to section 2.1.2), where a staged process should be followed to investigate and assess if a particular site is:

- a. Contaminated,
- b. If contaminated, is it significant enough to warrant remediation, and
- c. If remediation is required, then it should be undertaken as part of the development process.

In addition to this requirement, if a particular site is contaminated to such a degree that it requires regulation by the NSW EPA, then it is likely that a NSW EPA accredited site auditor will be required to review all contaminated site reports. However, it is noted that this may not be required in all cases. Regulation is initiated under the Contaminated Land Management Act 1997 (CLM Act 1997). Refer to section 2.2.1 for further information.

The investigation and assessment of contaminated sites should be conducted in a manner consistent with the national framework: National Environment Protection (Assessment of Contaminated Sites) Measure 1999 (Amended 2013) (NEPM 2013) – this approach is endorsed by the NSW EPA. Refer to section 2.2.3 for further information.

2.1.1.2 Ministerial directions – acid sulfate soils

The objective of this direction *'is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils'*. The direction provides guidance to planning authorities where there is a probability that ASS is present based on acid sulfate soil maps detailed in the Sydney LEP (2012).

The stage of the planning process at which this direction applies is *'when a relevant planning proposal authority prepares a planning proposal that will apply to land having a probability of containing acid sulfate soils as shown on the Acid Sulfate Soils Planning Maps'*.

The direction clarifies that the relevant planning authority must consider the ASS planning guidelines when preparing a planning proposal that incorporates land identified as having a probability of ASS being present.

The direction specifies that provisions must be made to regulate works in an ASS environment. The provisions must be consistent with ASS Model LEP in the ASS planning guidelines or other provisions provided by the Director-General of the Department of Planning that is consistent with the ASS planning guidelines.

Concerning intensification of land uses on land where ASS may be present, the direction indicates that the relevant planning authority must not prepare the planning proposal unless it has considered an ASS study in the context of a change of land use. Further, the relevant planning authority must supply a copy of the ASS study to the Director-General before undertaking community consultation (in satisfaction of section 57 of the Environmental Planning & Assessment Act 1997 ((EP&A Act 1997)).

Implication for Pymont Peninsula:

Consideration of ASS being present and the potential impact on future development sites within the Site. Land classed as foreshore, or former foreshore has a higher likelihood of ASS present than the more elevated parts, of the Pymont Peninsula, where sandstone is the predominant geology/soil type.

2.1.2 State Environmental Planning Policy No. 55

SEPP 55 provides state-wide planning controls for the remediation of contaminated land. Under the provisions of SEPP 55, *"land must not be developed if it is unsuitable for a proposed use owing to contamination and must be remediated prior to development"*.

A fundamental principle within SEPP 55 is to consider the potential for land contamination as early as possible within the planning and development control process. Therefore, under the requirements of SEPP 55, remediation work, if required, is classified as either:

- Category 1: remediation work for which development consent is required; or
- Category 2: remediation work not requiring development consent.

Category 1 remediation works are assessed to be significant and require consideration of a number of environmental and cultural factors such as areas of critical habitat, effects on threatened species, populations and/or ecological communities, or remediation involving on-site soil treatment and groundwater.

Category 2 remediation works are those which are assessed as not requiring development consent where it has been demonstrated that Category 1 remediation factors are not relevant.

Further, Section 3.5.4 of SEPP 55 states that *remediation of contaminated land is considered to be development and may require planning approval even if the proposed land use does not require approval*.

The assessment of contaminated land is necessary before determining if remediation of land is required.

2.1.3 City of Sydney Development Control Plan 2012 (DCP)

Section 3.17 of the City of Sydney DCP (2012), titled '*Contamination*', provides the following information about contaminated land within its jurisdiction:

Objective

(a) *Minimise the risk to human and environmental health on land contaminated by past uses.*

Provisions

(1) *Each development application is to include information sufficient to allow Council to meet its obligation to determine whether development should be restricted due to the presence of contamination.*

Note: These obligations are outlined in State Environmental Planning Policy No. 55 at the time of adoption of this plan.

The City of Sydney DCP (2012) refers to SEPP 55 as the governing policy for the planning and development process.

Other information related to contamination within the City of Sydney DCP (2012) is detailed in 'Schedule 5: *Public open space dedication and design criteria, Land Quality – The park is to be fit for purpose (generally flat and usable) and not constrained by contaminated land restrictions or property easements. Assessing the land quality will minimise development and maintenance costs and ensure long term flexibility for the use of the park*'.

The City of Sydney Contaminated Land Development Control Plan (2004) provides detailed information on the procedure for dealing with contamination issues under the context of planning and development approvals. This plan will apply to sites/premises that may be outside of the coverage of the City of Sydney DCP (2012) and where other planning consent authorities have control.

Implication for Pyrmont Peninsula:

The information detailed within the DCP (2012) refers to SEPP 55 as the overriding planning policy. It focuses on remediation of the land and the process that a proponent of a proposed development has to follow to understand if remediation (of land) is required, namely a staged approach to investigation and assessment, i.e., preliminary and detailed site investigations.

This indicates that a consent authority needs to be satisfied that land subject to a development application is suitable for the intended use based on potential contamination risk(s). This is of particular relevance where the land will be subject to change of use, i.e., more sensitive land use.

The City of Sydney Contaminated Land Development Control Plan (2004) can be used as a guideline document for the investigation and assessment process. However, the National Environment Protection (Assessment of Contaminated Sites) Measure 1999 (Amended 2013) (NEPM 2013) is the key guideline for the assessment of contaminated land. Further information on the NEPM (2013) is provided in section 2.2.4.

2.1.4 City of Sydney Local Environmental Plan 2012 (LEP)

Contaminated land, and the management thereof, does not form part of the City of Sydney Local Environmental Plan (LEP) 2012, and it is not considered further for this study.

However, acid sulfate soil (ASS) is addressed under *Division 4 'Miscellaneous'* within the City of Sydney LEP 2012, specifically *Clause 7.14*. The objective of the clause is to ensure that development does not disturb or drain acid sulfate soils and cause environmental damage.

Under this clause, development consent must not be granted for the carrying out of works unless an acid sulfate soils management plan (ASSMP) has been prepared for the proposed works under the Acid Sulfate Soils Manual (ASSM) (ASSMAC 1998) and has been provided to the consent authority.

If a preliminary assessment is prepared for a proposed development (undertaken in accordance with the ASSM) and the outcomes indicate that an ASSMP is not required, and the preliminary assessment has been provided to the City of Sydney who has confirmed the assessment in writing, then development consent is not required.

There are other exceptions to the above, as detailed in *Clause 7.14*. However, these are immaterial to this study.

Implication for Pymont Peninsula:

If acid sulfate soil is present or possibly present, on the basis of the LEP maps and other maps, a development application may be approved if a preliminary assessment (as a minimum) indicates there is no risk of environmental harm due to the disturbance of acid sulfate soils. In some cases, where a particular site is the subject of a development application, site investigation works may have already been completed to assess the presence of ASS.

If the assessment has not been conducted, a detailed review may likely be required.

2.2 Contaminated land regime

2.2.1 Contaminated Land Management Act 1997

The management of contaminated land in NSW is shared by the EPA and planning authorities, including DPIE and local councils. The EPA regulates contaminated land under the Contaminated Land Management Act 1997 (CLM Act), where contamination is significant enough to warrant regulation. Contaminated land that the EPA does not regulate is managed by planning authorities through the planning and development process.

The CLM Act 1997 establishes a process for investigating and (where appropriate) remediating land that the EPA considers contaminated significantly enough to require regulation.

2.2.2 Protection of the Environment Operations Act 1997

Under section 191 and section 193 of the POEO Act (adopted under the CLM Act), the EPA has the power to request information and or records relating to contamination.

If the land is subject to an Environment Protection Licence (EPL), contamination at the declared land can be regulated through special conditions on the EPL.

2.2.3 Environmental Planning & Assessment Act 1997

The planning and development control process in the Environmental Planning and Assessment Act 1979 (EP&A Act) plays an essential role in managing land contamination. The integration of land contamination management into the planning and development control process:

- ensures that changes in land use will not increase the risk to health or the environment
- avoids inappropriate restrictions on land use
- provides information to support decision making and to inform the community.

When carrying out planning functions under the EP&A Act, a planning authority must consider the possibility that previous land use has caused contamination of the site and the potential risk to health or the environment from that contamination. Decisions must then be made as to whether the land should be remediated or its use of land restricted to reduce the risk. Failure to consider the possibility of contamination at appropriate stages of the planning decision process may result in:

- inappropriate land-use decisions
- increased risk to human health
- detrimental effects on the biophysical environment
- impacts on the safety of existing and new structures
- delay in realising developments
- substantial fall in the land value and the passing on of unanticipated development costs to other parties.

Schedule 6(2) of the EP&A Act states *A planning authority does not incur any liability in respect of anything done or omitted to be done in good faith by the authority in duly exercising any planning function of the authority to which this clause applies in so far as it relates to contaminated land (including the likelihood of land being contaminated land) or to the nature or extent of contamination of land.*

2.2.4 National Environment Protection Measure 2013

The National Environment Protection (Assessment of Contaminated Sites) Measure 1999 (Amended 2013) (NEPM 2013) is made under the National Environment Protection Council Act 1994 and sets the national framework for the assessment of contaminated sites. The NEPM was developed to establish a nationally consistent approach to evaluating site contamination to ensure sound environmental management practices by the community, including regulators, site assessors, environmental auditors, landowners, developers, and industry.

The NEPM is approved by State and Territory Environment Ministers and implemented in each jurisdiction. In NSW, section 105 of the CLM Act 1997 provides detail on the EPA's role in approving guidelines for use during the investigation and assessment of contaminated land.

2.3 Acid sulfate soil

The assessment and management of ASS within NSW is guided by the NSW Acid Sulfate Soil Manual (ASSM) (*Acid Sulfate Soil Management Advisory Committee*, August 1998) (ASSMAC 1998). ASS is the name given to naturally occurring sediments or soils containing iron sulfides that can create sulphuric acid via oxidation when disturbed and exposed to air. This can be significantly detrimental to the environment and receptors if not managed appropriately. ASS are a common occurrence in foreshore areas, including those found throughout Sydney Harbour and the study area. A source of environmental risk in areas where ASS is present is associated with development and / or redevelopment of land, i.e., construction activities, particularly excavations where there is a risk of exposure of ASS or drainage of a water table to depth greater ASS.

Within the planning and development approvals process, a consent authority can provide development approval if satisfied that there is a low risk of environmental harm for an activity proposed within an area where there is a high probability that ASS is present. Specifically, the ASSM states that LEPs *“are the key regulatory mechanism to ensure the sustainable management of ASS in the coastal zone”* and that *“zoning and development control provisions in LEPs provide local councils with the opportunity to ensure that land uses are carried in an appropriate manner and that intensification of land use does not pose unacceptable risks to the environment”*.

The Sydney LEP 2012 details a series of Acid Sulfate Soils Planning Maps, which form the basis of identifying ASS risk as part of this study. A fundamental premise of this study is that if the land is identified, from reviewing the LEP 2012 maps, that it is in an area with a high probability of ASS being present, then the risks are higher. As a result, the consent authority will likely require further consideration and assessment of ASS.

Similar to contaminated land, it is envisaged that zoning change may not be the only circumstance under which a development proponent is requested to consider and assess ASS. As detailed in section 4.1 of the ASSM (ASSMAC 1998), existing provisions can be strengthened within the existing land zoning and a requirement to obtain development consent for proposed works in ASS zones.

The ASSM indicates that similar to the approach under the contaminated land regime, a staged approach is recommended, which involves a preliminary assessment followed by an acid sulfate soils management plan (ASSMP) if ASS is present and will affect the proposed development. Also, if development consent is required (deemed as not designated development), a statement of environmental effects (SEE) must be submitted along with the development application.

It is important to note that an environmental impact statement (EIS) may be required if a proposed development is defined as 'designated development' (refer to section 5.2 of the ASSM, ASSMAC 1998).

3. Basis of assessment

3.1 Contamination and ASS

The framework for the preliminary contamination assessment was developed in accordance with guidelines “made or approved”, by the NSW EPA under the *Contaminated Land Management Act, 1997* (CLM Act, 1997). These guidelines include:

- NEPC (2013), National Environment Protection (Assessment of Site Contamination) Measure 1999, National Environment Protection Council (NEPC).
- NSW EPA (2020), Consultants reporting on contamination land - Contaminated land guidelines.

The study is preliminary and can be viewed as being at the ‘pre-development application’ stage of the planning process where site-specific contaminated land assessments have not been requested by the relevant planning authority (i.e. City of Sydney). Instead, this study supports the planning proposal for the implementation of the PPPS.

Given this, the study does not involve a detailed assessment of individual sites, but it provides publicly accessible information on potentially contaminated land constraints, including ASS, across the Site.

3.2 Methodology

3.2.1 Data Sources

The study involved the acquisition and interpretation of various sources of information provided by DPIE along with publicly available information. Sources of publicly available information that were reviewed included:

- NSW EPA contaminated sites register (record of notices and notified sites).
- NSW EPA Protection of the Environment Operations (POEO) Act (register of regulated sites).
- Geological and soil-landscape maps.
- Historical aerial imagery.
- Review of groundwater bore information.
- Review of publicly available contaminated land and environmental-related reports relevant to the Site.

DPIE provided digital information identifying ‘PPPS Key Sites’ (proposed) development locations across the Site. This information was incorporated into the study to identify potential contaminated land and ASS risks associated with these sites and future development.

3.2.2 Assessment

The assessment of the reviewed datasets formed the basis of identification of constraints across the Site. The assessment outcome identified the locations where there is a potential for contaminated land and/or acid sulfate to be present, based on an interpretation of the available data.

Table 1 presents the key datasets that have been used in the assessment and their relevance to this study. The proximity of the DPIE defined key Sites to areas of potential or known contamination as well as considering areas where there is a high probability of ASS is the main determining factor.

Table 1 Key Datasets and Relevance to Study

Dataset	Relevance
DPIE Key Sites	These sites have been provided by DPIE to assist with the study and to provide specific locations to assess.
Contaminated land record of notices / notified sites	These are sites that have been notified to the NSW EPA as either being contaminated or suspected of being contaminated. An increased risk of contamination is presently based on the proximity of a PPPS Key Site to a site identified on the contaminated site registers*.
Premises regulated by the NSW EPA under an Environmental Protection Licence (EPL) (includes former and delicensed sites)	These premises the NSW EPA regulates under the POEO Act 1997 where an EPL is in operation. There are a wide variety of industries and operations that these apply to. An increased risk of contamination is presently based on the proximity of a PPPS Key Site to a site identified on the POEO Act register.
Identification of areas of ASS within the Site boundary and proximity	The Sydney LEP 2012 identifies where ASS may be present on specific planning maps. There is an increased potential of environmental risk (i.e., soil contamination and groundwater) if development occurs on land where ASS exists and mitigation measures have not been considered or implemented as part of the development. If a PPPS Key Site is located within an area identified as being underlain by ASS there would be an increased risk of ASS being present.
Historical aerial imagery	Historical aerial photographs have been used to identify historical/former land use (where possible), which can assist with an understanding of the contamination potential of individual sites or broader areas. For the purposes of this study, they were used as part of a more comprehensive assessment of the Pyrmont, Glebe and Ultimo areas. If PPPS Key Sites are located in areas of former industrial land use or areas, there would be a higher likelihood of contamination being present, e.g., quarries, reclaimed land, an increased risk of contamination is possible.
Other datasets	These were used to assist with the environmental understanding of a site or area, e.g., depth to groundwater, likely groundwater flow direction, geological significance and depth of fill material.

* the significance of the risk will vary depending on the nature of the contamination and the NSW EPA categorisation outcomes.

3.2.3 DPIE Key Sites

DPIE provided a dataset that identified approximately 80 potential development sites across the PPPS (study area), which have been categorised by DPIE, as follows:

- Category A: Priority Sites.
- Category B: Sites capable for change.
- Category C: Sites possible of change (low likelihood).
- Category D: Additional potential sites.

These 'key sites' are the focus of this study and their location is provided on Figure 2 to Figure 7 along with key datasets detailed in Table 1.

3.2.4 Outcomes

The study will compare the various constraints with the location of the DPIE identified key sites to assess the potential for contamination or ASS issues as part of the development process. The information review and constraints assessment will be presented in tabular form where a 'risk' has been assigned.

4. Site environmental setting

4.1 Pyrmont Peninsula

The Pyrmont Peninsula is located immediately to the west of the Sydney city central business district (CBD) – Appendix A. The area is identified in the Sydney Local Environmental Plan (LEP) 2012 as Ultimo-Pyrmont. The Site also includes the north eastern portion of the suburb of Glebe at the Sydney Fish Markets and the entire suburb of Ultimo, which extends from Fig Street in the north to Broadway in the South.

An indicative review of the subject area indicates a variety of land uses, including – residential (mainly high/medium density), open space/recreation, educational and commercial, although it is noted that much of the area is occupied with a residential/commercial mix.

4.2 Topography and drainage

Elevation data was provided on Sixmaps¹ and detailed within the Lotsearch reports (Lotsearch 2021a, 2021b) obtained for the study. A review of these information sources indicates that the elevation of the Site varies between 0 m (sea level) above Australian height datum (AHD) to 36 m AHD.

The Pyrmont portion of the Site has the highest elevations (36 m AHD) noted in the northwest, which drops sharply to the west towards Blackwattle Bay (4 m AHD). The 4 m AHD contour follows the foreshore mark towards the Sydney Fish Market and Glebe and the South through Wentworth Park.

The highest areas through Ultimo are at an elevation of 20 m AHD to the east of Wentworth Park, which drops to 4 m AHD at Tumbalong Park and Darling Harbour.

Storm water drainage across the Pyrmont Peninsula and Ultimo is expected to collect in the local stormwater system and discharge to Blackwattle Bay or Darling Harbour. There may be infiltration of groundwater into the stormwater, but infiltration is expected to be limited due to the extensive urban fabric within the Site.

4.3 Soil landscapes

A review of the information provided in the Lotsearch reports (Lotsearch 2021a, 2021b) indicates that the Site is located in an area dominated by the following landscape types:

Table 2 Summary of Soil Landscapes

Soil Landscape Type	General Description	Location on Site
GyMEA	Landscape described as undulating to rolling rises and low hills on Hawkesbury Sandstone. Local relief 20-80 m, slopes of 10-25%, localised rock outcrops. Soils are described as yellow earths, earthy sands, siliceous sands, gleyed and yellow podzolic soils. Described as shallow permeable soil, very low soil fertility. Extensive coverage across Sydney, including foreshore.	These soils cover the majority of Pyrmont and Ultimo, particularly through the central portion from north to South.
Disturbed Terrain	Landscape described as level plain to hummocky terrain, extensively disturbed by human activity, including complete disturbance, removal or burial of soil. Local relief < 10m, slopes <30%. The soils are described as turfed fill areas commonly capped with up to 0.4 m of sandy loam, or up to 0.6 m of compacted clay over fill or waste materials. Typical locations described as previous swamps, estuaries and wetlands including throughout Sydney harbour foreshore. Reported that there are numerous areas of disturbed terrain too small to represent at a small scale located throughout Sydney Region.	This soil-landscape occupies the foreshore of the Site from Tumbalong Park, to Darling Harbour, along Pyrmont to the Sydney Fish Market as well as Wentworth Park and the land to the South along Wattle Street.

¹ SIX Maps (nsw.gov.au)

Soil Landscape Type	General Description	Location on Site
Deep Creek	<p>Typical landscape is described as level to gently undulating alluvial floodplain that drains the Hawkesbury Sandstone. Local relief is <5 m, slopes < 3%.</p> <p>Soils are described as deep on well drained terraces, siliceous sands on current floodplain and humus podzols on low lying areas.</p> <p>Locations described as lower, non-tidal reaches of watercourses draining the Hawkesbury Valleys, Macdonald Ranges and Hornsby Plateau. Numerous smaller examples occur on valley floors mapped within the Hawkesbury soil landscape, but these are too small to be represented on 1:100,000 scale.</p>	Small strip of this soil type occupies the eastern boundary the Site, to west and South of Tumbalong Park / Darling Harbour.

4.4 Geology

A review of the information provided in the Lotsearch reports (Lotsearch 2021a, 2021b) indicates that the Site is located in an area with several geological units, as summarised in Table 3. In addition to the information provided in Table 3 the Site is likely to be underlain by a layer of fill material of varying depths, especially in the lower-lying areas near Blackwattle Bay and Darling Harbour. In addition, it is common in urban areas with a former industrial history that waste was used as fill or contamination may have occurred.

Table 3 Summary of site geology

Geological unit	Description	Location
Sandstone (Rh)	Medium to coarse-grained quartz sandstone, very minor shale and laminate lenses.	This geological unit occupies the majority of the Site and runs from north to the South, from Pymont to Ultimo. The sandstone coincides with the highest areas of the Site and outcrops are visible in the Pymont area.
Man-made fill / Quaternary (mf/Qha)	Man-made fill (dredged sand and mud, demolition rubble, industrial and household waste) overlying silty to peaty quartz sand, silt and clay with ferruginous and humic cementation in places and common shell layers.	The fill is exclusively on the western section of the Site and extends from the Sydney Fish Market south to Wentworth Park and further towards Ultimo.
Quaternary (Qha)	Silty to peaty quartz sand, silt and clay. Ferruginous and humic cementation in places. Common shell layers.	The Quaternary alluvium underlies the eastern portion of the Site from Darling Harbour through Tumbalong Park and to the South of the Site.
Man-made fill (mf)	Man-made fill. Dredged estuarine sand and mud, demolition rubble, industrial and household waste.	Man-made fill can be described as a pocket at the foreshore of Darling Harbour adjacent to Tumbalong Park.

4.5 Hydrogeology

Onsite

A review of the hydrogeological information provided in the Lotsearch reports (Lotsearch 2021a, 2021b) indicates nine boreholes are located within the Site boundary. These boreholes are situated to the north of the Sydney Fish Market in the western section of the Site (Pymont). These boreholes have been labelled 'SPA-Sydney Fish Markets' owned by 'Other Govt', GHD assumes that these are government-owned. The boreholes are described as monitoring bores installed to a maximum depth of 11.55m, with the shallowest being 3.0 m. However, details on the depth to groundwater and other relevant hydrogeological information for these bores has not been provided.

A summary of the driller's log has been provided for three of the nine bores. The underlying geology is described as fill material consisting of clayey sand, silty sands, gravelly silt sand, and silty gravels. In two of the boreholes, sandstone bedrock was encountered at depths of 1.5 m and 2.5 m below ground level (m bgl). The remaining borehole encountered a layer of silty sand and shell fragments which was underlain by a layer of orange / brown silty clay.

Offsite

The Lotsearch report (Lotsearch 2021a, 2021b) identifies five boreholes located close to the northwest boundary of Wentworth Park. The depth to groundwater is provided in four of the five boreholes, ranging from 0.6 m to 0.7 m bgl. These boreholes were all drilled to shallow depths, 4.0 m bgl. This indicates the presence of shallow groundwater in this area, which is likely to represent groundwater conditions across the western portion of the Site, occupied by Wentworth Park and lower elevated areas along Wattle Street.

A review of the summary of the driller's logs for these five bores indicates layers of fill underlain by silty clays, sandy clays, clayey sands, with minor shells and the soils are noted to be 'saturated'. This may indicate reclaimed land or the presence of dredged material used as backfill, typically in low-lying coastal areas within the Sydney Harbour.

Five further boreholes are identified to the southwest of the Site boundary, close to Wattle Street within Ultimo. These boreholes have been installed to depths ranging from 6.0 m to 8.2 m bgl, with standing water level (SWL) noted to be between 2.18 m to 5.93 m bgl.

A review of the driller's logs provided within the Lotsearch report (Lotsearch 2021a, 2021b), indicates a layer of fill material present to depths between 0.8 m to 4.8 m bgl. The deeper layers of fill consisted of grey/brown, gravel, clay, silt and concrete. The shallow layer consisted of sand, concrete, brick and metal fragments. The natural soils underlying this were described as silty clays, silty sands, with some clayey sand. Sandstone bedrock (weathered) was encountered within three boreholes at depths between 5.8 m to 8.0 m bgl.

4.6 Acid sulfate soils

A review of the information provided within the Lotsearch reports (Lotsearch 2021a, 2021b) indicates areas within the Site where there is a higher risk of ASS being present. These areas are summarised in Table 4. The information related to ASS provided in the Lotsearch reports (Lotsearch 2021a, 2021b) is based on the ASS planning maps and *Clause 7.14 Acid Sulfate Soils of Division 4 'Miscellaneous'* as detailed in the Sydney LEP 2012.

The 'ASS soil classification' is described in the Sydney LEP 2012, and the intent is to identify areas where works may present an environmental risk based on the presence of ASS. If a risk exists, development consent is required before development is permitted.

Table 4 ASS presence within the Site

ASS Soil Classification	Description	Location
Soil Class 1	Any works present an environmental risk.	Present continuously along the foreshore from the western side of Darling Harbour to the north western side of Pyrmont, ceasing at the ANZAC bridge. This ASS class extends "inland" to the west across Pyrmont Park and the Star Casino. Present as a thin strip on the western side of Pyrmont close to Wentworth Park.
Soil Class 2 and 2a	Works below natural ground surface present an environmental risk; Works by which the water table is likely to be lowered present an environmental risk.	Present along the western foreshore of Pyrmont, close to the ANZAC bridge extending to the South to Wentworth Park and along Wattle Street further to the South.
Soil Class 3	Works more than 1 metre below the natural ground surface present an environmental risk. Works by which the water table is likely to be lowered more than 1 metre below the natural ground surface present an environmental risk.	Identified as a relatively small area located on the central western portion of the Site, adjacent to Wentworth Park.

ASS Soil Classification	Description	Location
Soil Class 5	Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres AHD and by which the water table is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4.	This ASS Soil Class covers most of the Site, extending from Pymont in the north to Ultimo in the South. This Soil Class 5 correlates to the elevated areas of the Site where sandstone bedrock is expected to be at or close to the surface.

It is noted that Wentworth Park, Sydney Fish Market, Tumbalong Park and the south western portion of Darling Harbour are 'unclassified', and it is likely that there is a low risk of ASS being present in these areas.

5. History

5.1 Historical aerial photographs

Available historical aerial photographs for the site and surrounding area from 1930, 1943, 1949, 1955, 1965, 1970, 1978, 1982, 1986, 1991, 1994, 2000, 2009 and 2020 were obtained from the Lotsearch reports (Lotsearch 2021a, 2021b). Copies of the aerial photographs referenced above are included in Appendix B.

Note that the photographs taken before 1970 were 'black and white' and photographs from and including 1982 onwards were 'colour'. The aerial photograph review was conducted to develop a general history of the study area. Some of these photographs were taken from relatively high altitudes (generally resulting in photographic scales of more than 1:16,000), and hence the level of detail that can be interpreted is constrained. Information derived from historical aerial photography is described in chronological order in Table 5.

5.1.1 Aerial Photography Review

The review of the historical aerial photographs shows that the Site's historical use was predominately used for industrial and shipping infrastructure and activities. Land use then evolved in the later decades for residential and commercial purposes and some tourism and recreational related purposes. Results of the aerial photograph review are summarised in Table 5.

Table 5 Historical Aerial Photography Review Summary

Year	Observations
1930	<p>The resolution of the aerial photograph is not clear.</p> <p>North: The majority of the Site's northern portion is occupied by industrial land uses with smaller buildings, possible terraced housing situated adjacent to the wharves on the eastern side of Pymont. The wharves are occupied by warehousing and railway tracks are present.</p> <p>A railway line arcs from the eastern side of Pymont to the western side and cuts through the northern portion of Wentworth Park.</p> <p>West: This area is dominated by industrial land use with various building sizes and smaller wharves. A tank farm is situated in the northwestern portion of this area, close to the former Glebe Island Bridge.</p> <p>At the south western portion of Pymont, close to Wentworth Park, there appears to be smaller wharves and a large warehouse type building where the Sydney Fish Market is located.</p> <p>Central and east: There are blocks of terraced housing located to the west of Darling Harbour with various industrial-type buildings. The northern portion of Tumbalong Park at the boundary with Darling Island is dominated by the railway stock yard and large warehouses, and large wharves.</p> <p>South: There are multiple blocks of terraced housing through the central southern portion with various industrial buildings (possibly warehousing located around them, with a higher concentration to the west towards Wentworth Park.</p> <p>There is a circular track at Wentworth Park with vacant land to the north and a series of smaller tracks to the South.</p>
1943	<p>North: The entire northern portion of the Site appears to be dominated by industrial land uses. The Pymont Power Station is possibly present on the eastern side of Pymont, close to present day Darling Harbour.</p> <p>Three large wharves on the north eastern corner of the site (Jones Bay Wharf, Darling Island Wharf, Sydney Wharf with two smaller wharves immediately to the South) appear to be used for shipping and industrial purposes.</p> <p>The site's northern portion appeared to be mainly industrial buildings and Darling Island at the northern most point (used for shipping). To the northwest of the site, Glebe Island Bridge connected Pymont to Glebe Island.</p> <p>In the north western portion of the Site, close to Banks Street, a large tank farm is situated amongst industrial type buildings (possibly warehouse), and the Griffin Incinerator is present.</p> <p>Central: The central portion of the Site contains low-density residential terrace type housing. Railway lines ran through the central part of the site, below industrial and residential buildings (multiple bridges built over the railway).</p> <p>East: The southern portion of Darling Harbour and Tumbalong Park is dominated by railway works and stock yard.</p>

Year	Observations
	<p>South: The southern portion of the site consists of multiple industrial buildings and possible terraced housing.</p> <p>West: In the western portion of the Site, multiple small jetties for shipping and industrial purposes are present in Blackwattle Bay. In addition, numerous industrial buildings, including the Sydney Fish Market, are present. A tank farm is present to the north of where the current day Sydney Fish Market is located.</p> <p>In the southwest portion, where Wentworth Park is currently located, multiple industrial warehouses are present. In addition, a park and racing track (Wentworth Park) is present to the South of the industrial warehouses.</p>
1949	<p>The site has remained similar to the 1943 aerial photograph. Notable changes are:</p> <p>West: Several large industrial warehouses located immediately to the South of the foreshore at Sydney Fish Market have been demolished, with open space now present at this location.</p>
1955	<p>The site remained as per the 1949 aerial photograph. Notable changes are:</p> <p>North: Sydney Wharf had been extended eastward. It appeared to have a loading and storage area for shipments and the two smaller wharves observed in 1943 had been removed in place for this extension.</p> <p>West: Two of the large warehouses lining Blackwattle bay had been removed.</p> <p>The large industrial buildings observed on the western portion of the Site (1943 to at least 1951) have been demolished, and parkland is present (where present-day Wentworth Park is located).</p>
1965	<p>The site remained as per 1955. Notable changes are:</p> <p>North: Two buildings had been constructed on the eastern side of the wharf, and it appears that both sides of the wharf were now in use for shipping purposes.</p> <p>Central: Some of the industrial buildings observed in 1955 had been demolished, and the land left cleared.</p> <p>East: Three shelters/warehouses have been constructed over some railway tracks and loading bays at the railway stock yard (present-day Tumbalong Park). An industrial building has been constructed close to the railway stock yard.</p> <p>West: The buildings where the present-day Sydney Fish Market have been demolished and a large warehouse-type building was constructed. The tank farm to the north has been removed.</p> <p>Several buildings had been constructed on Wentworth Park land.</p> <p>South: A large building has been constructed on the southwest corner of the Site facing Broadway. Several buildings at the intersection of Harris Street and Broadway have been demolished and a larger building constructed in their place.</p>
1970	<p>The site remained as per 1965. Notable changes are:</p> <p>North: Some industrial infrastructure (buildings) observed in 1965 had been removed from the shipping area (Point Street). Two new industrial buildings had been constructed on previously vacant land on Miller Street.</p> <p>East: A road (William Henry Street) had been constructed to replace a smaller road over the railway line. Some of the terraced housing has been demolished in the central and central-eastern section of the Site.</p> <p>South: Demolition of several buildings has occurred in the southernmost portion of the Site facing Broadway.</p>
1978	<p>The site remained as per 1970. Notable changes are:</p> <p>North: The northern portion of the site remained as predominately industrial land, with increased density of buildings and industrial infrastructure since 1970.</p> <p>Central: Some more of the terraced housing and smaller commercial lots have been demolished. A large industrial building has also been demolished further to the South of this.</p> <p>South: The most southern portion of the Site had been redeveloped into large buildings including a high-rise building (now UTS).</p>
1982	<p>The site remained as per 1975. Notable changes are:</p> <p>Central: Previously, vacant land had been developed into a car park and (potentially units) residential land (Harris Street). Four large buildings have been constructed on the site of the previously demolished terraced houses. Previously demolished buildings have several buildings constructed (unknown if industrial/commercial/residential).</p> <p>East: The bridge over Darling Harbour had been disconnected. A new road was constructed around Darling Harbour's perimeter over the railway stock yard, connecting to Pyrmont Street.</p> <p>South: Some of the industrial buildings on the southern portion of the site had been demolished and developed into residential housing (Jones Street).</p>

Year	Observations
1986	<p>The site remained as per 1982. Notable changes are:</p> <p>North: The buildings on Darling Island (off Pirrama Road) had been demolished, and the area appeared to be used for vehicle parking. The railway infrastructure was removed from Darling Island Wharf and was used for vehicle parking.</p> <p>East and Central: All railway infrastructure had been removed from the stock yard, and the area appears to be undergoing significant construction activities assumed to be associated with the ICC and Darling Harbour precinct. The western distributor appears to be under construction. Some of the industrial lots on the central portion of the site had been cleared.</p> <p>South: The southern portion remained a mix of industrial and residential. Industrial buildings had been demolished and the Powerhouse Museum was under construction. There was more development and construction underway on UTS land.</p>
1991	<p>The Site remains as per 1986. Notable changes are:</p> <p>North: It appears the former railway track in the northern section of Darling Harbour has been removed or is in the process of being removed. The northern portion of the Site generally remains industrial and shipping related.</p> <p>East: Pyrmont Bridge had been reconstructed along with the pedestrian bridge and monorail track. The ICC and Darling Harbour precinct on the eastern portion of the site had been fully developed.</p> <p>Central: Some industrial buildings had been demolished, and the Western Distributor had been constructed in their place. The central portion was predominately residential land with former factories, and industrial warehouses assumed to be demolished. These were replaced by the Western Distributor and the construction of residential apartment blocks.</p> <p>South: Demolition of two buildings has occurred in the southeastern corner of the Site.</p>
1994	<p>The Site generally appears similar to the 1991 aerial photograph. Notable changes are:</p> <p>North: Glebe Island Bridge had been replaced by the extension of the Western Distributor, and the construction of the Anzac Bridge has commenced. Warehousing demolished at the foreshore of Pyrmont.</p> <p>North west and West: Industrial buildings along Bank Street have been demolished, and an apartment block has been constructed where the former Griffin Incinerator was located, with the vacant land present. Some buildings to the north of the Fish Market have been demolished and the area used for vehicle parking. Two apartment blocks have been constructed to the South of the Fish Market.</p> <p>East / central east: Some industrial buildings have been demolished directly to the west of the ICC.</p> <p>South: The southern portion contains original buildings from 1943, including industrial and residential, with some demolition underway for green space.</p>
2000	<p>The Site generally remains as per 1994. Notable changes are:</p> <p>North: Pirrama Road areas appear to have been redeveloped from industrial buildings into residential housing and green space. Many of the industrial buildings and related infrastructure along Refinery Drive and Bowman Street has been demolished.</p> <p>East: Construction of the Star Casino and the precinct along the Wharves had been completed.</p> <p>Central: The cleared land adjacent to the western distributor had been developed into commercial buildings.</p> <p>West: Additional apartment blocks have been constructed to the South of the Fish Market.</p> <p>South: The southeastern corner has now been fully redeveloped with other buildings in its place (likely commercial related). A park was constructed in the central southern portion, at Mary Ann street with the buildings previously demolished.</p>
2009	<p>The Site generally remains as per 2000. Notable changes are:</p> <p>North: The previously cleared land on the site's northern portion had been developed into mainly residential buildings/apartments.</p> <p>The tank farm located in the north western section of the site has been demolished, with vacant land now present. The former railway passage appears to have been filled, and multiple residential and commercial buildings had been constructed in its place. Sydney Wharf had been extended width-wise, and a commercial or residential building had been constructed on it.</p> <p>South: In the southern portion of the site, many of the old industrial buildings had been cleared, and multiple residential apartment blocks had been constructed.</p>

Year	Observations
2020	<p>The Site generally remains as per the 2009 aerial photograph. Notable changes are:</p> <p>North: The site's northern portion is predominately residential apartments with some commercial / office buildings and green space. More commercial buildings had been developed on Sydney Wharf and Darling Island Wharf.</p> <p>East: The Darling Harbour precinct has been redeveloped into the ICC and Darling Quarter.</p> <p>Central and South: The central and southern portions remained mainly as 2005 with predominately residential housing and some old buildings from the remaining as observed in the 1943 aerial photograph. A second high rise building has been constructed directly adjacent to the current UTS campus high rise.</p>

5.2 Publicly available environmental reports

As part of this study, a review of publicly available environmental reports was undertaken. DPIE did not provide specific environmental reports. However, several were obtained by searching online resources. The study was undertaken to identify potentially contaminated sites within the Site boundary that may affect the future development potential of key sites identified by DPIE.

A summary of these reports and key findings relevant to the Site are detailed in Table 6.

Table 6 Publicly Available Contaminated Land Report Review Summary

Scope	Outcomes
Noel Arnold & Associates, 2010, Soil Contamination Investigation, Bank Street, Pyrmont	
<p>This investigation was undertaken for NSW Public Works for a site located at Bank Street, Pyrmont.</p> <p>The investigation was focused on soils located on a portion of land underneath the Anzac Bridge at Bank Street, which was identified for redevelopment.</p> <p>A soil sampling program with eight test pits to a depth of 1.3 m was undertaken.</p>	<p>Key findings relevant to the Site:</p> <ul style="list-style-type: none"> – Parts of this site were previously a bitumen covered car park. – Soil sampling results indicated the area was unsuitable for the proposed end use: a boat ramp was constructed. – Hydrocarbons and polycyclic aromatic hydrocarbons were detected in soils analysed. – It was recommended that soil be excavated, and waste classification assessment be undertaken to reuse or dispose of the soils during the redevelopment.
UrbanGrowth NSW, 2015, The Bays Precinct Transformation Plan	
<p>This Transformation Plan sets out priorities, timing and uses for the Precinct.</p> <p>It sets out an overall goal for the Bays precinct, provides the clear policy framework and outlines a spatial planning framework.</p>	<p>Site history with potential contamination risk:</p> <ul style="list-style-type: none"> – White Bay Power Station – Glebe Island was a former car import terminal – The grain silos were built at Glebe Island in 1975 – Rozelle Rail Yards became a marshalling area for trains when the Metropolitan Goods railway line opened in 1922. <p>The sites identified within this report are not within the Site boundary and are a sufficient distance from the Site not to present a contamination risk and have not been considered further.</p>
JBS&G, 2015, Site Wide Remedial Concept Plan, The Bays Precinct Urban Transformation Area (for UrbanGrowth NSW)	
<p>JBS&G was engaged in preparing a site-wide remedial concept plan for properties that comprise the 'Bays Precinct Urban Transformation Area'.</p> <p>The objectives of the report were to:</p> <ul style="list-style-type: none"> – Provide a summary of historical investigation works completed across the Bays Precinct and present a Conceptual Site Model (CSM) documenting the overall contamination characteristics and potential exposure pathways. 	<p>Key findings relevant to the Site:</p> <p>Blackwattle Bay</p> <ul style="list-style-type: none"> – Disused underground storage tanks (UST) located to the north of Sydney Fish Market. Reported that USTs were decommissioned between 1990s and 2000s. – Hymix concrete batching plant fronting Bank St, north of Sydney Fish Market. – British Imperial Oil Company Ltd and Shell Company of Australia Pty Ltd leased the current day Sydney Fish Market site for oil distribution and storage.

Scope	Outcomes
<ul style="list-style-type: none"> – Characterise the proposed potential future site land uses from an environmental perspective. – Identify available remedial strategies to be adopted for the Bays Precinct and relevant portions thereof by an assessment of remedial options. <p>This report included a review of various other environmental-related reports available for various portions of the Blackwattle Bay precinct.</p>	<ul style="list-style-type: none"> – Petroleum hydrocarbon, heavy metals and polycyclic aromatic hydrocarbon contamination encountered within footprint of Sydney Fish Market (third party report reviewed by JBS&G). – Fill and reclaimed land (1880s, 1890s to 1920s). – Former coal wharf (Bridge Road). – Hanson concrete batching plant (Bridge Road). – Current and former industrial areas. – Potential ASS conditions in natural alluvial/marine soil underlying fill material and in adjoining bay sediments within Blackwattle Bay. – ASS confirmed in natural soils underlying foreshore at Bridge Road, to the west of Sydney Fish Market. <p>Wentworth Park</p> <ul style="list-style-type: none"> – Reclaimed and filled land – Fig Street and Wattle Street Council depot. – The late 1880s – land reclamation works resulting in the formation of Wentworth Park. – Quarrying activities at Fig and Wattle Street depot backfilled again (the 1890s – 1905). – City of Sydney, Wattle St Depot site, known to have soil, groundwater and soil vapour impacts associated with former tar pits, USTs and associated refuelling infrastructure. – Directly to the South of Sydney Fish Market was known heavy industry (currently apartments, Wattle Crescent). – To the immediate southern of Wentworth Park, range of heavy industrial use, including former foundry. – Wentworth park building footprints (current and former).
<p>Sydney Metro West, 2019, Sydney Metro West, Scoping Report, Stage 1 – Major civil construction work between The Bays and Sydney CBD</p>	
<p>Request for Secretary’s Environmental Assessment Requirements.</p> <p>The document outlines the proposal for the major civil construction work between The Bays and Sydney CBD.</p> <p>The purpose of this report is to support Sydney Metro’s application to the Minister for Planning and Public Spaces for planning approval under Section 5.15 of the EP&A Act.</p> <p>In specific relevance to this study, the report refers to the possibility of a metro station at Pymont, specifically close to the Pymont Street and Pymont Bridge Road junction.</p> <p>A preliminary environmental assessment was undertaken, which assessed the potential environmental impact of the proposed station at Pymont.</p>	<p>Key findings relevant to the Site:</p> <ul style="list-style-type: none"> – The report identified no groundwater users along the proposed metro corridor between the Bays and Sydney CBD. – There was a high probability of acid sulfate soils within the bottom sediments at Johnston’s Bay and Darling Harbour and the northeast of the proposed Pymont station. – There were no known contaminated sites within the footprint of the proposed metro corridor between the Bays and Sydney CBD. – There were no known contaminated sites present at or near the proposed Pymont station location. – Dry cleaners were identified within the Pymont Station area, which may be a potential source of contamination. – There is potential for <i>minor</i> contamination (unspecified within the report) in the fill material across the proposed Pymont station location.

6. Regulatory searches

GHD reviewed datasets from the Office of Environment and Heritage (OEH) including notices under the Contaminated Land Management Act 1997, POEO Environment Protection License Register and environmental incidents.

6.1 List of NSW contaminated sites notified to the EPA

The NSW EPA maintains a “List of NSW contaminated sites notified to the EPA” under Section 60 of the CLM Act. Inclusion on this list indicates that the notifiers consider the sites are contaminated and warrant reporting to the NSW EPA. The contamination at a site may or may not be significant enough to warrant regulation by the NSW EPA, and following review of relevant site information, the NSW EPA will determine whether or not the site warrants regulation.

A search of the database was undertaken on 6 June 2021 and found no premises within the Site boundary. There were six premises located within a 500 m radius of the site boundary.

Table 7 Sites Notified to the NSW EPA Under the CLM Act 1997

Site	Address	Contamination activity / type	Management Class	Location in relation to site boundary
Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle Street, Pyrmont	Other industry	Regulation under CLM Act not required	On site (eastern boundary of Wentworth Park)
Shell Coles Express Service Station	387-429 Wattle Street, Ultimo	Service Station	Regulation under CLM Act not required	Offsite, 20 m south west
Former AGL Gasworks	Berths 5, 6 & 7 (already demolished) and part of Hickson Road, Millers Point	Gasworks	Contamination formerly regulated under the CLM Act	Offsite, 234 m north east
Cnr Regent Street and Wellington Street, Chippendale	Wellington Street, Chippendale	Chemical industry	Contamination currently regulated under CLM Act	Offsite, 277 m south
Interpro House (OSP 46581)	447 Kent Street, Sydney	Other petroleum	Regulation under CLM Act not required	Offsite, 363 m north east
Former AGL Gasworks	38 Hickson Road, Millers Point	Gasworks	Contamination being managed via the planning process (EP&A Act)	Offsite, 416 m north east
Former AGL Gasworks	36 Hickson Road, Millers Point	Gasworks	Contamination formerly regulated under the CLM Act	Offsite, 438 m north east
Former AGL Gasworks	30-34 Hickson Road	Gasworks	Regulation under CLM Act not required	Offsite, 455 m north east

Off the sites detailed in Table 7, the Former Council Works Depot and the Shell Coles Express Service station will be considered as part of this study. The remaining sites are regarded as sufficient distance or hydraulically upgraded from the study area, and the risks from these are considered low.

6.2 Contaminated land record of notices

The NSW EPA maintains a list of sites that appear on the *Contaminated Land: Record of Notices* issued under the Contaminated Land Management Act 1997. A search of the list was undertaken on 6 June 2021 and indicated that one site is located within the Site boundary and three sites within a 500 m radius of the site boundary.

Table 8 Sites on the EPA Contaminated Land Record of Notices

Site	Address	Contamination activity / type	Notice status	Location in relation to site boundary
Pymont Power Station	Pymont Road, Pymont		7 former notices	On site (north eastern Pymont)
Cnr Regent Street and Wellington Street, Chippendale	Wellington Street, Chippendale	Chemical industry	3 current and 4 former	Offsite, 277 m south west
Former AGL Gasworks	36 Hickson Road, Millers Point		2 former	Offsite, 234 m north east
Former AGL Gasworks	Berths 5, 6 & 7 (already demolished) and part of Hickson Road, Millers Point		11 former	Offsite, 234 m north east

Off the sites detailed in Table 8, the Pymont Power Station will be considered part of this study. The remaining sites are regarded as sufficient distance or hydraulically upgraded from the study area, and the risks from these are considered low.

6.3 Former gasworks

The NSW EPA maintains a public register of former gasworks within NSW and the register indicates that there is one former gasworks located within 500 m of the site:

- Hickson Road, Millers Point, located 234 m to the north east of the site.

This is located on the opposite side of Darling Harbour to the northeast of the Site and is considered to be hydraulically upgradient. Therefore, the risks from this site are considered low. In addition, the former gasworks has been remediated and subject to a site audit (under the CLM Act 1997).

6.4 POEO Act 1997

The NSW EPA maintains a public register of premises subject to an Environment Protection Licence (EPL) under the POEO Act. A search of the register was undertaken on 6 June 2021 and indicates that there are none in operation within the site boundary. However, fifteen premises are operating under an EPL located within 500 m of the Site boundary.

Table 9 Current licensed activities under the POEO Act 1997

Licence Holder	Number / ID	Type of Licence	Distance from site boundary (m)	Status
Gypsum Resources Australia Pty Ltd	11906	Shipping in bulk	Offsite, 62 m west	Issued
Newcastle Port Corporation	13008	Shipping in bulk	Offsite, 62 m north west	Issued
Cement Australia Holdings Pty Ltd	4310	Cement or lime handling	Offsite, 62 m north west	Issued
Sydney Cite Marine Pty Ltd	12651	Boat construction / maintenance (general)	Offsite, 75 m west	Issued
CPE Central Park Pty Ltd	20768	Generation of electrical power from gas	Offsite, 96 m south	Issued
Laing O'Rourke Australia Construction Pty Ltd	21148	Railway systems activities	Offsite, 127 m south east	Issued
Sydney Trains	12208	Railway systems activities	Offsite, 142 m south east	Issued
White Bay 6 Pty Ltd	20144	Boat construction / main tenance (general)	Offsite, 185 m north	Issued

Licence Holder	Number / ID	Type of Licence	Distance from site boundary (m)	Status
Transport for NSW	11919	Boat construction / main tenance (general)	Offsite, 215 m west	Issued
John Holland Pty Ltd	20971	Concrete works, railway systems activities	Offsite, 288 m west	Issued
CPB Contractors Pty Ltd	21423	Railway infrastructure construction (<50,000T)	Offsite, 328 m south east	Issued
Sugar Australia Pty Ltd	4790	General agricultural processing Shipping in bulk	Offsite, 332 m west	Issued
John Holland Pty Ltd	21278	Road construction	Offsite, 403 m west	Issued
Newcastle Port Corporation	12095	Shipping in bulk	Offsite, 415 m north west	Issued
Metro Trains Sydney Pty Ltd	21247	Railway systems activities	Offsite, 468 m north east	Issued

The sites detailed in Table 9 are considered sufficient distance or hydraulically cross or downgradient from the study area, and the risks from these are considered low.

6.5 Delicensed and former licenced activities

The NSW EPA also maintains a public register of premises that have been delicensed or formerly subject to an EPL under the *POEO Act*). A search of the NSW EPA EPL register was undertaken on 6 June 2021 and indicated that there were twenty activities within 500 m of the site, as detailed in Table 10.

Table 10 Former licenced activities under the *POEO Act 1997*, now revoked or surrendered

Licence Holder	Number / ID	Type of Licence	Distance from site boundary (m)	Status
Luhrmann Environment Management Pty Ltd	4653	Other activities- application of herbicides	Onsite (Site wide)	Surrendered*
Robert Orchard	4838	Other activities- application of herbicides	Onsite (Site wide)	Surrendered*
Sydney Weed & Pest Management Pty Ltd	6630	Other activities- application of herbicides	Onsite (Site wide)	Surrendered*
Hanson Construction Materials Pty Ltd	3801	Shipping in bulk	Onsite (western section of Site, Glebe)	Surrendered
Sydney Harbour Casino Properties Pty Ltd	5949	Miscellaneous licenced discharge to waters (at any time)	Onsite (north eastern section of Site, Pyrmont)	Surrendered
Lendlease Building Pty Ltd	11718	Crushing, grinding, separating	Onsite (north western section of Site, Pyrmont)	Surrendered
Carlton & United Breweries (NSW) Pty Ltd	1521	Brewing and distilling Hazardous, industrial or group A waste generation or storage	Offsite, 33 m south	Surrendered
Patrick Stevedores Operations Pty Ltd	7180	Hazardous, industrial or group A waste generation or storage. Shipping in bulk	Offsite, 34 m east	Surrendered
Bilfinger Berger AG	11804	Road construction	Offsite, 57 m north east	Surrendered
ETEX Australia Pty Ltd	20330	Shipping in bulk	Offsite, 62 m north west	Surrendered
Sydney Harbour Foreshore Authority	20394	Generation of electrical power from diesel	Offsite, 64 m north west	Surrendered

Licence Holder	Number / ID	Type of Licence	Distance from site boundary (m)	Status
Infrastructure NSW	13336	Crushing, grinding, separating Contaminated groundwater treatment Land-based extractive activity	Offsite, 114 m north east	Surrendered
Downer EDI Works Pty Ltd	21130	Railway systems activities	Offsite, 127 m south east	Surrendered
Acciona Infrastructure Australia Pty Ltd	20699	Land-based extractive activity	Offsite, 244 m east	Surrendered
Metropolitan Demolitions and Recycling Pty Ltd	10026	Crushing, grinding, separating	Offsite, 259 m west	Surrendered
Remath Investments No 6 Pty Ltd	3052	Shipping in bulk	Offsite, 261 m south west	Surrendered

* These types of activities were usually undertaken on an LGA basis and unlikely to have been conducted on individual sites.

Of the sites detailed in Table 10, the following will be considered further as part of this study:

- Hanson Construction Materials Pty Ltd (industrial land use).
- Sydney Harbour Casino Properties Pty Ltd (considered unlikely to present a risk based on nature of activity).
- Lendlease Building Pty Ltd (possible risk based on nature of activity).
- Carlton & United Breweries (NSW) Pty Ltd (considered unlikely given that former site is now mixed use residential and commercial, possible for residual contamination to be present).

The remaining sites are considered immaterial, a sufficient distance or hydraulically cross or downgradient from the study area, and the risks from these are considered low.

Table 11 *Delicensed activities still regulated by the EPA*

Licence Holder	Number / ID	Type of Licence	Distance from site boundary (m)	Status
HYMIX Australia Pty Ltd	1253	Concrete works	Onsite (western section of Site, Glebe)	No longer in force
Australia Red Cross Society	6847	Hazardous, industrial or group A waste generation or storage	Offsite, 379 m east	No longer in force
The University of Sydney	12070	Hazardous, industrial or group A waste generation or storage	Offsite, 386 m south west	No longer in force
The Preterm Foundation	12236	Hazardous, industrial or group A waste generation or storage	Offsite, 494 m south east	No longer in force

Of the sites detailed in Table 11, the Former Hymix Australia Pty Ltd site will be considered further. The remaining sites are deemed to be a sufficient distance or are hydraulically cross or downgradient from the study area, and the risks from these are considered low.

6.6 Waste management and liquid fuel sites

Geoscience Australia maintains a database of waste management sites and liquid fuel sites via a web-based service platform. A review of the information contained within the Lotsearch report (Lotsearch 2021a, 2021b) indicated the presence of the following sites within and close to the site boundary:

- Shell Service station, 387-429 Wattle Street, Ultimo, operational petrol station located 20 m to the southwest of the Site's southern portion (Ultimo).

This site is notified to the NSW EPA and will be considered as part of the study.

6.7 PFAS investigation & management sites

The Lotsearch reports (Lotsearch 2021a, 2021b) provides information regarding PFAS investigation and management programs within Australia. These programs are undertaken by the NSW EPA, Department of Defence and Airservices Australia, respectively.

A review of the information contained within the Lotsearch reports (Lotsearch 2021a, 2021b) indicates that there are no sites subject to PFAS investigation and management within or close to the Site boundary.

7. Results

Table A, Appendix C presents a summary of the data and information review considering the key datasets used in the assessment. The main constraints for each of the key sites are identified, with commentary provided for each. Where constraints have not been identified based on the key datasets, other information has been used to indicate potential risk, i.e., historical aerial photograph review. The use of historical aerial photographs, whilst important, can be considered more minor of determining factor with this study given that the majority of the Site (study area) has been used for industrial purposes in the past.

The outcomes of the study indicate the following:

- The land zones applicable to the key sites are R1 (general residential), RE1 (public recreation), B3 (commercial core), B4 (mixed-use), SP2 (infrastructure), SHC (Sydney Harbour Catchment), DHDP (Darling Harbour Development Plan) or CBW (City Bays West SREP 26).
- There is a long history of industrial use of the general area, and this may have an impact on the contamination status of some of the key sites within each sub-precinct.
- Several former and delicensed activities were regulated by the NSW EPA, which had the potential to contaminate soils and groundwater.
- ASS may be limited to areas close to the foreshore and areas where there is soil cover as it is noted that significant portions of the Site have bedrock close to or at the surface, e.g., sandstone exposures observed at Pirrama Park, Pyrmont.
- The potential for contamination to be present in the subsurface soils and / or groundwater across the Site is considered higher due to the nature of the former land uses e.g., heavy industry, extensive history of railway stock yard and shipping uses, Pyrmont power station, Pyrmont Incinerator and demolition of various structures.
- A variety of former/historical land uses across the Site had the potential to contaminate soils and groundwater, with three of these notified to the NSW EPA under the CLM Act 1997.
- The key sites fall into one of the following constraint categories as detailed in Table A, Appendix C.
 - High likelihood of both contamination and ASS issues.
 - High likelihood of ASS issues, low likelihood of contamination issues.
 - High likelihood of contamination issues, low likelihood of ASS issues.
 - Low likelihood of both contamination and ASS issues.

Figure 2 to Figure 10 presents the location of each of the key sites with dataset overlays to identify the constraints and where further assessments may be required to satisfy planning requirements.

8. Discussion

The results of the data and information review indicate that for many of the key sites, constraints exist which may require further consideration and assessment in the context of planning and development controls.

Where a proponent of development seeks approval for a change of permitted land use i.e., rezoning of land to more sensitive land use, the proponent needs to satisfy the consent authority that the development site is suitable for the intended land use. This is done by undertaking appropriate investigations and, if required, remediation, which renders the development site suitable for the intended land use.

Remediation can be classed as either

- Category 1: which requires development consent
- Category 2: which does not require development consent

The onus is on the proponent to identify which remediation category is needed through consultation with the relevant consent authority.

Concerning contaminated land, in most cases, a proposed change of use to land (i.e., redevelopment of a key site) would warrant a development application and approval from consent authority, particularly if that change of use was to a more sensitive land use irrespective of land zoning. This scenario would be expected for current zone 'B4 – Mixed use' as this is suitable for a range of different land uses.

If a change to a more sensitive land use via rezoning was proposed within the current zone, 'B3 – commercial core', this would likely require further assessment and, if required, remediation to facilitate a development application.

It could also be envisaged that if intensification of land use within any of the zones applicable to the key sites, with the exception of R1 – general residential, involved redevelopment to residential apartments or other types of residential, then this would be considered a more sensitive land use and as such, further contamination assessment is likely to be required to ensure the quality of the land is suitable for such purposes.

If any of the zones correspond to areas where there is an increased probability of the presence of ASS to be present, then it is likely that, at the very least, an investigation and / or an ASSMP is put in place as part of the development consent approval from the consent authority. There is specific criteria detailed in the LEP 2012 to be used when considering the potential risks from the presence of ASS (refer to Table 4).

The same can be said of known contaminated sites, particularly those which have been notified to the NSW EPA for contamination issues, as these have an inherent elevated risk of the presence of contamination. The outcomes of previous contaminated land assessments and / or remediation would be critical in understanding the current contamination status of a site as well as current land use or activity.

8.1 Contamination assessment

For future development applications where contamination is identified as a potential issue, or there is a request by the consent authority, investigations and further management reports that may be required are:

- Preliminary site investigation (PSI).
- Detailed site investigation (DSI).
- Remediation action plan (RAP).
- Validation report.
- Environmental management plan (EMP).

The nature and extent of the investigations are site-specific and dependent on various factors usually included in the PSI stage of assessment and form the scope of the investigation at the DSI stage. Based on PSI and DSI outcomes, further management or remediation may be required to render the site suitable for the intended use. A site can be made suitable by remedial action to a standard relevant to the proposed/intended land use.

In addition, after remedial action at a site, ongoing management may be required to manage environmental risk(s) posed by residual contamination (i.e. monitoring chemicals at or under the site). The implementation of an EMP provides a framework for the maintenance of mitigation measures and ongoing monitoring of the residual contamination where complete clean-up of a site is not feasible or where onsite containment of contamination has occurred. An EMP will also be notified by the local council on a Section 10.7 planning certificate for an individual site.

A site audit statement (SAS) may be required from a NSW EPA accredited Site Auditor to confirm if a site is suitable for the intended use(s). A SAS may be requested as part of the planning process by the consent authority and involves the Site Auditor providing an independent review of each aspect of the contaminated land assessment stages undertaken at a site, i.e., PSI, DSI, RAP etc. Further details on the aspects of the site audit process are provided in *Guidelines for the NSW Site Auditor Scheme, Contaminated Land Management* (3rd Edition) (NSW EPA 2017).

Other assessments that may be required during the development process can include a hazardous materials assessment (such as asbestos, lead paint and synthetic mineral fibres), particularly when demolition of structures/buildings is planned. SafeWork NSW regulates the presence of hazardous materials on a site.

9. Conclusions

GHD has reviewed several key datasets to assist with the identification of potential development constraints within the Site. The potential constraints ranged from former historical land use (e.g. industrial), known contaminated sites, current, former and delicensed NSW EPA regulated activities and the presence of acid sulfate soils.

The Ministerial Directions for both contaminated land and acid sulfate soils requires the consideration of these two issues by the proponent of a planning proposal. This preliminary study has found that many of the key sites across the study area (the Site) may be impacted by one or both of these variables if development were proposed. Further, in addition to the Ministerial Directions there are other planning controls which may need to be considered such as SEPP 55 and the City of Sydney DCP (2012) when assessing development potential.

It is likely that further assessments will be required for many of the key sites at development application stage of the planning process.

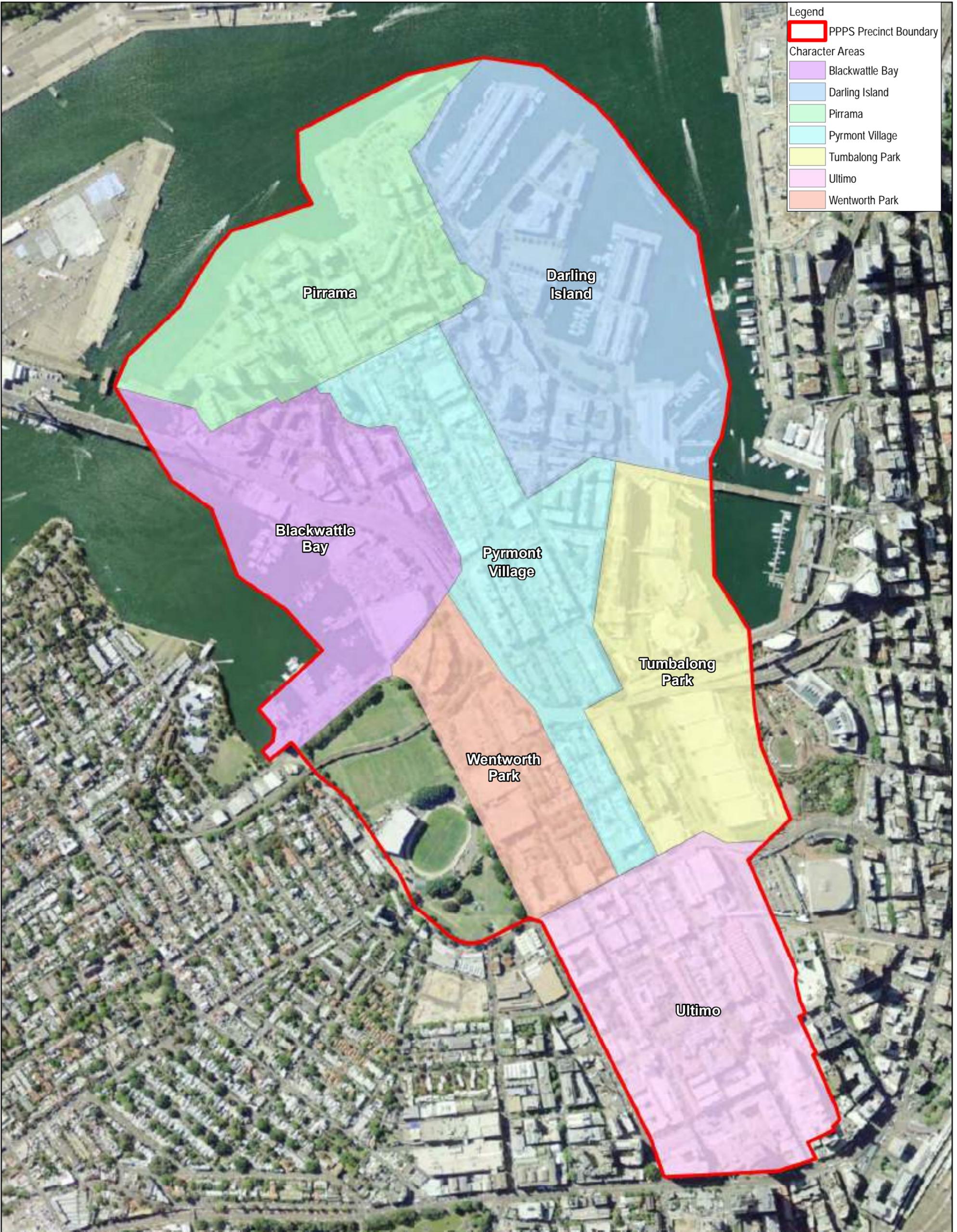
9.1 Recommendations

Based on the outcomes of this study, the following recommendations are detailed:

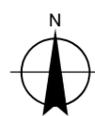
- If, in the future, key sites are identified as being preferred for redevelopment, further assessments are recommended where there is a high risk of contamination or the presence of ASS (or both). The additional assessments should follow the framework as specified within the NEPM (NEPC 2013) and other NSW EPA endorsed guidelines for the investigation of contaminated land and acid sulfate soils.
- Consideration for additional preliminary investigations to be undertaken at the key sites to refine the outcomes of this preliminary study. The additional investigations may include:
 - The acquisition of planning certificates from local government.
 - Liaison with SafeWork NSW to assess for the presence of hazardous chemicals.
 - Liaison with local government to review records pertaining to contaminated land that they may hold on the key sites.
 - Undertake a qualitative risk assessment of the key sites to assess the potential contamination and acid sulfate soil risk. This would build upon the constraints identification undertaken as part of this study.
- For key sites with a high risk of contamination or the presence of ASS (or both) identified for redevelopment, it is recommended to undertake detailed site investigations to assess the contamination risk. It is recommended to do this as early as possible as the potential management of contaminated land or land impacted by ASS can impact the timeframes and associated costs of development.

Appendix A

Figures



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



DPIE
 Pymont Place

Project No. 12550958
 Revision No. A
 Date 15 Jun 2021

PPPS Character Areas

FIGURE 1



Legend

- Pyrmont Ultimo Lot Change Sites 210705 Issue
- PPPS Precinct Boundary
- EPA Delicensed
- EPA Current Licensed
- EPA Former Licensed
- EPA Contaminated Land Register Record of Notices

Acid Sulfate Soils State

- 1
- 2
- 5

Data Disclaimer
 © 2021. Whilst every care has been taken to prepare this map, GHD make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Paper Size ISO A3

Metres

Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



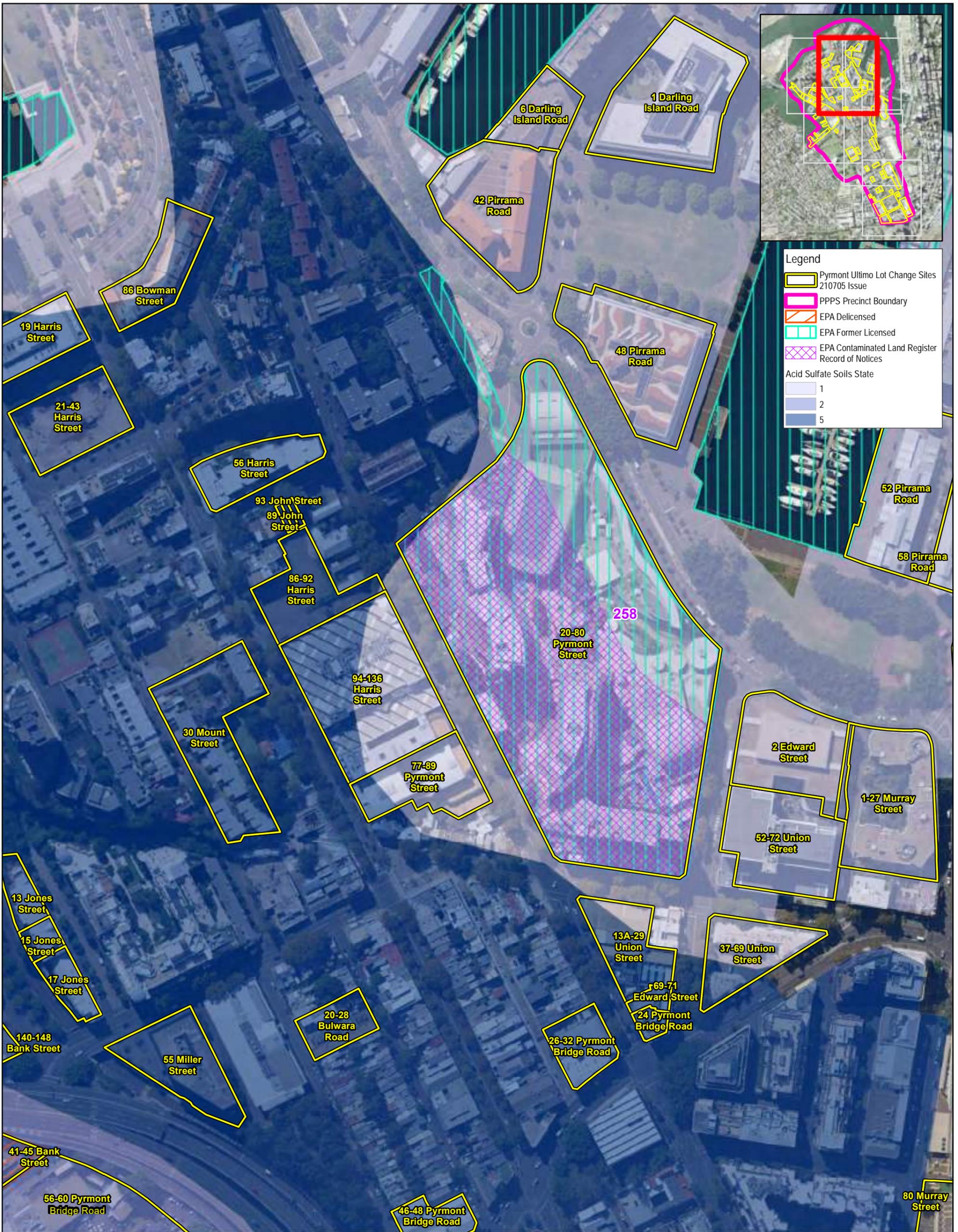
DPIE
 Pyrmont Place

**Pyrmont Ultimo Lot Change Sites
 210705 Issue**

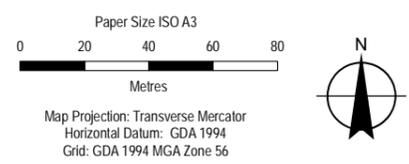
Project No. 12550958
 Revision No. A
 Date 23 Aug 2021

N:\AU\Sydney\Projects\21112550958\GIS\Maps\Deliverables\12550958_005_PyrmontUltimoLotChangeSites210705Issue_RevA.mxd
 Print date: 23 Aug 2021 - 12:59

Data source: Lotsearch; EPA Contaminated Record Notices; EPA Contaminated Notified Sites; EPA Delicensed; EPA Current; EP Former; Acid Sulfate Soils State; SJB; PPPS Precinct Boundary; PPPS Sites Categorized; Aerial Imagery; Stamps (2018). Created by: jcmatic



Data Disclaimer
 © 2021. Whilst every care has been taken to prepare this map, GHD make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.



DPIE
 Pyrmont Place

**Pyrmont Ultimo Lot Change Sites
 210705 Issue**

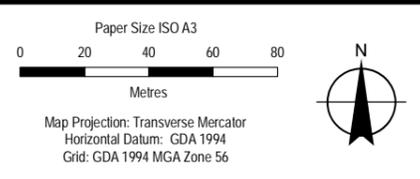
Project No. 12550958
 Revision No. A
 Date 23 Aug 2021

N:\AU\Sydney\Projects\21112550958\GIS\Maps\Deliverables\12550958_005_PyrmontUltimoLotChangeSites210705Issue_RevA.mxd
 Print date: 23 Aug 2021 - 13:00

Data source: Lotsearch; EPA Contaminated Record Notices; EPA Contaminated Notified Sites; EPA Delicensed; EPA Current; EP Former; Acid Sulfate Soils State; SJB; PPPS Precinct Boundary; PPPS Sites Categorized; Aerial Imagery; Stamps (2018). Created by: jcmalic



Data Disclaimer
 © 2021. Whilst every care has been taken to prepare this map, GHD make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.



DPIE
 Pyrmont Place

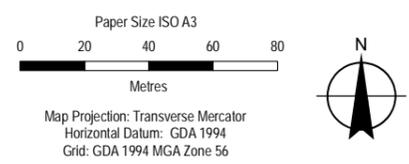
**Pyrmont Ultimo Lot Change Sites
 210705 Issue**

Project No. 12550958
 Revision No. A
 Date 23 Aug 2021

**Page 3 of 6
 FIGURE 4**



Data Disclaimer
 © 2021. Whilst every care has been taken to prepare this map, GHD make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.



DPIE
 Pymont Place

**Pymont Ultimo Lot Change Sites
 210705 Issue**

Project No. 12550958
 Revision No. A
 Date 23 Aug 2021

N:\AU\Sydney\Projects\21112550958\GIS\Maps\Deliverables\12550958_005_PymontUltimoLotChangeSites210705Issue_RevA.mxd
 Print date: 23 Aug 2021 - 13:01

Data source: Lotsearch; EPA Contaminated Record Notices; EPA Contaminated Notified Sites; EPA Delicensed; EPA Current; EP Former; Acid Sulfate Soils State; SJB; PPPS Precinct Boundary; PPPS Sites Categorized; Aerial Imagery; Sixmaps (2018). Created by: jcmalic



Legend

- Pyrmont Ultimo Lot Change Sites 210705 Issue
- PPPS Precinct Boundary
- EPA Former Licensed
- EPA Contaminated Land Register Notified Sites

Acid Sulfate Soils State

- 2
- 3
- 5

Data Disclaimer
 © 2021. Whilst every care has been taken to prepare this map, GHD make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Paper Size ISO A3

Metres

Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



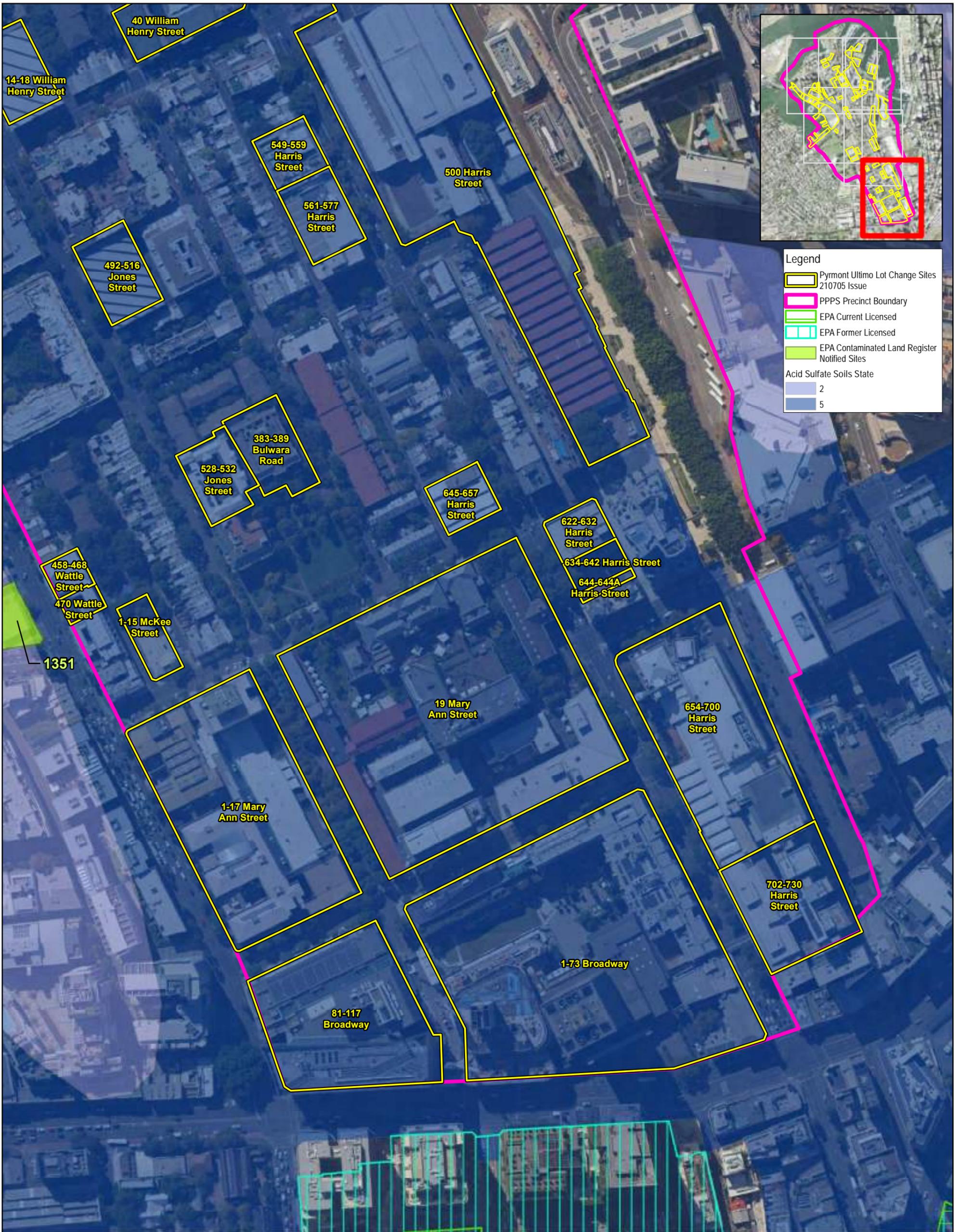
DPIE
 Pyrmont Place

**Pyrmont Ultimo Lot Change Sites
 210705 Issue**

Project No. 12550958
 Revision No. A
 Date 23 Aug 2021

N:\AU\Sydney\Projects\21112550958\GIS\Maps\Deliverables\12550958_005_PyrmontUltimoLotChangeSites210705Issue_RevA.mxd
 Print date: 23 Aug 2021 - 13:01

Data source: Lotsearch; EPA Contaminated Record Notices; EPA Contaminated Notified Sites; EPA Delicensed; EPA Current; EP Former; Acid Sulfate Soils State; SJB; PPPS Precinct Boundary; PPPS Sites Categorized; Aerial Imagery; Sitmaps (2018). Created by: jcmalic



Legend

- Pyrmont Ultimo Lot Change Sites 210705 Issue
- PPPS Precinct Boundary
- EPA Current Licensed
- EPA Former Licensed
- EPA Contaminated Land Register Notified Sites

Acid Sulfate Soils State

- 2
- 5

Data Disclaimer
 © 2021. Whilst every care has been taken to prepare this map, GHD make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Paper Size ISO A3

0 20 40 60 80
 Metres

Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



DPIE
 Pyrmont Place

**Pyrmont Ultimo Lot Change Sites
 210705 Issue**

Project No. 12550958
 Revision No. A
 Date 23 Aug 2021

N:\AU\Sydney\Projects\21112550958\GIS\Maps\Deliverables\12550958_005_PyrmontUltimoLotChangeSites210705Issue_RevA.mxd
 Print date: 23 Aug 2021 - 13:02
 Data source: Lotsearch; EPA Contaminated Record Notices; EPA Contaminated Notified Sites; EPA Delicensed; EPA Current; EP Former; Acid Sulfate Soils State; SJB; PPPS Precinct Boundary; PPPS Sites Categorized; Aerial Imagery; Sitmaps (2018). Created by jcmatic

Appendix B

Lotsearch Reports



LOTSEARCH
LOTSEARCH ENVIRO PROFESSIONAL

Date: 31 May 2021 14:38:16

Reference: LS020892 EP

Address: Pyrmont, NSW 2009

Disclaimer:

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.

You should obtain independent advice before you make any decision based on the information within the report.

The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	16/04/2021	16/04/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	14/04/2021	12/04/2021	Monthly	1000m	1	1	10
Contaminated Land Records of Notice	Environment Protection Authority	03/05/2021	03/05/2021	Monthly	1000m	1	1	7
Former Gasworks	Environment Protection Authority	11/05/2021	11/10/2017	Quarterly	1000m	0	0	1
National Waste Management Facilities Database	Geoscience Australia	12/05/2021	07/03/2017	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000m	0	0	1
EPA PFAS Investigation Program	Environment Protection Authority	12/05/2021	28/04/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	26/05/2021	26/05/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	26/05/2021	26/05/2021	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	26/05/2021	26/05/2021	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	11/05/2021	11/05/2021	Quarterly	2000m	0	0	1
EPA Other Sites with Contamination Issues	Environment Protection Authority	02/02/2021	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	11/05/2021	11/05/2021	Monthly	1000m	0	4	18
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	11/05/2021	11/05/2021	Monthly	1000m	1	1	6
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	11/05/2021	11/05/2021	Monthly	1000m	6	10	18
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	N/A	N/A	N/A	N/A
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	N/A	-	N/A	N/A
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	N/A	N/A	N/A	N/A
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	N/A	-	N/A	N/A
Points of Interest	NSW Department of Finance, Services & Innovation	14/05/2021	14/05/2021	Quarterly	1000m	216	249	719
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	14/05/2021	14/05/2021	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	14/05/2021	14/05/2021	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	14/05/2021	14/05/2021	Quarterly	1000m	3	4	28
State Forest	Forestry Corporation of NSW	25/02/2021	14/02/2021	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	22/01/2021	11/12/2020	Annually	1000m	0	0	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000m	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	Annually	1000m	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000m	9	14	132

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Geological Units 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	5	5	6
Geological Structures 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	1	1	1
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	2	2	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000m	3	4	6
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	06/05/2021	26/02/2021	Monthly	500m	3	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	2	2	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	14/05/2021	28/04/2021	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	12/05/2021	12/05/2021	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	12/05/2021	12/05/2021	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	12/05/2021	12/05/2021	Monthly	1000m	11	11	11
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	06/05/2021	07/12/2018	Monthly	1000m	2	3	5
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	06/05/2021	30/04/2021	Monthly	1000m	9	20	182
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/05/2021	20/11/2019	Annually	500m	2	2	2
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/05/2021	20/11/2019	Annually	500m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	14/05/2021	26/03/2021	Quarterly	500m	9	11	51
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	06/05/2021	30/04/2021	Monthly	500m	81	90	370
Bush Fire Prone Land	NSW Rural Fire Service	31/05/2021	29/04/2021	Weekly	1000m	0	0	0
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment & Heritage	01/03/2017	16/12/2016	As required	1000m	2	2	3
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	24/02/2021	19/03/2020	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Annually	1000m	0	0	0
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	0	0	0
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	27/05/2021	27/05/2021	Weekly	10000m	-	-	-

Site Diagram

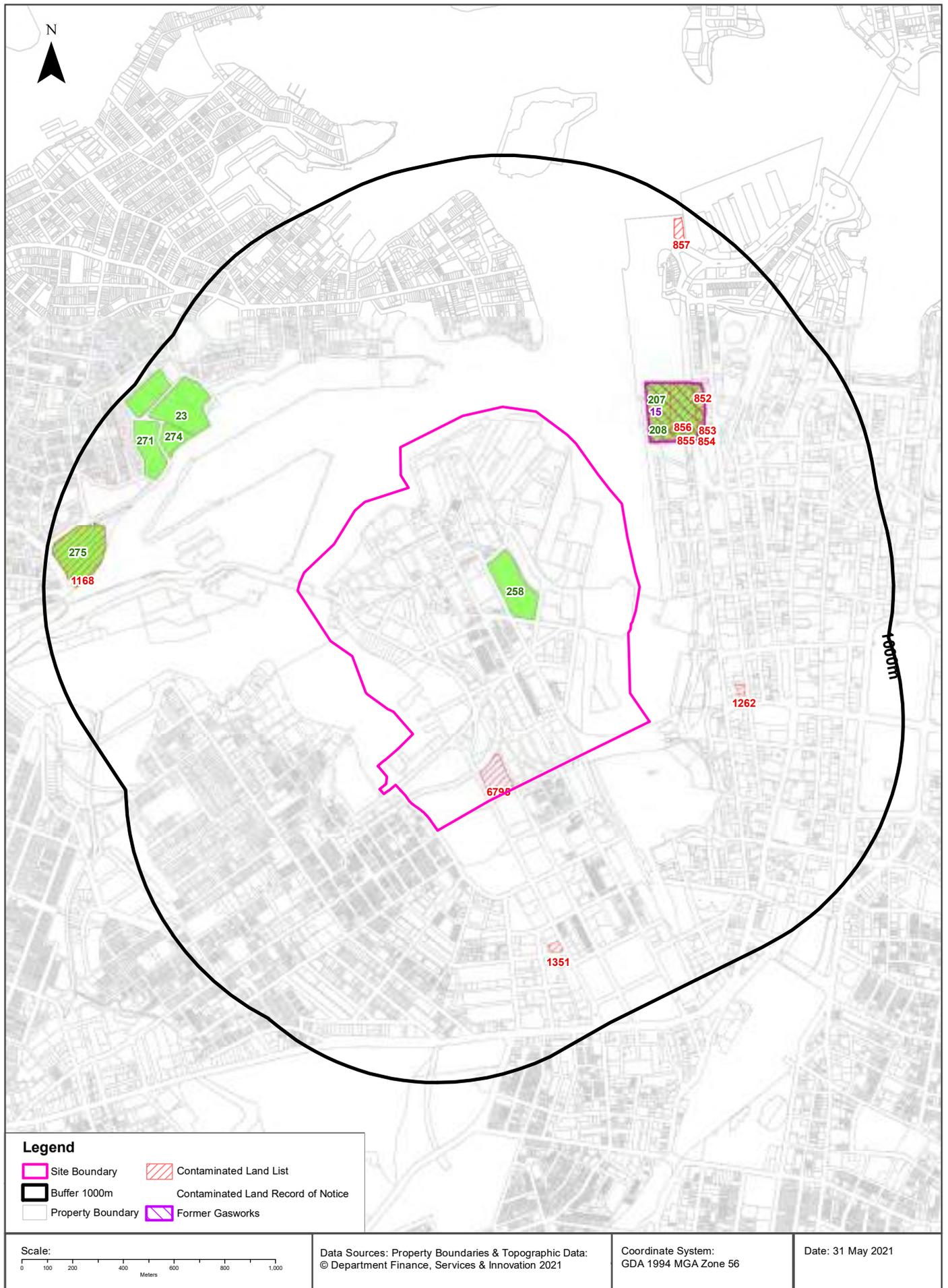
Pyrmont, NSW 2009



<p>Legend</p> <ul style="list-style-type: none"> Site Boundary Internal Parcel Boundaries 	<p>Total Area: 1.48km²</p> <p>Total Perimeter: 5.1km</p> <p>Disclaimers:</p> <p>Measurements are approximate only and may have been simplified or smaller lengths removed for readability.</p> <p>Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.</p>	<p>Scale:</p> <p>0 25 50 100 150 200 250 Meters</p> <p>Data Sources: Data Sources: Aerial Imagery; © Aerometrex Pty Ltd</p> <p>Coordinate System: GDA 1994 MGA Zone 56</p> <p>Date: 31 May 2021</p>
--	--	---

Contaminated Land

Pyrmont, NSW 2009



Contaminated Land

Pyrmont, NSW 2009

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
6795	Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle STREET	Pyrmont	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	0m	On-site
855	Former AGL Gasworks	Berths 5, 6 and 7 (already demolished) and part Hickson Road	Millers Point	Gasworks	Contamination formerly regulated under the CLM Act	Current EPA List	Premise Match	234m	North East
856	Former AGL Gasworks	Road reserve fronting 30-38 Hickson Road	Millers Point	Gasworks	N/A - Site no longer on EPA Contaminated Land List	Previous EPA List	Premise Match	318m	North East
1262	Interpro House (OSP 46581)	447 Kent Street	Sydney	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	363m	East
854	Former AGL Gasworks	38 Hickson Road and Road Reserve	Millers Point	Gasworks	Contamination being managed via the planning process (EP&A Act)	Current EPA List	Premise Match	416m	North East
853	Former AGL Gasworks 36 Hickson Road	36 Hickson Road	Millers Point	Gasworks	Contamination formerly regulated under the CLM Act	Current EPA List	Premise Match	438m	North East
852	Former AGL Gasworks	30 - 34 Hickson Road	Millers Point	Gasworks	Regulation under CLM Act not required	Current EPA List	Premise Match	455m	North East
1351	Shell Coles Express Service Station	387-429 Wattle Street	Ultimo	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	614m	South
1168	White Bay Power Station	Robert Street	Rozelle	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	775m	West
857	Moores Wharf UPSS	4 Towns Place	Millers Point	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	877m	North East

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.

EPA site management class	Explanation
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority
 © State of New South Wales through the Environment Protection Authority

Contaminated Land

Pyrmont, NSW 2009

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
258	Pyrmont Power Station	Pyrmont Road	Pyrmont	7 former	3063	Premise Match	0m	On-site
207	Former AGL Gasworks 36 Hickson Road	36 Hickson Road	Millers Point	2 former	3265	Premise Match	234m	North East
208	Former AGL Gasworks	Berths 5, 6 and 7 (already demolished) and part Hickson ROAD	Millers Point	11 former	3221	Premise Match	234m	North East
23	Former Unilever Detergent Factory	Hyam, Foy, Reynolds, Palmer, Booth Street	Balmain	18 former	3007	Premise Match	661m	North West
271	Ampol Balmain	Reynolds Street and Buchanan Street	Rozelle	8 former	3084	Premise Match	689m	North West
274	Former Unilever Sulphonation Plant	Reynolds Street	Rozelle	4 former	3005	Premise Match	692m	North West
275	White Bay Power Station	Robert Street	Rozelle	7 former	3068	Premise Match	775m	West

Contaminated Land Records of Notice Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit

<http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm>

Former Gasworks

Former Gasworks within the dataset buffer:

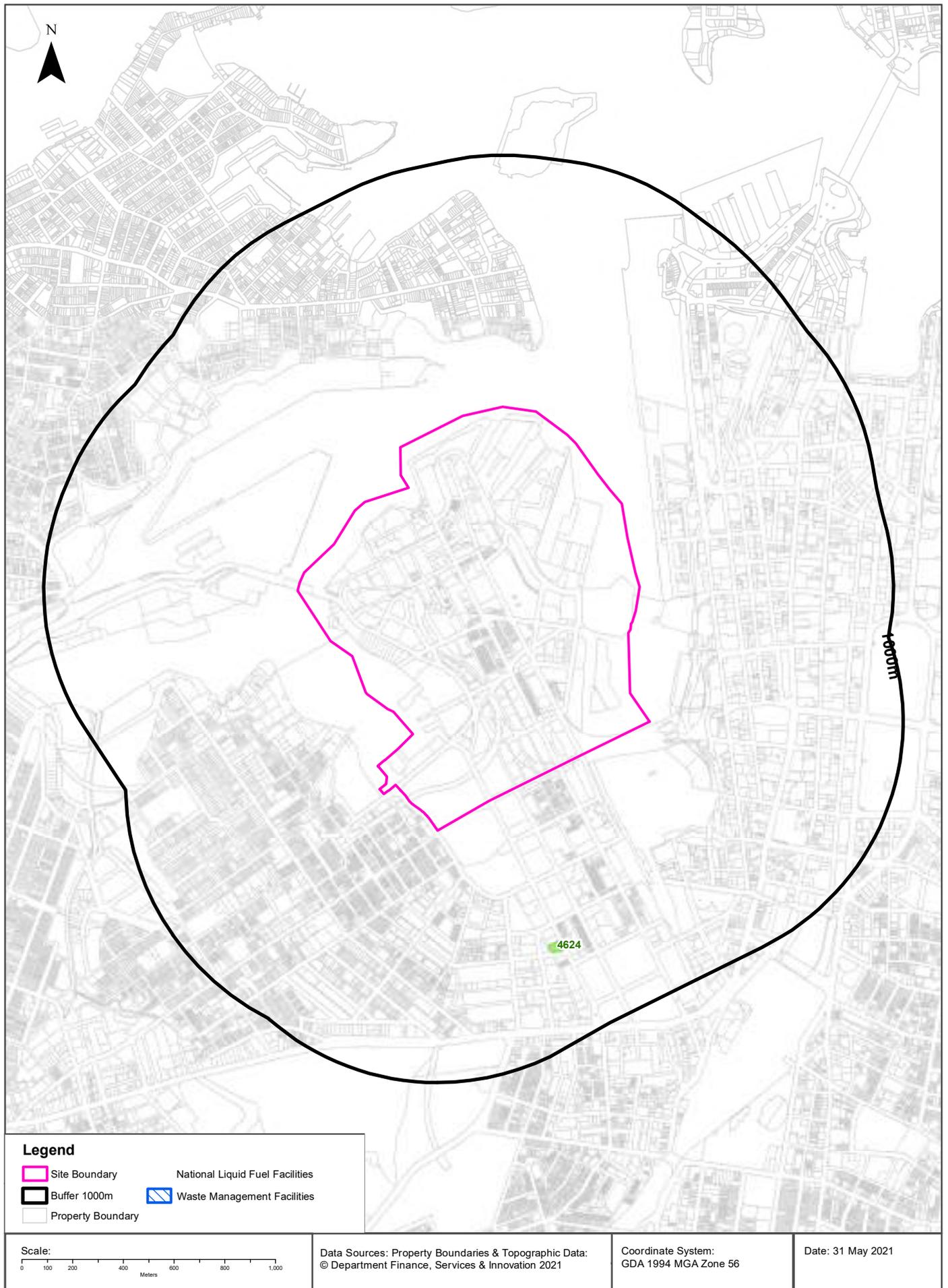
Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
15	Hickson Road, Millers Point	Council of the City of Sydney	Search record of EPA notices	Premise Match	234m	North East

Former Gasworks Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

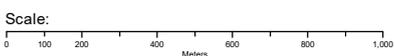
Waste Management & Liquid Fuel Facilities

Pymont, NSW 2009



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- Waste Management Facilities
- National Liquid Fuel Facilities



Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2021

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Waste Management & Liquid Fuel Facilities

Pyrmont, NSW 2009

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Geoscience Australia

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

National Liquid Fuel Facilities

National Liquid Fuel Facilities within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
4624	Shell	Coles Express Ultimo	387-429 Wattle Street	Ultimo	Petrol Station	Operational		25/07/2011	Premise Match	614m	South

National Liquid Fuel Facilities Data Source: Geoscience Australia

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

PFAS Investigation & Management Programs

Pyrmont, NSW 2009

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

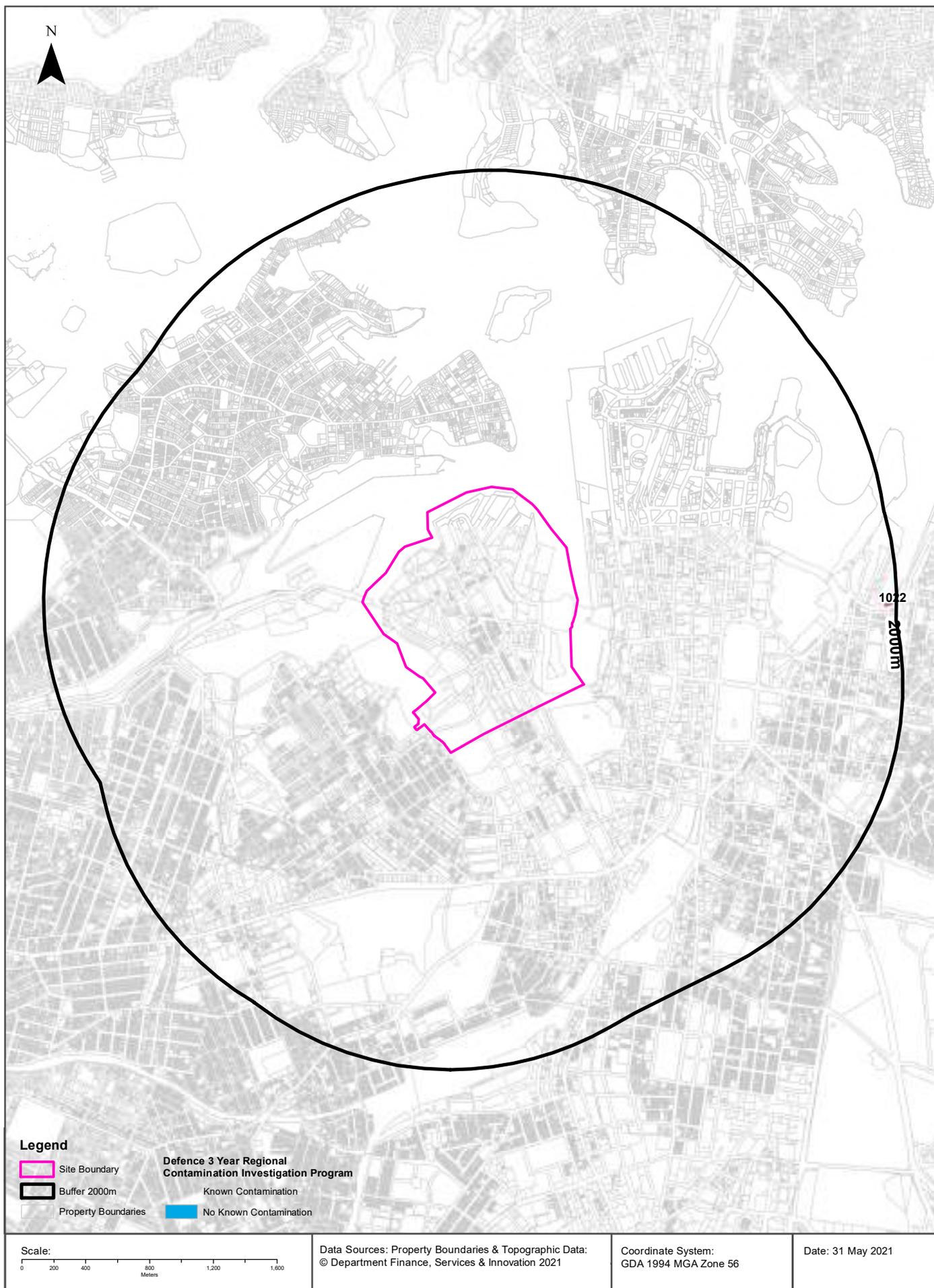
Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence 3 Year Regional Contamination Investigation Program

Pymont, NSW 2009



Defence Sites

Pyrmont, NSW 2009

Defence 3 Year Regional Contamination Investigation Program

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
1022	Garden Island Precinct	Garden Island, New South Wales	YES	Premise Match	1918m	East

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

Pyrmont, NSW 2009

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

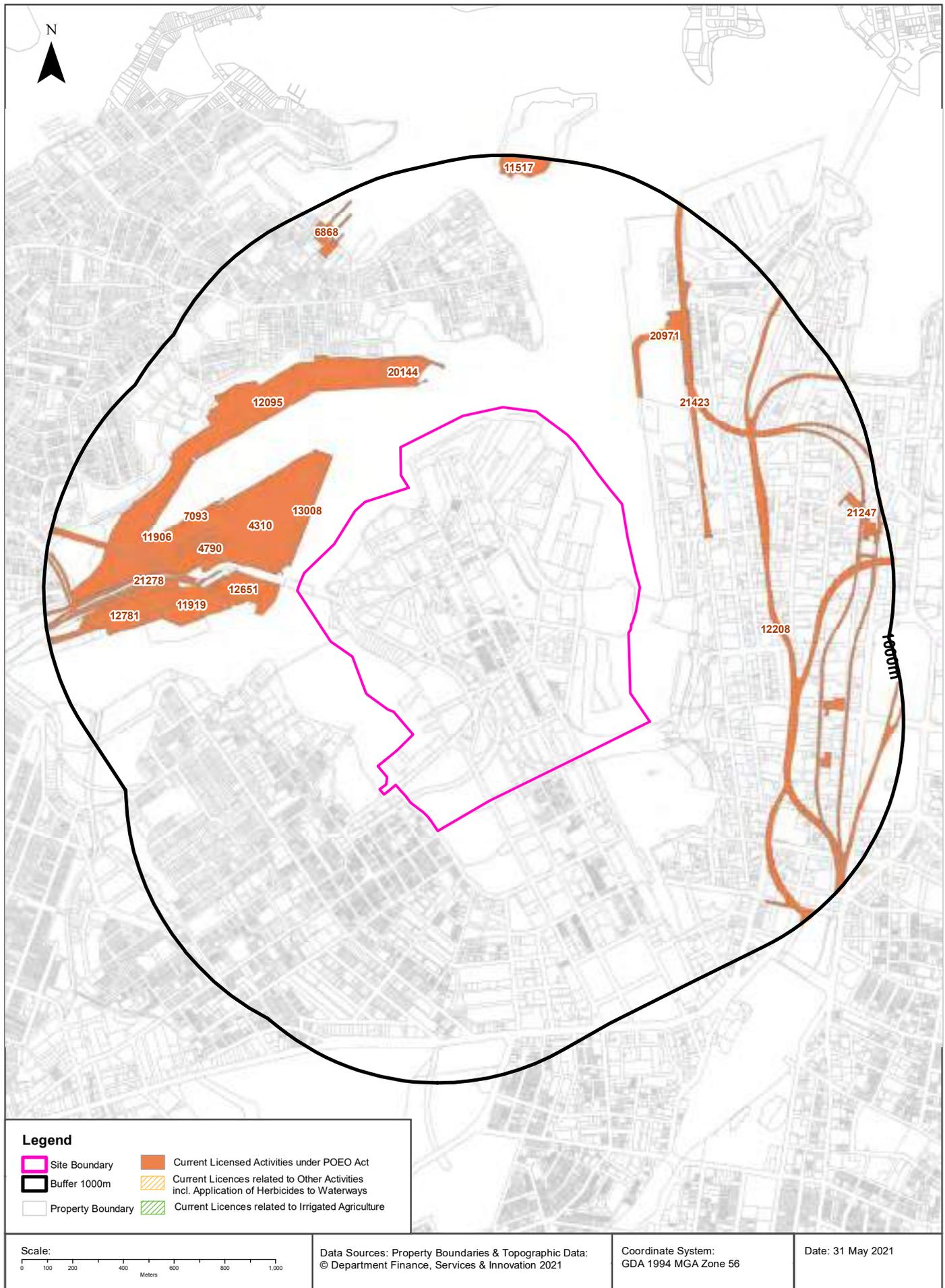
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Current EPA Licensed Activities

Pymont, NSW 2009



EPA Activities

Pyrmont, NSW 2009

Licensed Activities under the POEO Act 1997

Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
11906	GYPSUM RESOURCES AUSTRALIA PTY. LIMITED	GYPSUM RESOURCES AUSTRALIA PTY. LIMITED	SOMMERVILLE ROAD	ROZELLE	Shipping in bulk	Premise Match	62m	West
13008	NEWCASTLE PORT CORPORATION	Glebe Island Berth 1 and 2	Sommerville Road	ROZELLE	Shipping in bulk	Premise Match	62m	North West
4310	CEMENT AUSTRALIA HOLDINGS PTY LTD	GLEBE ISLAND CEMENT TERMINAL	SOMMERVILLE ROAD	SYDNEY	Cement or lime handling	Premise Match	62m	North West
12651	SYDNEY CITY MARINE PTY LIMITED	SYDNEY CITY MARINE	37 James Craig Road, ROZELLE, NSW 2039	ROZELLE	Boat construction/main tenance (general)	Premise Match	75m	West
20144	White Bay 6 Pty Ltd	White Bay, Berth 6	Robert Street	BALMAIN	Boat construction/main tenance (general)	Premise Match	185m	North
11919	TRANSPORT FOR NSW	JAMES CRAIG MARINA	JAMES CRAIG ROAD	ROZELLE	Boat construction/main tenance (general)	Premise Match	215m	West
20971	JOHN HOLLAND PTY LTD	Sydney Metro City & Southwest Tunnels and Excavation Works	Locations between Chatswood railway station and Sydenham railway station, SYDNEY, NSW 2000	SYDNEY, NSW	Concrete works, Railway systems activities	Network of Features	288m	North East
4790	SUGAR AUSTRALIA PTY LIMITED	SUGAR AUSTRALIA GLEBE ISLAND TERMINAL	LOT 1 SOMMERVILLE ROAD	ROZELLE	General agricultural processing	Premise Match	332m	West
4790	SUGAR AUSTRALIA PTY LIMITED	SUGAR AUSTRALIA GLEBE ISLAND TERMINAL	LOT 1 SOMMERVILLE ROAD	ROZELLE	Shipping in bulk	Premise Match	332m	West
21278	JOHN HOLLAND PTY LTD		WestConnex between the M4-M5 Mainline Tunnels and Rozelle, ROZELLE, NSW 2039		Road construction	Road Match	403m	West
12095	NEWCASTLE PORT CORPORATION	Berth 4 White Bay	Robert Street	BALMAIN	Shipping in bulk	Premise Match	415m	North West
7093	NEWCASTLE PORT CORPORATION	WHARF 7 GLEBE ISLAND	SOMMERVILLE ROAD	GLEBE	Shipping in bulk	Premise Match	433m	West
21247	Metro Trains Sydney Pty Ltd		SYDNEY METRO, ROUSE HILL, NSW 2155		Railway systems activities	Network of Features	468m	North East
21423	CPB CONTRACTORS PTY LIMITED		BETWEEN CHATSWOOD DIVE SITE AND SYDENHAM DIVE SITE, SYDNEY, NSW 2000		Railway infrastructure construction (<50,000T)	Network of Features	468m	East
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	491m	East
12781	SYDNEY BOATHOUSE HOLDINGS PTY LIMITED	Sydney Boathouse	James Craig Road	ROZELLE	Boat mooring and storage	Premise Match	502m	West

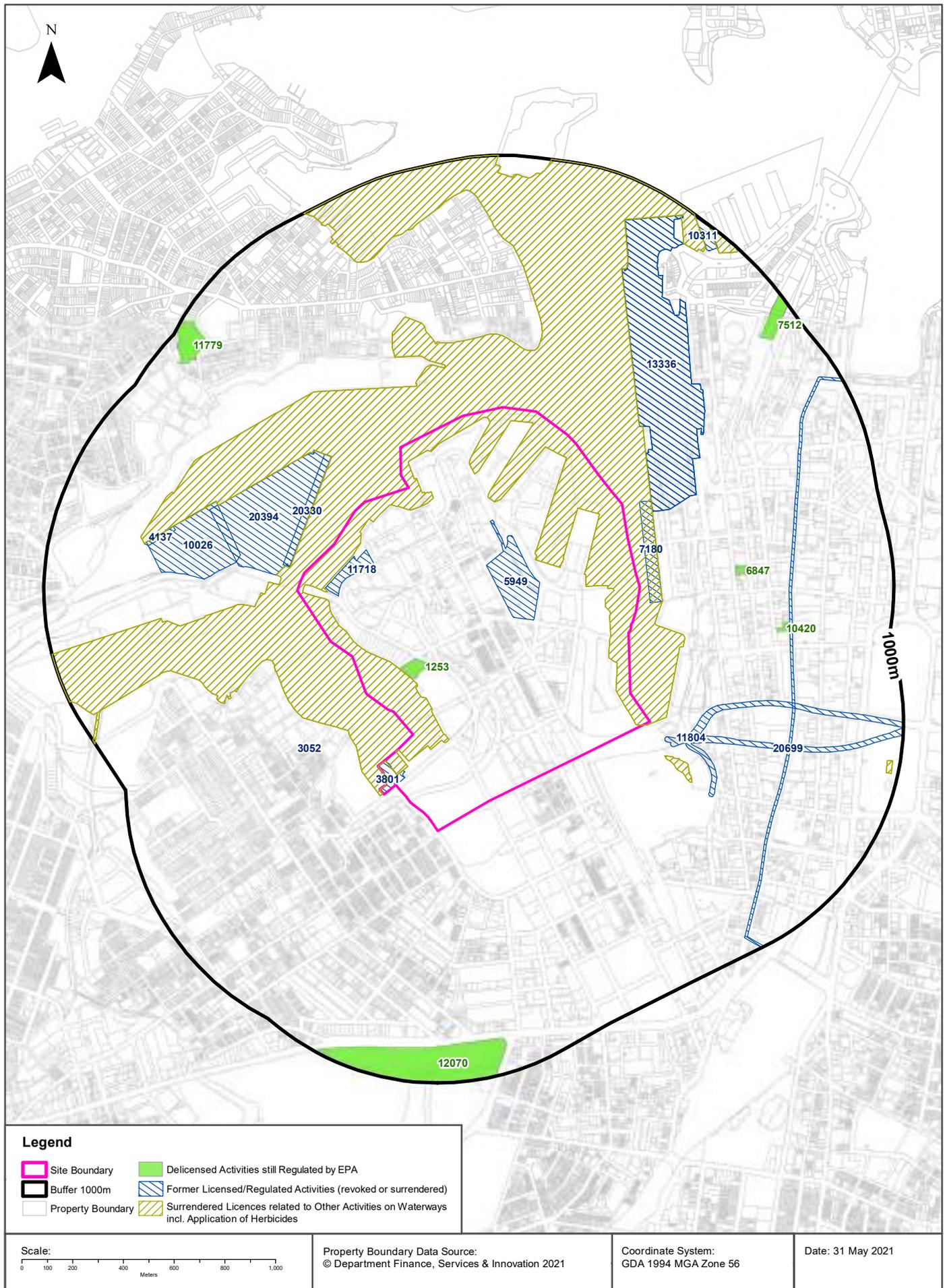
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
6868	TRANSDEV SYDNEY FERRIES PTY LTD	BALMAIN SHIPYARDS	72 WATERVIEW STREET	BALMAIN	Boat construction/main tenance (dry/floating docks)	Premise Match	803m	North West
11517	SYDNEY SHIP REPAIR & ENGINEERING PTY LTD	SYDNEY SHIP REPAIR AND ENGINEERING PTY LTD	Goat Island	SYDNEY	Boat construction/main tenance (general)	Premise Match	908m	North

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Pymont, NSW 2009



EPA Activities

Pyrmont, NSW 2009

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
1253	HYMIX AUSTRALIA PTY LIMITED	HYMIX AUSTRALIA PTY LTD	41-45 BANK STREET	PYRMONT	Concrete works	Premise Match	0m	On-site
6847	AUSTRALIAN RED CROSS SOCIETY	AUSTRALIAN RED CROSS BLOOD SERVICE	153 CLARENCE STREET	SYDNEY	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	379m	East
10420	THE HOSPITALS CONTRIBUTION FUND OF AUSTRALIA LTD	HCF HOUSE	403 George Street	SYDNEY	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	552m	East
7512	ROADS & TRAFFIC AUTHORITY OF NEW SOUTH WALES	RTA - SYDNEY HARBOUR BRIDGE MAINTENANCE	LOWER FORT STREET	DAWES POINT	Hazardous, Industrial or Group A Waste Generation or Storage	Area Match	828m	North East
12070	THE UNIVERSITY OF SYDNEY	The University of Sydney	Camperdown & Darlington Campuses	SYDNEY UNIVERSITY	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	848m	South
11779	SYDNEY SOUTH WEST AREA HEALTH SERVICE	BALMAIN HOSPITAL	BOOTH STREET	BALMAIN	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	868m	North West

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
3801	HANSON CONSTRUCTION MATERIALS PTY LTD	HANSON CONSTRUCTION MATERIALS PTY LTD, BRIDGE ROAD, GLEBE	Surrendered	09/12/1999	Shipping in bulk	Premise Match	0m	On-site
5949	SYDNEY HARBOUR CASINO PROPERTIES PTY LIMITED	STAR CITY CASINO, 80 PYRMONT STREET, PYRMONT, NSW, 2009	Surrendered	13/06/2000	Miscellaneous licensed discharge to waters (at any time)	Premise Match	0m	On-site
11718	LENDLEASE BUILDING PTY LIMITED	BOWMAN STREET, PYRMONT, NSW 2009	Surrendered	23/08/2002	Crushing, grinding or separating	Premise Match	0m	On-site
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
7180	PATRICK STEVEDORES OPERATIONS PTY LIMITED	DARLING HARBOUR WHARVES 3-7, GATE 5 HICKSON ROAD, SYDNEY, NSW 2000	Surrendered	25/02/2000	Hazardous, Industrial or Group A Waste Generation or Storage; Shipping in bulk	Premise Match	34m	East
20330	ETEX AUSTRALIA PTY LTD	Glebe Island Berths 1 and 2, SOMMERVILLE ROAD, ROZELLE	Surrendered	10/10/2013	Shipping in bulk	Premise Match	62m	North West
20394	Sydney Harbour Foreshore Authority	Sydney Exhibition Centre Glebe Island, James Craig Road, ROZELLE	Surrendered	23/01/2014	Generation of electrical power from diesel	Premise Match	64m	North West
11804	BILFINGER BERGER AG	CROSS CITY TUNNEL, SYDNEY, NSW 2000	Surrendered	24/12/2002	Road construction	Road Match	89m	South East
13336	INFRASTRUCTURE NSW	Barangaroo, Barangaroo South/ Central and a portion of Hickson Rd (near to 30-38 Hickson Rd), MILLERS POINT, NSW 2000, MILLERS POINT	Surrendered	25/10/2010	Crushing, grinding or separating	Premise Match	114m	North East
13336	INFRASTRUCTURE NSW	Barangaroo, Barangaroo South/ Central and a portion of Hickson Rd (near to 30-38 Hickson Rd), MILLERS POINT, NSW 2000, MILLERS POINT	Surrendered	25/10/2010	Contaminated groundwater treatment	Premise Match	114m	North East
13336	INFRASTRUCTURE NSW	Barangaroo, Barangaroo South/ Central and a portion of Hickson Rd (near to 30-38 Hickson Rd), MILLERS POINT, NSW 2000, MILLERS POINT	Surrendered	25/10/2010	Land-based extractive activity	Premise Match	114m	North East
10026	METROPOLITAN DEMOLITIONS & RECYCLING PTY LIMITED	Glebe Island Grain Terminal, Sommerville Road, GLEBE, NSW 2037	Surrendered	01/11/1999	Crushing, grinding or separating	Premise Match	259m	West
3052	REMATH INVESTMENTS NO 6 PTY LTD	45-51 FORSYTH STREET, GLEBE, NSW 2037	Surrendered	22/02/2000	Shipping in bulk	Premise Match	261m	South West
4137	LINX LOGISTICS PTY LTD	Berth 8 Sommerville Road, ROZELLE, NSW 2039	Surrendered	21/07/2000	Shipping in bulk	Premise Match	533m	West
20699	ACCIONA INFRASTRUCTURE AUSTRALIA PTY LTD	CBD and South East Light Rail, CBD and South East Light Rail Alignment and Ancillary Sites, SYDNEY	Surrendered	08/04/2016	Land-based extractive activity	Network of Features	554m	East
10311	MULTIPLEX CONSTRUCTION S (NSW) PTY LTD	Walsh Bay Pier 8/9, Towns Place, MILLERS POINT, NSW, 2000	Surrendered	12/01/2000	Miscellaneous licensed discharge to waters (at any time)	Premise Match	917m	North East

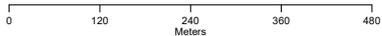
Former Licensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Aerial Imagery 2020

Pyrmont, NSW 2009



Scale:



Data Sources: Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 2015

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:
0 120 240 360 480
Meters

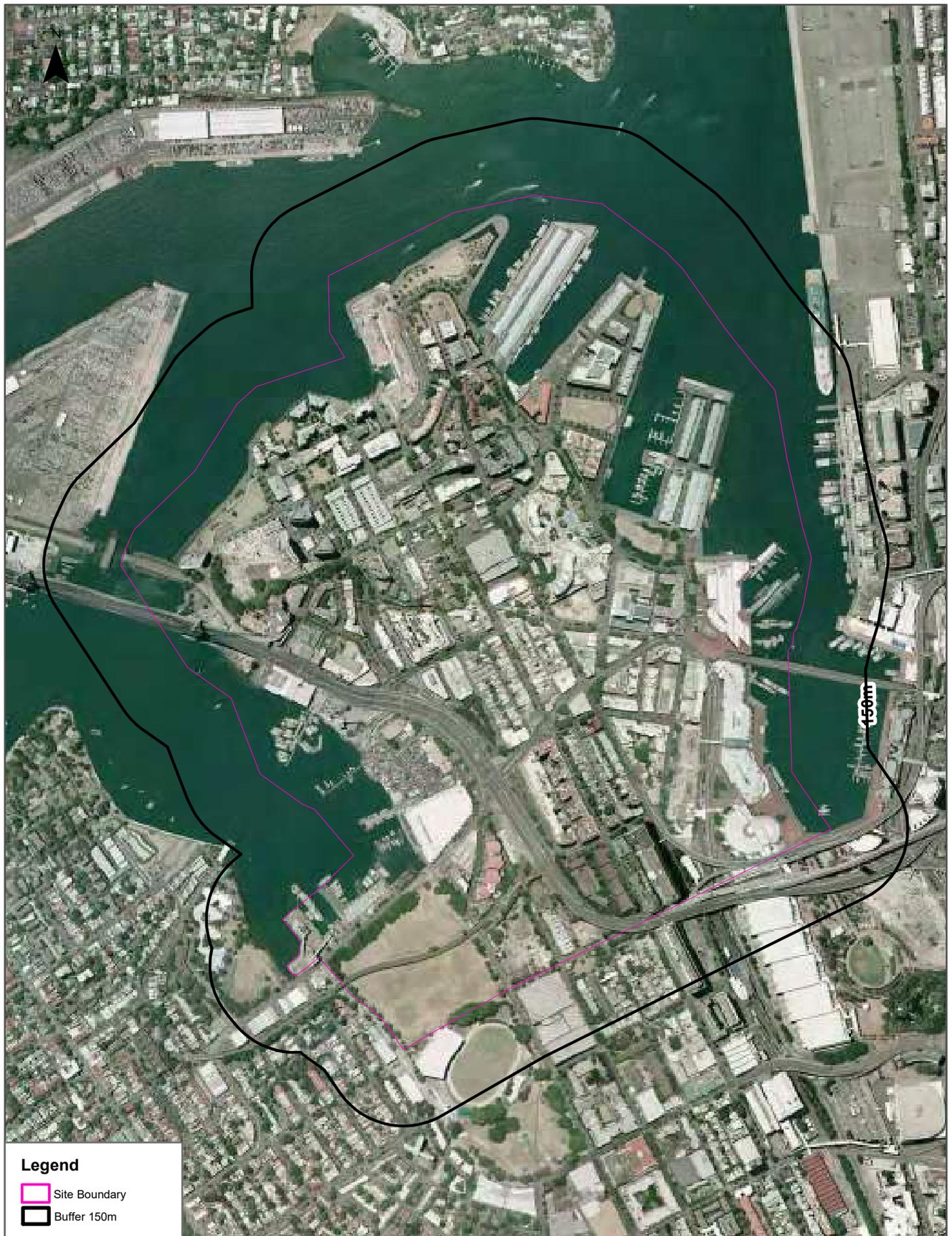
Data Sources: Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 2009

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:
0 120 240 360 480
Meters

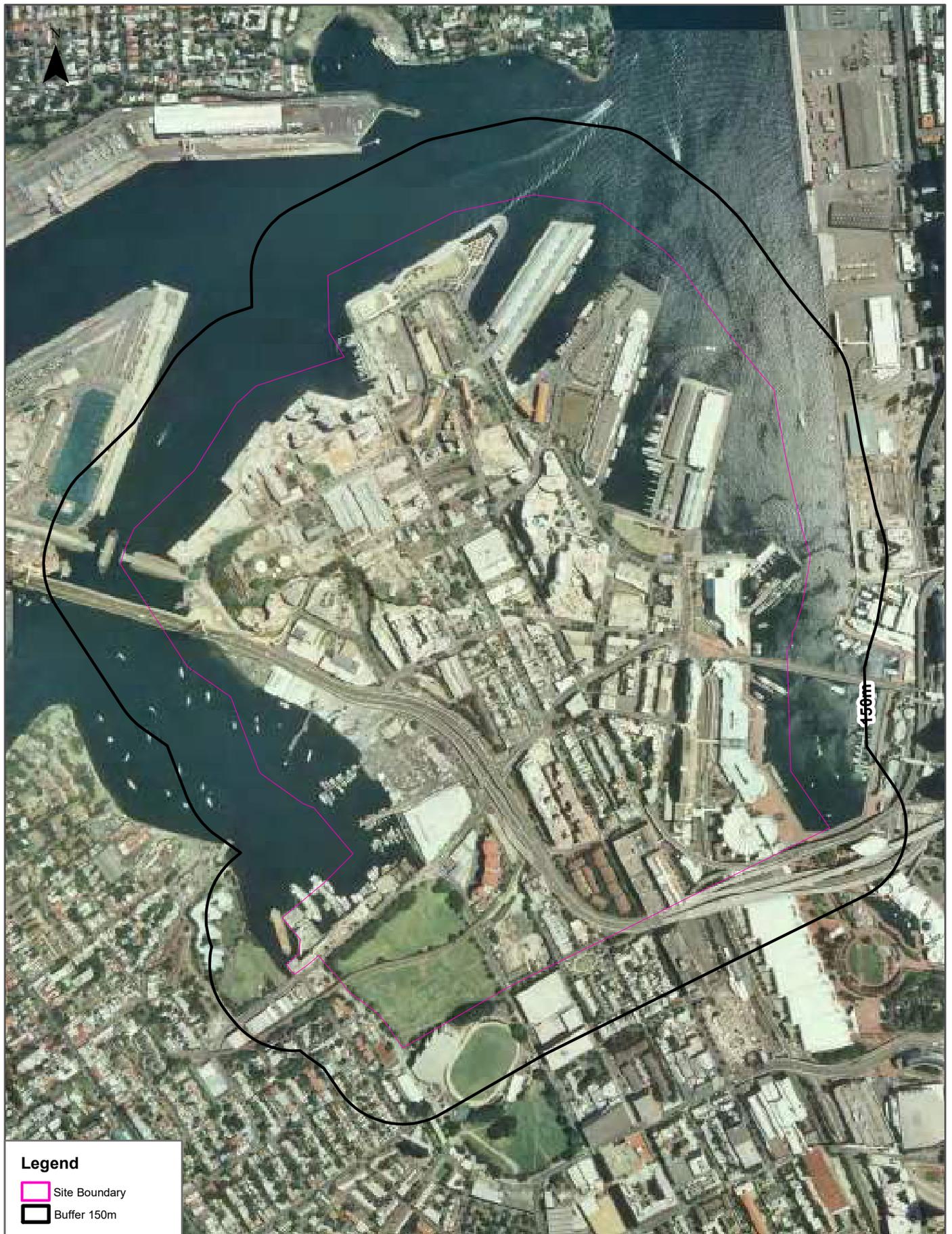
Data Sources: Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

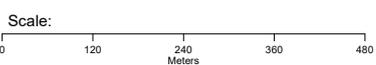
Aerial Imagery 2000

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



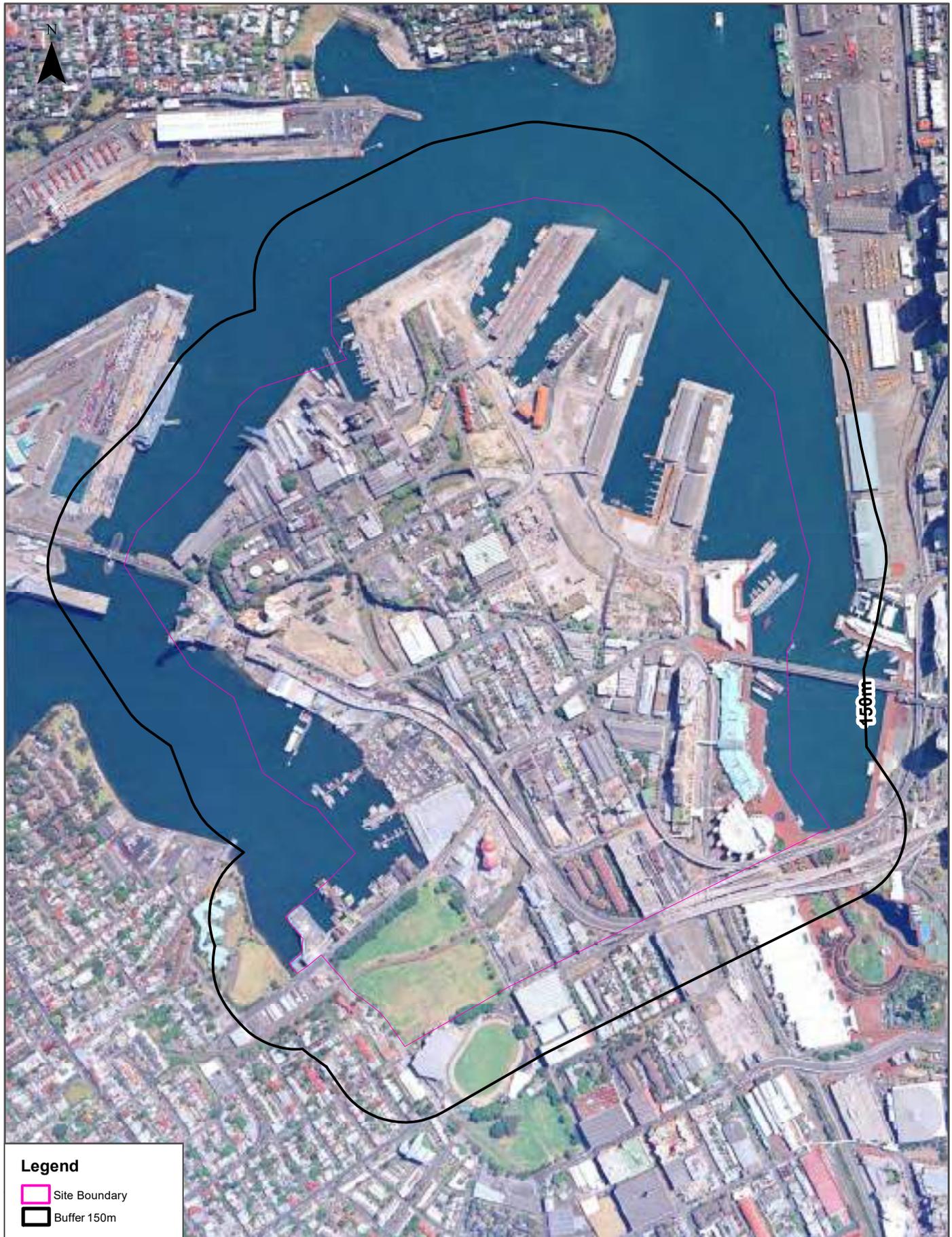
Data Sources: Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

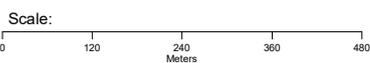
Aerial Imagery 1994

Pymont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

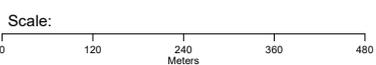
Aerial Imagery 1991

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



Data Sources: Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

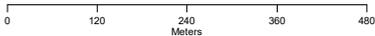
Date: 31 May 2021

Aerial Imagery 1986

Pymont, NSW 2009



Scale:



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

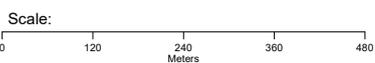
Aerial Imagery 1982

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



Data Sources: Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1978

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:
0 120 240 360 480
Meters

Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

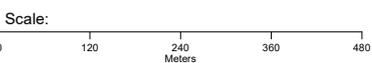
Aerial Imagery 1970

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



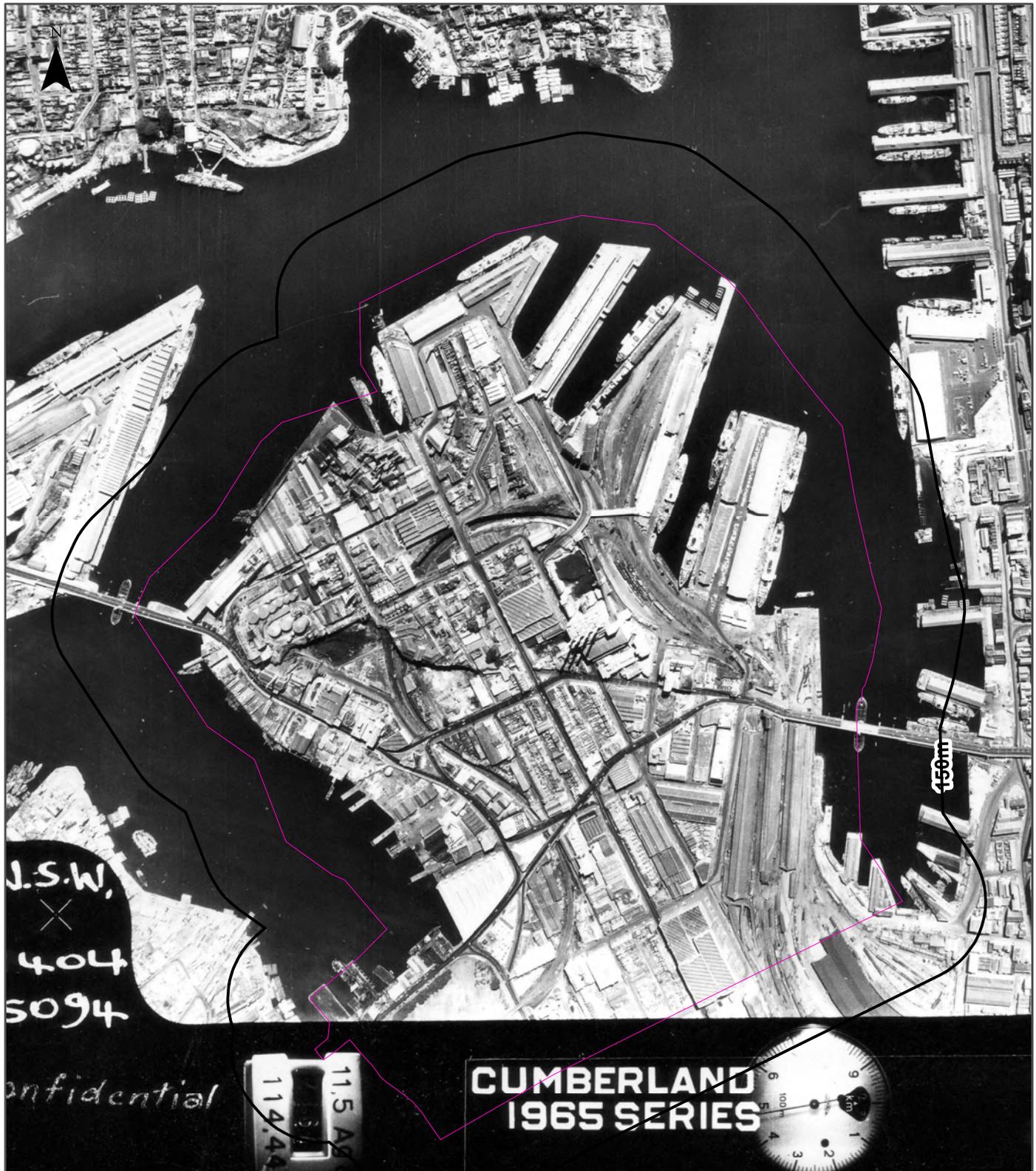
Data Sources: Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

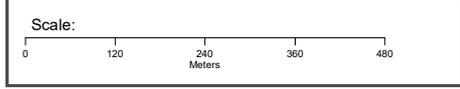
Aerial Imagery 1965

Pyrmont, NSW 2009



Legend

- Site Boundary
- Buffer 150m



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1965

Pymont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:
0 120 240 360 480
Meters

Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1961

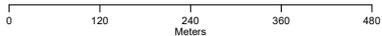
Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:



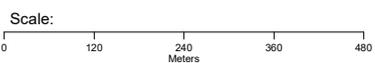
Data Sources: Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1955-1956

Pyrmont, NSW 2009



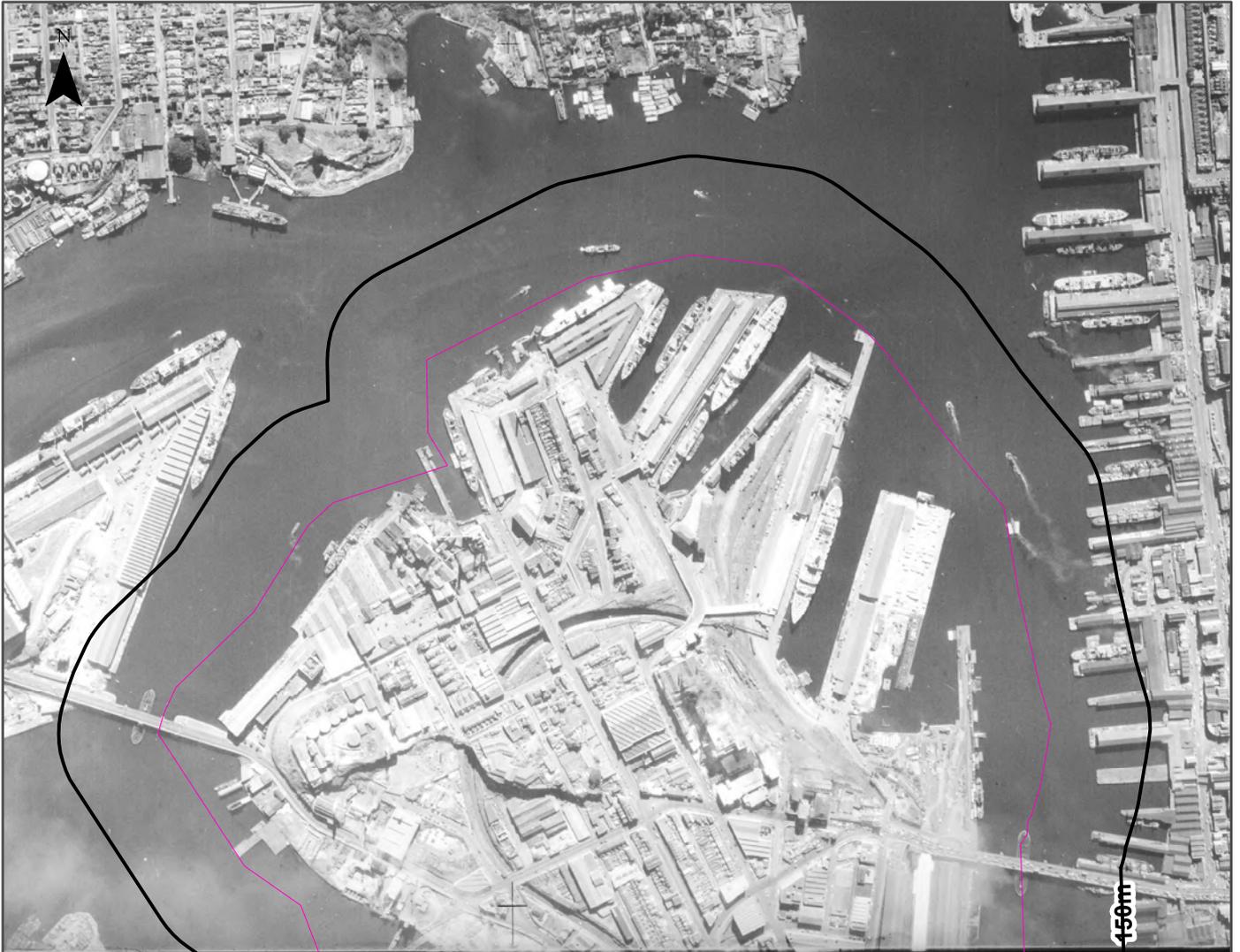
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

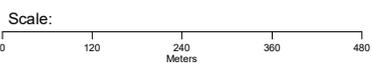
Aerial Imagery 1951

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



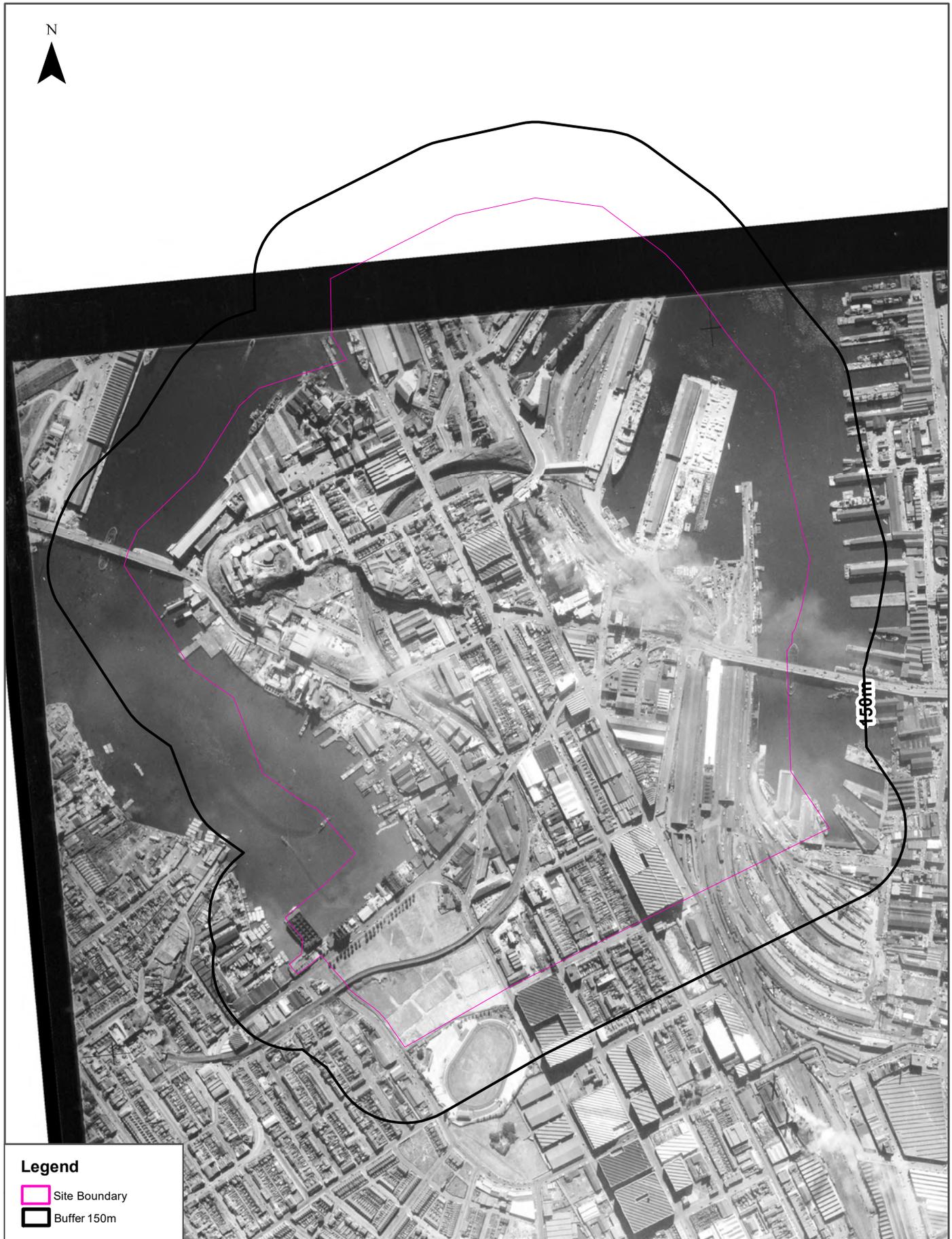
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

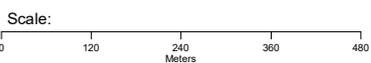
Aerial Imagery 1951

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



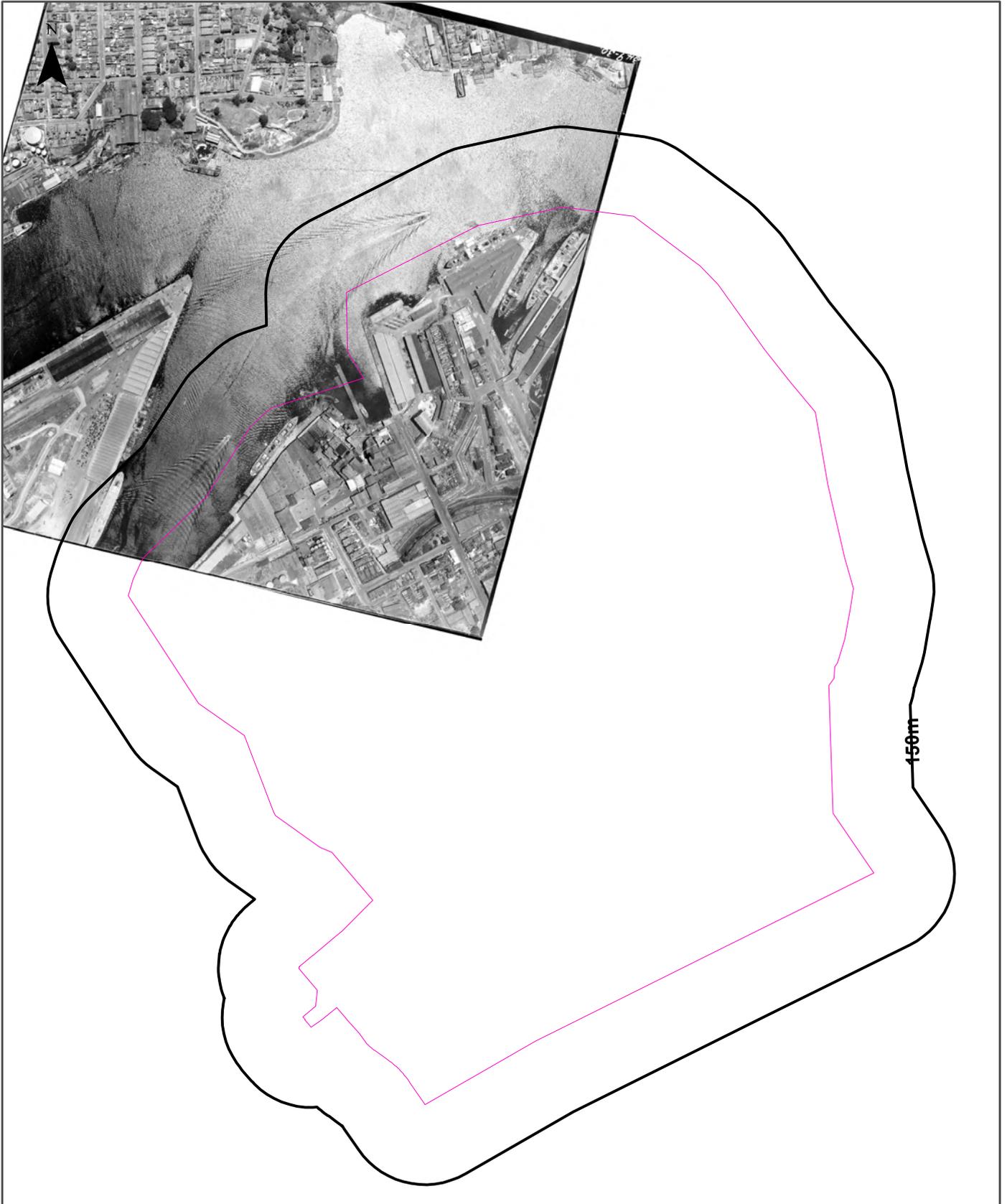
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1949

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:
0 120 240 360 480
Meters

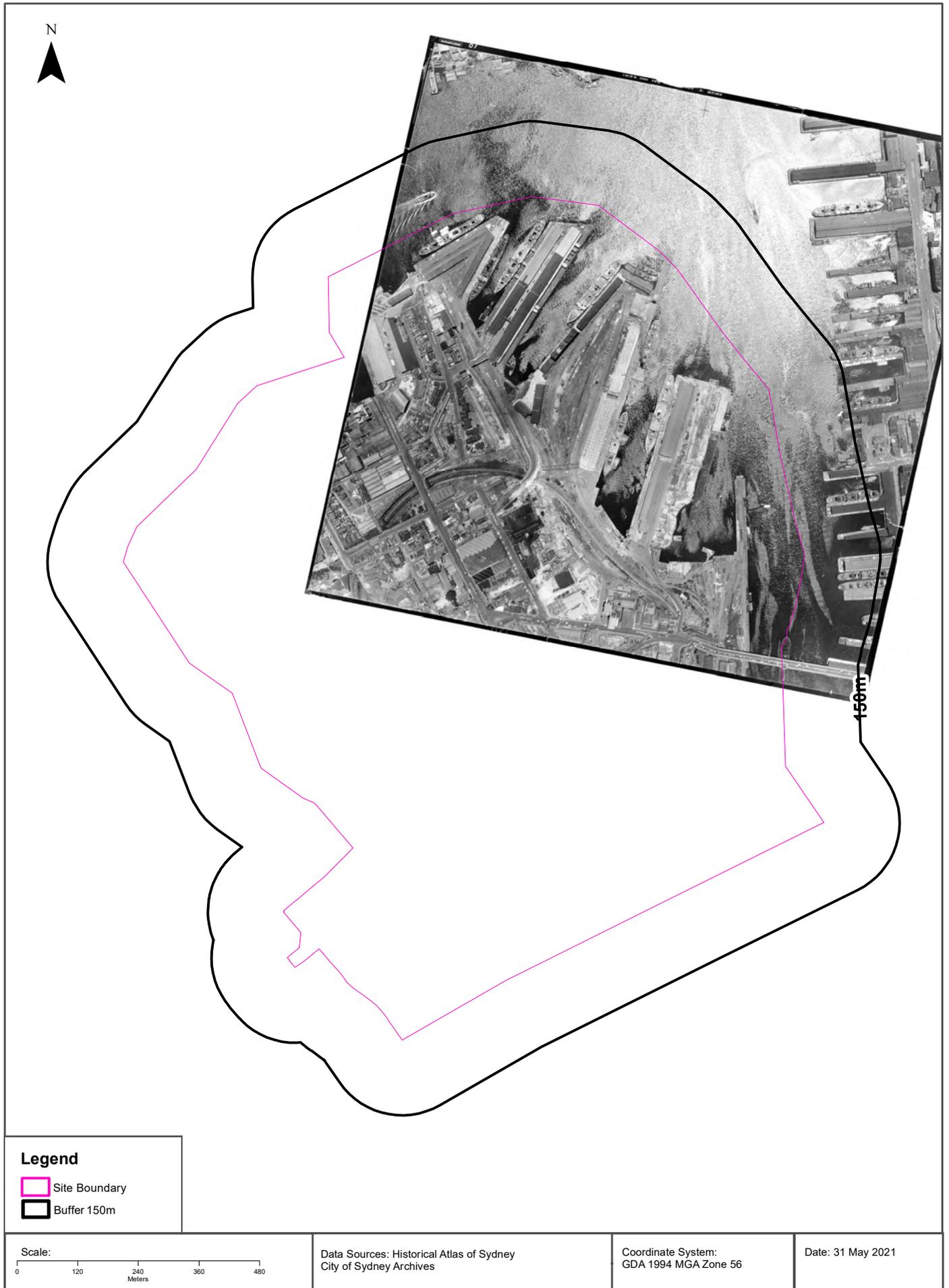
Data Sources: Historical Atlas of Sydney
City of Sydney Archives

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1949

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:
0 120 240 360 480
Meters

Data Sources: Historical Atlas of Sydney
City of Sydney Archives

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1949

Pyrmont, NSW 2009



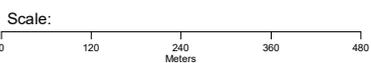
Aerial Imagery 1949

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



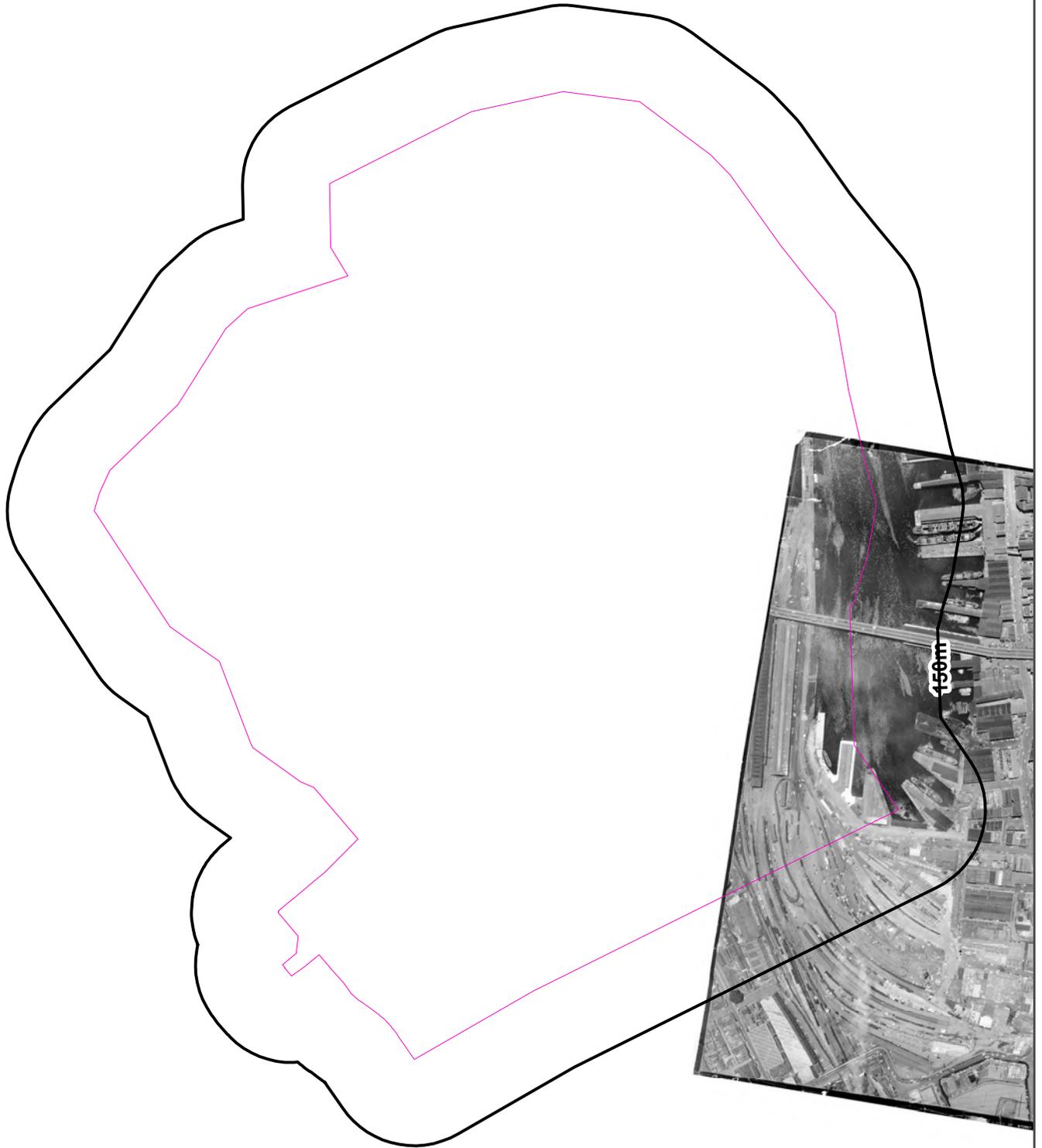
Data Sources: Historical Atlas of Sydney
City of Sydney Archives

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

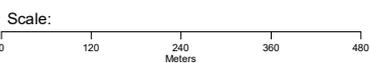
Aerial Imagery 1949

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



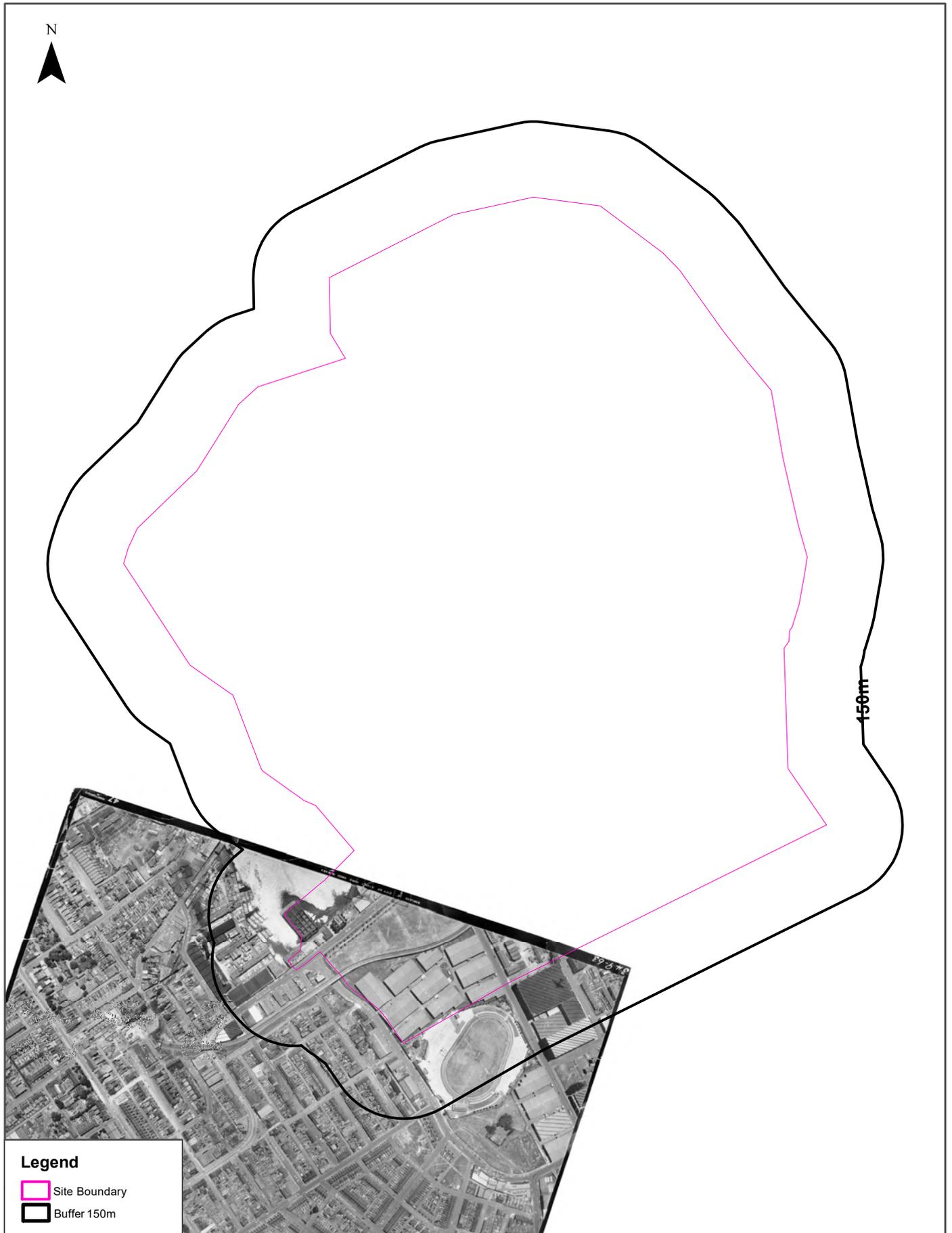
Data Sources: Historical Atlas of Sydney
City of Sydney Archives

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1949

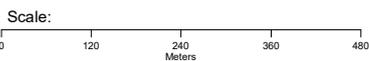
Pymont, NSW 2009



150m

Legend

-  Site Boundary
-  Buffer 150m



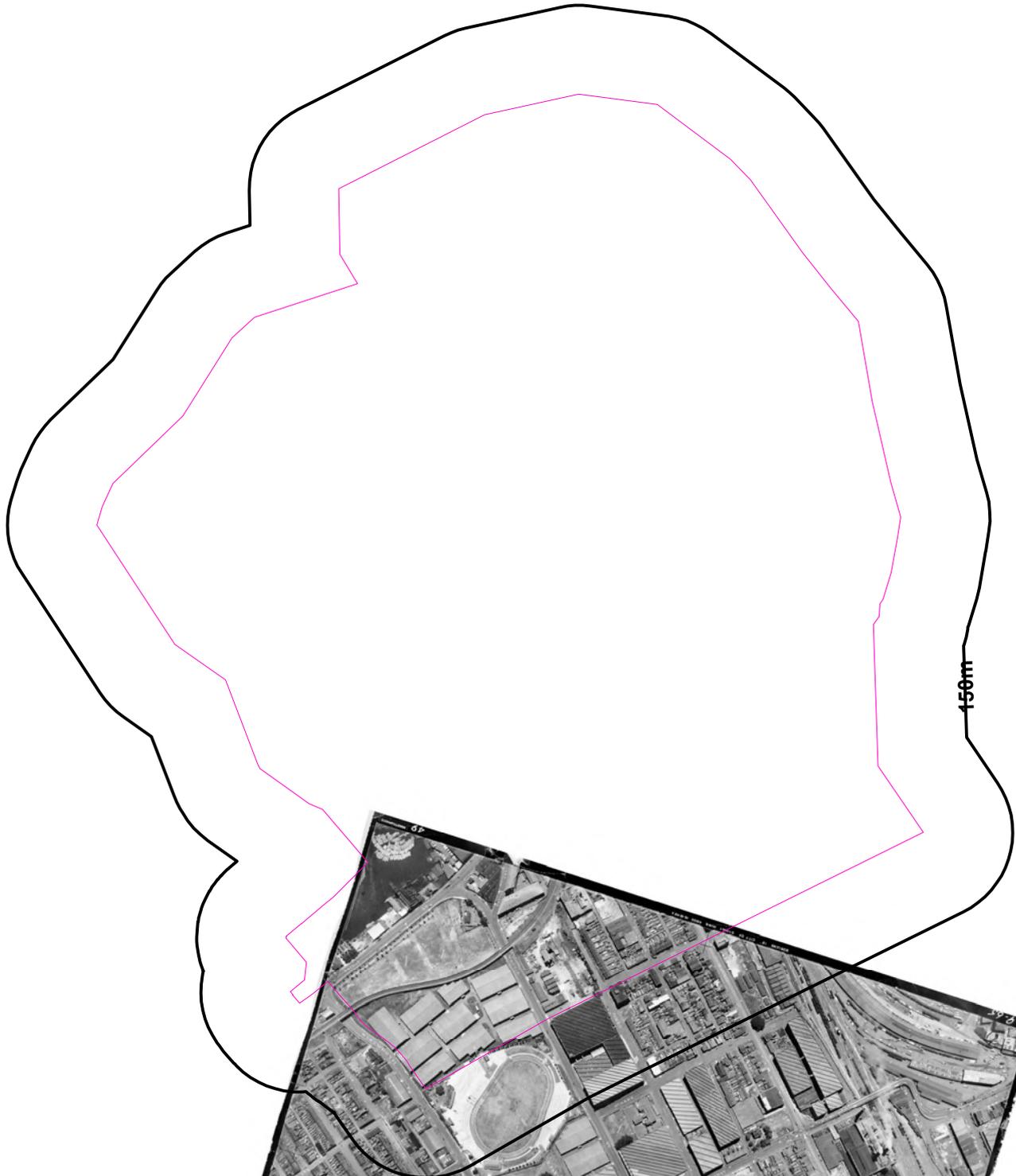
Data Sources: Historical Atlas of Sydney
City of Sydney Archives

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 June 2021

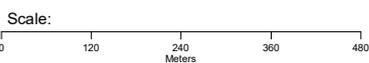
Aerial Imagery 1949

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



Data Sources: Historical Atlas of Sydney
City of Sydney Archives

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 June 2021

Aerial Imagery 1943

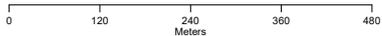
Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:



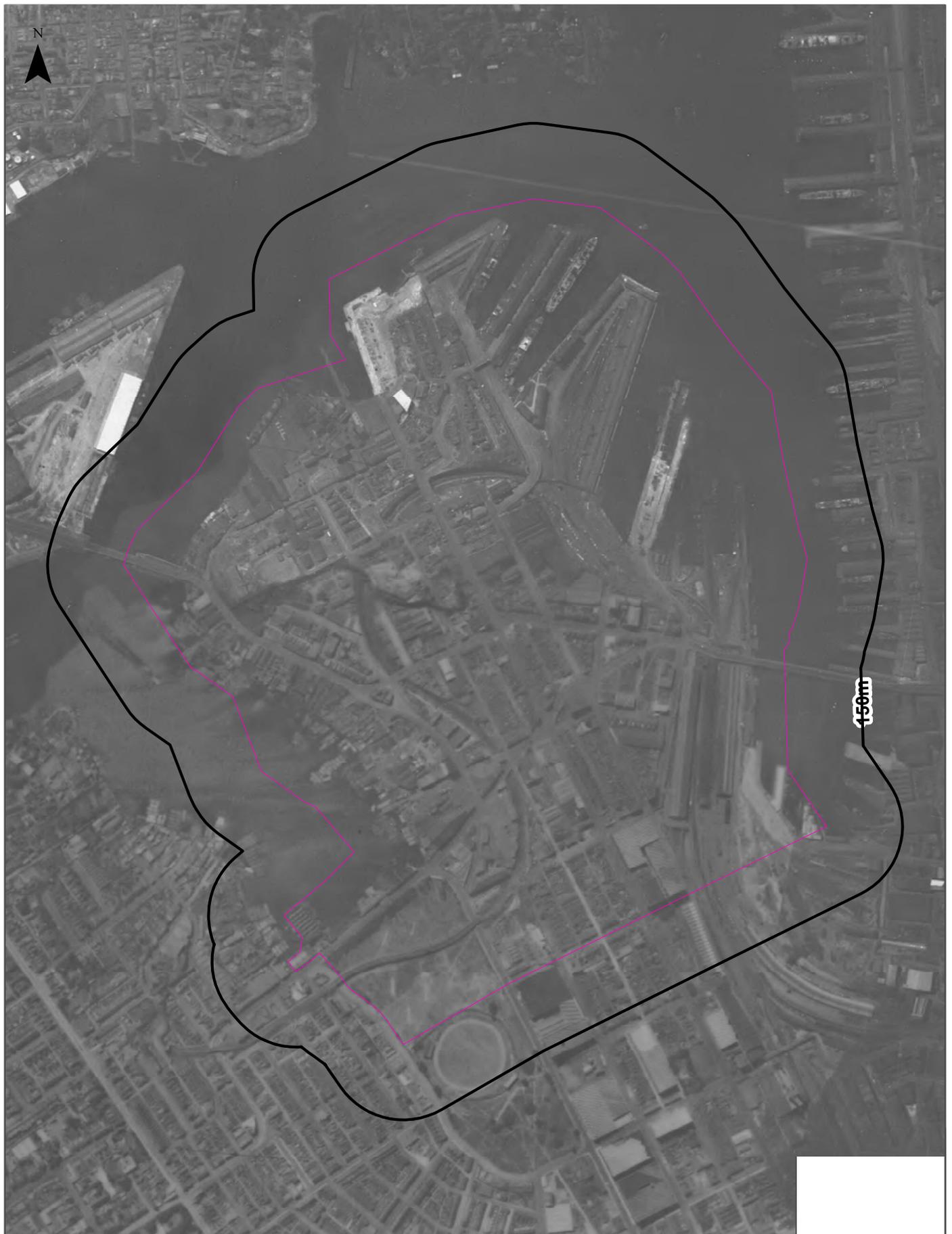
Data Sources: Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Aerial Imagery 1930

Pyrmont, NSW 2009



<p>Scale:</p> <p>0 120 240 360 480 Meters</p>	<p>Data Source Aerial Imagery: © 2021 Geoscience Australia</p>	<p>Coordinate System: GDA 1994 MGA Zone 56</p>	<p>Date: 31 May 2021</p>
---	--	--	--------------------------

Topographic Map 2015

Pymont, NSW 2009

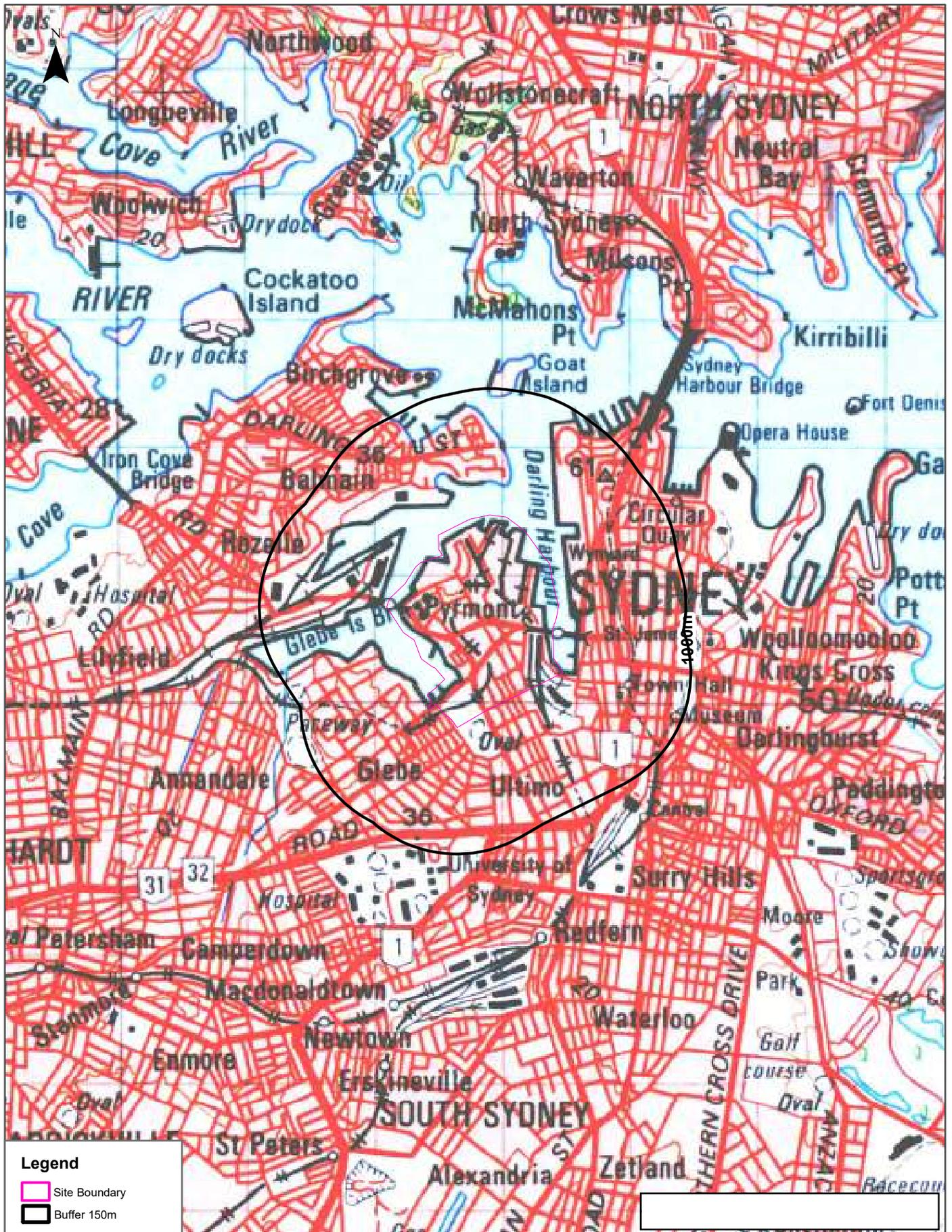


© Department of Finance, Services & Innovation 2013

<p>Scale:</p>	<p>Data Sources: Topographic Map Data © NSW Land and Property Information</p>	<p>Coordinate System: GDA 1994 MGA Zone 56</p>	<p>Date: 31 May 2021</p>
---------------	---	--	--------------------------

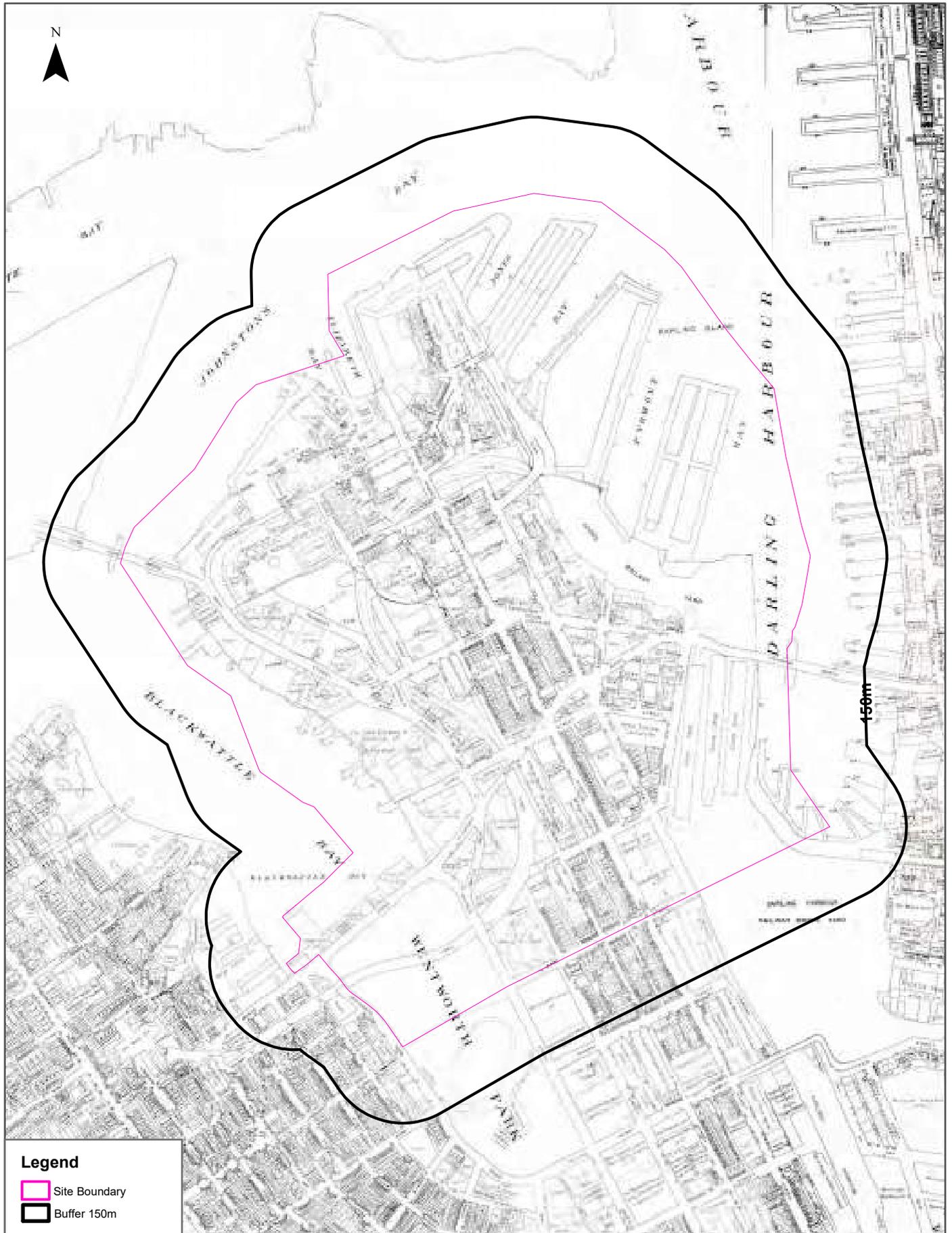
Historical Map 1975

Pymont, NSW 2009



Historical Map 1956

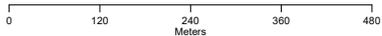
Pymont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m

Scale:



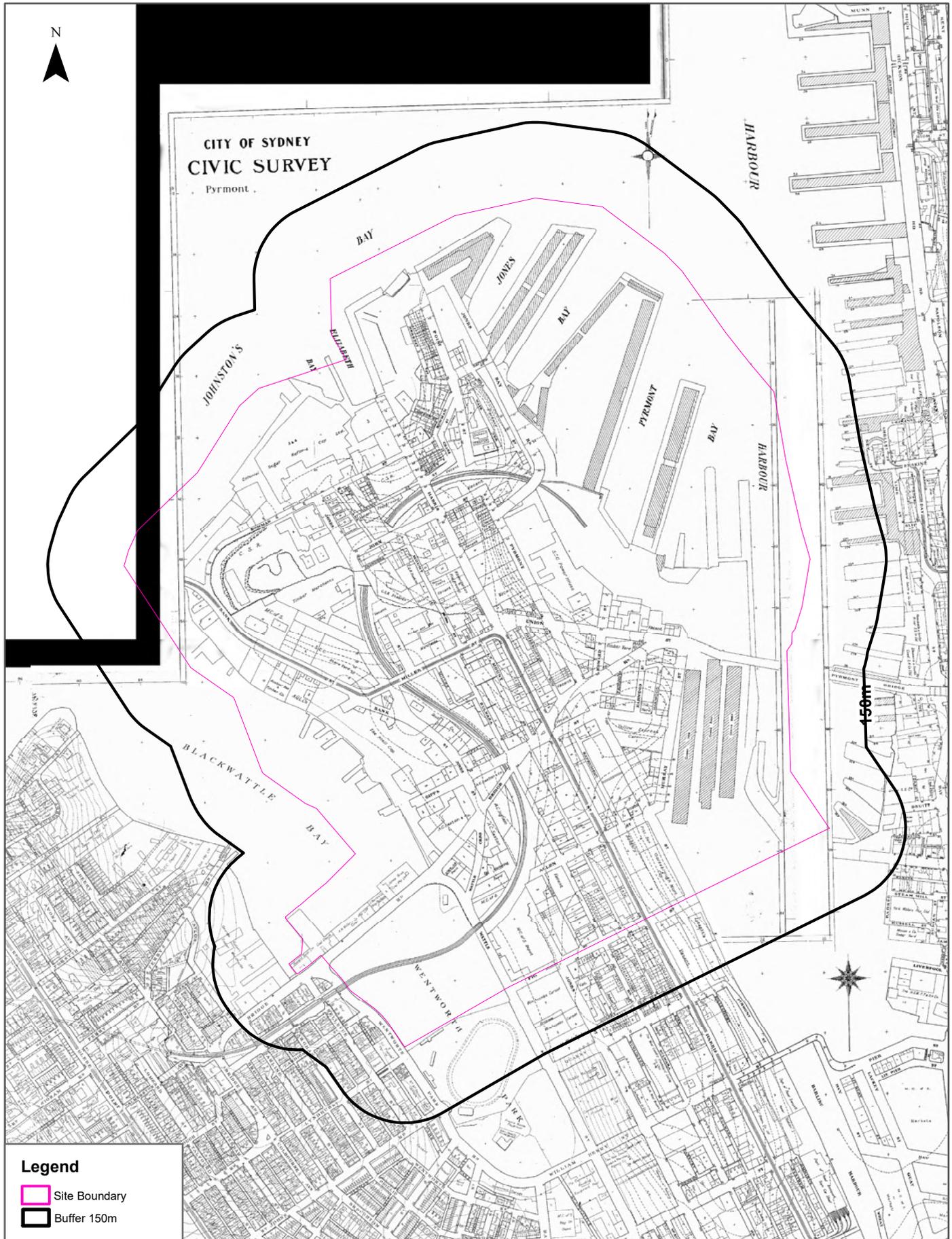
Data Sources: City Building Surveyor Sheets
Building Regulation Branch - City Building Surveyor's
Department, Council of the City of Sydney

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Historical Map 1938 - 1950

Pyrmont, NSW 2009



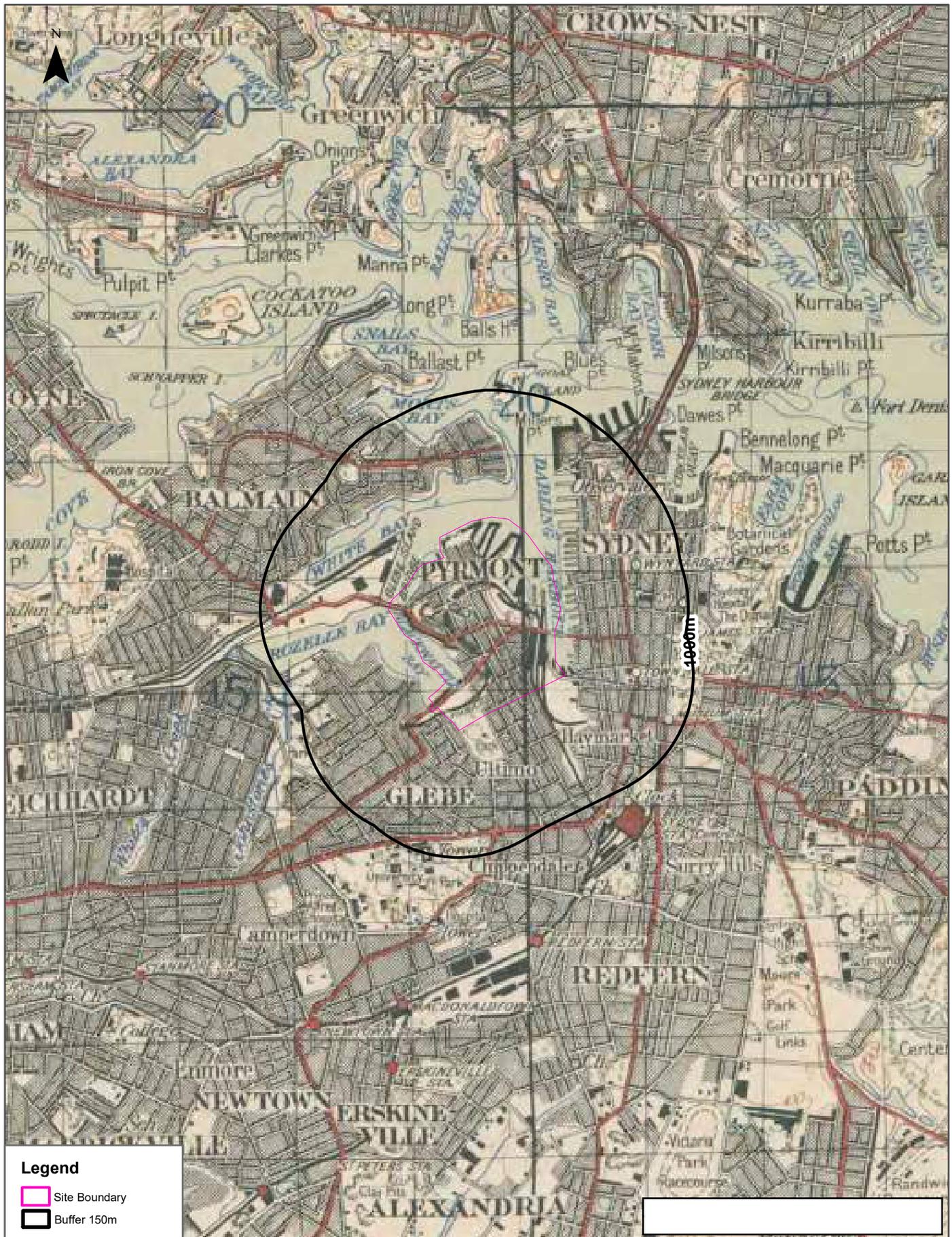
Data Sources: Sydney City Civic Survey 1938 - 1950
Town Planning Branch - City Engineers Department
Council of the City of Sydney

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 June 2021

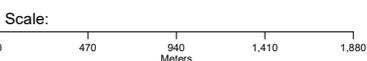
Historical Map c.1936

Pyrmont, NSW 2009



Legend

-  Site Boundary
-  Buffer 150m



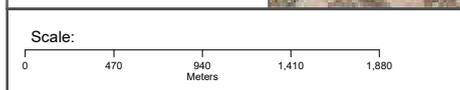
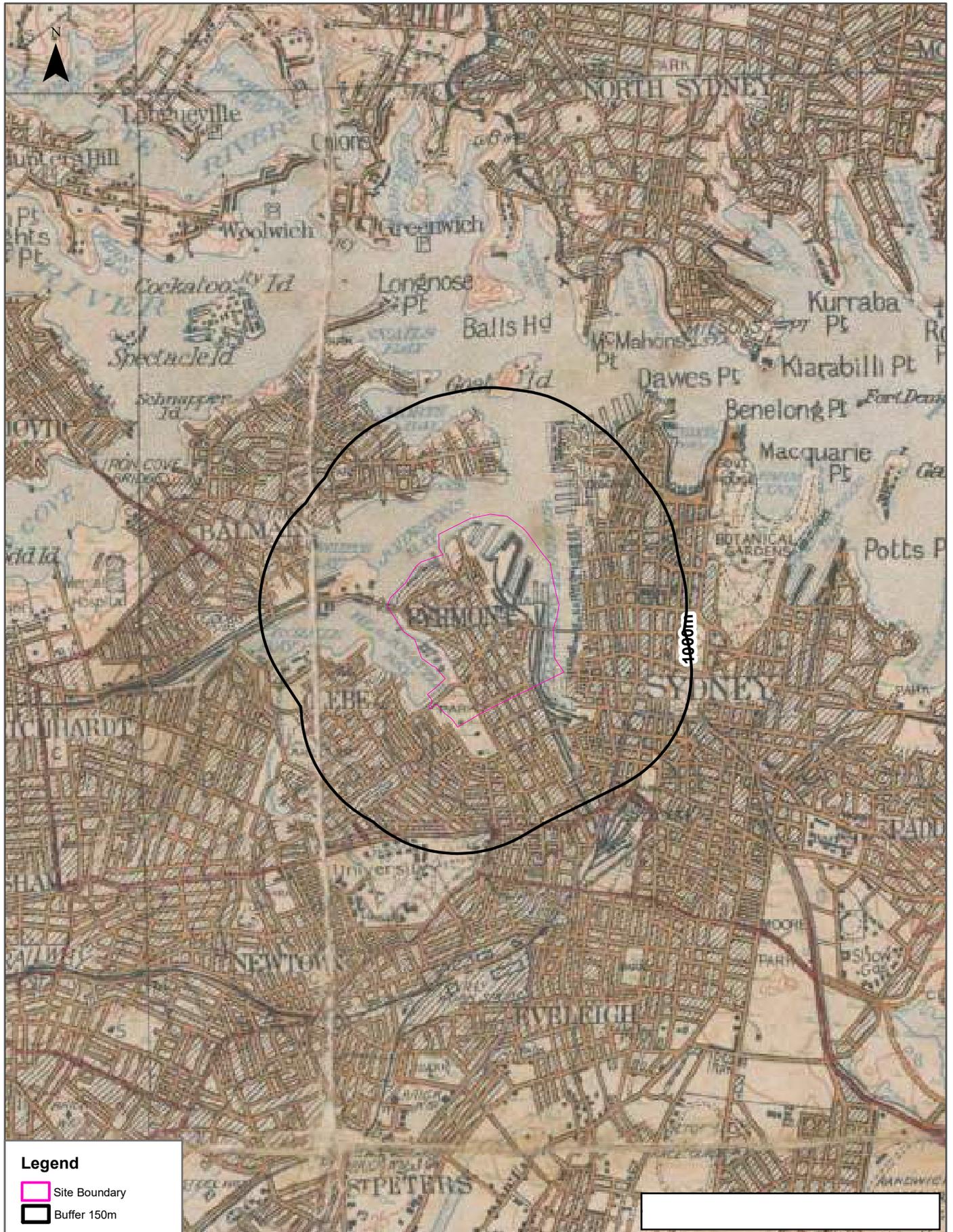
Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021

Historical Map c.1917

Pyrmont, NSW 2009



Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

Coordinate System:
GDA 1994 MGA Zone 56

Date: 31 May 2021