



Hans Sydney Pty Ltd
Preliminary Site Investigation

Stage 2
338 Pitt St, Sydney
NSW 2000

19 December 2019
57557/126005 Rev 1
JBS&G

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Abbreviations

A list of the common abbreviations used in this report is provided below.

ACM	Asbestos containing material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
COPC	Contaminant Of Potential Concern
bgs	below ground surface
BTEX	Benzene, toluene, ethylbenzene and xylenes
EPA	NSW Environment Protection Authority
PESA	Preliminary Environmental Site Assessment
Ha	Hectare
JBS&G	JBS&G Australia Pty Ltd
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAHs	Polycyclic aromatic hydrocarbons
Pb	Lead
PCBs	Polychlorinated biphenyls
PSI	Preliminary Site Investigation
TPH	Total Petroleum Hydrocarbons

Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Hans Sydney Pty Ltd (the client) to conduct a Phase 1 / preliminary site investigation (PSI) of Hans 338 project, located at 338 Pitt Street, Sydney NSW (the Site).

This report supports a Stage Significant Development Application (SSDA) for the mixed use redevelopment of 338 Pitt Street, Sydney, which is submitted to the City of Sydney pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). China Centre Development Pty Ltd is the proponent of the SSDA. The proposed development comprises of hotel, residential, commercial and retail uses and will include demolition of existing structures, excavation and site preparation including remediation if required and construction of an iconic 258m two-tower building with four basement levels.

The site is located at the corner of Pitt Street and Liverpool Street, within the 'Mid Town' precinct of Sydney's Central Business District (CBD). The site is approximately 150m west of Museum Station and Hyde Park, and approximately 350m from Town Hall Station. The site includes several allotments and constitutes nearly one third of the city block between Bathurst Street, Pitt Street and Liverpool Street. The site is an irregular shape and has a combined area of approximately 5,900m².

This PSI report presents an assessment of potential contamination to address the requirements of State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) to support the SSDA.

It is noted that a PSI for the Stage 1 DA portion of the site was previously completed in 2016 (JBS&G 2016¹). Subsequent to the completion of the Stage 1 PSI, the client acquired two additional properties (128 and 130 Liverpool Street) with a total area of 177 m², to be included in the broader development of the site. On this basis, the current PSI is required to update JBS&G (2016) with additional information gathered from the recently acquired properties (128 and 130 Liverpool Street).

Site inspections were completed by one of JBS&G's trained field scientists on the 19 September 2016 and 22 November 2019. The inspection included readily accessible areas of site, the exterior of buildings at ground level, and the two basement car parks (Lot 3 DP 104414 and Lot 10 DP 857070/Lot A DP 4488971). Multistorey commercial buildings occupied the majority of the site, and the remainder of the site was sealed. No evidence of USTs was observed and no odours, staining or hazardous building materials were observed, based on a limited site inspection.

Based on the findings of this investigation and subject to the limitations in **Section 7**, the following conclusions are made:

- From site inspections, the site generally appears well maintained and in good condition.
- While the potential for significant contamination at the site is low, a targeted program of intrusive investigations would be necessary to determine if contamination is present at the site. An intrusive investigation at the site should target potential fill materials in Dungate Lane, and within existing building footprints, with the exception of areas occupied by basement car parks.
- It is considered unlikely that activities at the site will have contaminated the land to a degree that would prevent the redevelopment of the site for mixed commercial and residential land-use.

¹ Preliminary Site Investigation, 338 Pitt St Sydney, JBS&G Australia Pty Ltd, 18 October 2016 (JBS&G 2016).

- In the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses.

1. Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by Hans Sydney Pty Ltd (the client) to conduct a Phase 1 / preliminary site investigation (PSI) of Hans 338 project, located at 338 Pitt Street, Sydney NSW (the Site). The site comprises nine properties (10 Lots), fronting Pitt, Castlereagh and Liverpool Streets.

The site is currently used for commercial purposes, including offices, retail stores and eateries and is currently zoned as B8 Metropolitan Centre.

This report supports a Stage Significant Development Application (SSDA) for the mixed use redevelopment of 338 Pitt Street, Sydney, which is submitted to the City of Sydney pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). China Centre Development Pty Ltd is the proponent of the SSDA.

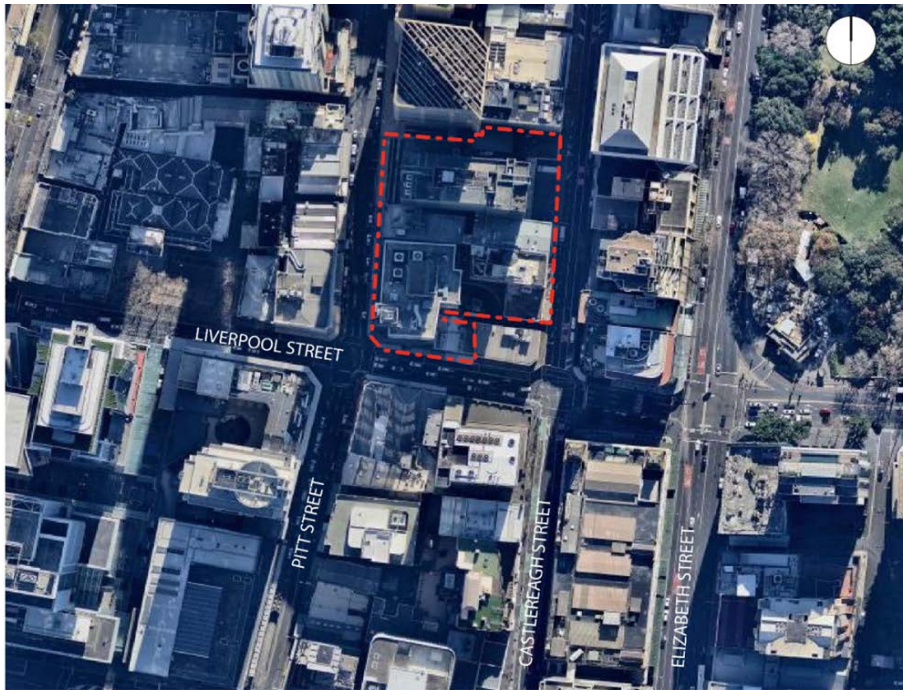
The site is located at the corner of Pitt Street and Liverpool Street, within the 'Mid Town' precinct of Sydney's Central Business District (CBD). The site is approximately 150m west of Museum Station and Hyde Park, and approximately 350m from Town Hall Station. The site includes several allotments and constitutes nearly one third of the city block between Bathurst Street, Pitt Street and Liverpool Street. The site is an irregular shape and has a combined area of approximately 5,900m².

The proposed development comprises of hotel, residential, commercial and retail uses and will include:

- demolition of all existing structures;
- excavation and site preparation, including any required remediation;
- construction and use of a mixed-use development, with an iconic 258m two-tower built form above a podium and internal courtyard;
- four (4) basement levels and a lower ground level accommodating residential, retail and hotel car parking, motorcycle parking, bicycle parking, loading dock, storage and relevant building services;
- improvements to the public domain, including landscaping, pedestrian thoroughfares/connections, and landscaping; and
- augmentation and extension of utilities and services.

A detailed description of development is provided by Ethos Urban within the EIS.

This PSI report presents an assessment of potential contamination to address the requirements of the current State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) (and Draft Remediation of Land SEPP) to support the SSDA and in doing so meet the SEARs 'Statutory and Strategic Context' requirement to address SEPP 55.



 The Site

It is noted that a PSI for the Stage 1 DA portion of the site was previously completed in 2016 (JBS&G 2016²). Subsequent to the completion of the Stage 1 PSI, the client acquired two additional properties (128 and 130 Liverpool Street) with a total area of 177 m², to be included in the broader development of the site. On this basis, the current PSI updates JBS&G (2016) with additional information gathered from the recently acquired properties (128 and 130 Liverpool Street).

The PSI has been undertaken in accordance with guidelines made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

1.1 Objectives

The objectives of the investigation are to review historical site activities and to draw preliminary conclusions regarding the potential contamination status of the site. Recommendations will be made as appropriate for any further actions required to conclude that the site is or can be made suitable for the intended land uses consistent with SEPP 55 requirements.

1.2 Scope of Work

To achieve the objectives of the assessment, the following scope of works was undertaken:

- Review of available Council documentation, aerial photographs, NSW EPA records and Heritage records to identify potential areas of environmental concern (AECs) and associated contaminants of potential concern (COPCs);
- Review of site setting including topography, hydrology, hydrogeology and geology;
- Review of records of environmental incidents or former environmental licences held by the NSW EPA;
- Site inspections to identify potential AECs and COPCs not identified in the historical record review; and
- Preparation of this PSI report in accordance with guidelines made or approved by EPA.

² Preliminary Site Investigation, 338 Pitt St Sydney, JBS&G Australia Pty Ltd, 18 October 2016 (JBS&G 2016).

2. Site Condition and Surrounding Environment

2.1 Site Identification

The site location is shown in **Figure 1**, and current site layout is shown in **Figure 2**. The site details are summarised in **Table 2.1** and described in the following sections.

Table 2.1: Summary of Site Details

Lot/DP	Lot 3 DP 104414 Lot 1 DP 66428 Lot 10 DP 857070 Lot A DP 4488971 Lot B DP 183853 Lot 1 DP 70702, Lot 1 DP78245 (under the same property) Lot 1 DP 90016 Lot B DP 448971 Lot C DP 448971
Address	338 Pitt Street, Sydney NSW 2000
Local Government Authority	City of Sydney
Easting	334296.691 (GDA94 - MGA56)
Northing	6250096.635 (GDA94 - MGA56)
Site Zoning	B8 Metropolitan Centre (Sydney Local Environmental Plan 2012)
Current Use	Commercial – Offices, retail, eateries.
Proposed Use	Hotel and residential uses
Site Area	Approximately 6,012 m ²

2.2 Site Description

Inspection of the greater site area was initially completed by one of JBS&G's qualified and trained environmental consultants on the 19 and 20 September 2016. Photographs taken during the site inspections are included in **Appendix F**. The inspection included readily accessible areas of site, the exterior of buildings at ground level, and the two basement car parks. A summary of general site features is provided below.

The site occupies a portion of a city block occupied by six multistorey buildings. At street level the buildings are predominately occupied by eateries and building foyers. No indications of ACM building materials were noted, from a limited inspection of the exterior of the buildings, and no peeling paint was noted on painted surfaces. An open area between buildings was noted at the end of Dungate Lane, which connects to Castlereagh Street to the east. This area appeared to be in use as a loading zone and as a bin collection area, as well as vehicle access to underground car parking.

Two basement carparks were noted at the site. The basement carpark within the Lots 10 in DP 857070 and A in DP 4488971 was noted to be set into natural materials, with sandstone bedrock observed in the wall of the upper basement level. No exposed soil/bedrock was observed in the other basement carpark, at Lot 3 DP 104414. There was no evidence of underground storage tanks (USTs) in the building basements or other accessible areas of site, with no risers, bowsers or fill/dip points observed. Additionally, there was no evidence of bulk chemical storage within the basement areas. A trade waste pipe and a suspected commercial grease trap or oil-water separator was noted within the basement at Lot 3 DP 104414, and were observed to be in good condition, with no signs of leakage.

Evidence of services were observed frequently at ground level within footpaths, with numerous gatics observed. The ground surface at the site was paved, with tiles on all footpaths, and asphalt roadway within Dungate Lane. No accessible soils were observed within the site.

Overall, the site appeared well maintained and in good condition. There were no odours or significant staining observed on the paved ground surfaces.

In addition, a second site inspection (from the street frontages) was completed by one of JBS&G's qualified and trained environmental consultants on the 22 November 2019. The site appeared consistent with the description provided above. In addition, the two properties located at 128 and 130 Liverpool Street were used as commercial eateries in which the buildings comprised of two-storey brick construction. There were no obvious potential sources of contamination viewed within these two properties from the street frontage.

2.3 Surrounding Land Use

Current land use of adjacent properties or properties across adjacent roads is summarised below:

- North – multistorey commercial buildings;
- East – Castlereagh Street, followed by multistorey commercial buildings;
- South – Liverpool Street, followed by multistorey commercial buildings.
- West – Pitt Street, followed by multistorey commercial buildings.

2.4 Topography

Review of the regional topographic data (SixMaps³) indicated that the site has an elevation of between 15 to 20 m Australian Height Datum (AHD). The regional topography slopes gently to the northwest towards Cockle Bay, approximately 800 m from the site.

2.5 Geology

Review of the regional geological map (DMR 1983⁴) indicated the site lies within Ashfield Shale, part of the Wianamatta group of sedimentary rocks. Ashfield shales typically lie on Mittagong formation and comprise of black mudstones, grey silty shales and sideritic clay ironstone bands, often containing high iron and low calcium levels.

Review of the Sydney Soil Landscape series (eSPADE⁵) indicates soils at the site comprise the residual Lucas Heights Landscape. These typically occur on undulating crests and ridges on plateau surfaces of the Mittagong formation, bands of shale and fine-grained sandstones with low relief to 30 m and slopes of less than 10 percent. The soils typically are moderately deep (50-150cm), hardsetting yellow podzolic soils and yellow soloths, and yellow earths on outer edges. This soil landscape group often exhibits stony soil, low fertility and low available water capacity.

2.6 Acid Sulphate Soils

Review of the acid sulphate soil map from Australian Soil Resource Information System (ASRIS⁶) indicates that the site is located in an area of low probability of acid sulphate soils (ASS). As such, management of development activities is unlikely to be required to address the potential for impacts to ASS on the site. In addition, the Council 10.7 certificates provided in **Appendix D**, indicates the site is not situated within a location that has been mapped as Class 1 or 2 ASS.

³ NSW Government Spatial Information Exchange website, <http://maps.six.nsw.gov.au/>, accessed 15 September 2016

⁴ Sydney 1:100 000 Geological Series Sheet 9130. Department of Mineral resources, 1983 (DMR 1983)

⁵ NSW Government Environment & Heritage, NSW soil and land information, eSPADE, <http://www.environment.nsw.gov.au/eSpadeWebapp/>, accessed 15 September 2016

⁶ Australian Soil Resource Information System, <http://www.asris.csiro.au/>, accessed 15 September 2016

2.7 Hydrology

Rainwater at the site is likely to enter stormwater infrastructure, as buildings occupy the majority of the site and the remaining ground surfaces are paved. The regional topography suggests collected rainwater would then migrate northwest via the city stormwater system towards Cockle Bay. Additionally, an open drain was noted at the site with adjacent painted message “drains to Sydney Harbour” as shown in **Photograph 5** in **Appendix F**.

2.8 Hydrogeology

Review of information obtained from the Office of Water database indicated that there are more than 10 registered groundwater bores within a 500 m radius of the site. As such, data from the 10 closest bores is included in **Appendix A** and summarised below. No data was available for groundwater quality for any of the bores reviewed.

- GW112175 is located approximately 900 m to the east of the site, on Bourke Street, and is registered as a monitoring bore. No Standing Water Level (SWL) data was available.
- GW112179 is located approximately 1.0 km to the southeast of the site, on Flinders Street, and is registered as a monitoring bore. No SWL data was available.
- GW200690 is located approximately 1.0 km to the southeast of the site, on Albion Street, and is registered for domestic purposes. No SWL data was available.
- GW112180 is located approximately 1.2 km to the southeast of the site, on Flinders Street, and is registered as a monitoring bore. No SWL data was available.
- GW109238 is located approximately 1.1 km to the southeast of the site, on Short Place, and is registered as a monitoring bore. The bore is located through clay loam and shale to 7.0 m bgs and the SWL was recorded at 4.59 m bgs.
- GW109239 is located approximately 1.1 km to the southeast of the site, on Marys Place, and is registered as a monitoring bore. The bore is located through clay loam and shale to 7.45 m bgs and the SWL was recorded at 4.57 m bgs.
- GW109086 is located approximately 1.3 km to the northwest of the site, near Sussex Street, and is registered as a monitoring bore. The bore is located through sand to 5.68 m bgs. No SWL data was available.
- GW113599 is located approximately 1.5 km to the northwest of the site, near Waterman's, Quay and is registered as a monitoring bore. No SWL data was available.
- GW109649 is located approximately 1.2 km to the southwest of the site near Wattle Street, and is registered as a monitoring bore. The bore is located through sand then sandstone to 7.20 m bgs and the SWL was recorded at 2.95 m bgs.
- GW109502 is located approximately 1.3 km to the southwest of the site, near Abercrombie, Street and is registered as a monitoring bore. No SWL data was available.

It is anticipated that shallow groundwater at the site will occur at approximately 3-5 m bgs, based on the reported SWL at nearby bores. Regional groundwater is likely to occur within sandstone/shale bedrock, especially within zones of relatively higher permeability associated with inconsistencies in the bedrock (faults, joints, weathered zones, etc.). Regional topography suggests groundwater migration may move towards Cockle Bay.

Localised, shallow subsoil groundwater seepage may also occur at the site, particularly following periods of significant wet weather. This may result in perched groundwater at the soil-bedrock interface and within highly weathered rock beneath surface soils. Seepage flow is influenced by topography, including local bedrock topography, and is expected to be toward the north-west.

3. Site History

3.1 Aerial Photographs

Copies of aerial photographs obtained from the Department of Lands are included in **Appendix B**. Relevant information from the aerial photograph review is summarised below. It is noted that the angle of the photographs causes the site boundaries to appear offset.

- **1930:** The site appears to be occupied by multistorey buildings. A portion of the north east of the site, adjoining Castlereagh Street, appears to be occupied by two small structures. Other portions of the site may be vacant, however, it is difficult to be certain due to shadows cast by the taller structures at the site.
- **1943:** The site appears mostly unchanged from the 1930 imagery with the exception that the smaller structures in the north east of the site are no longer visible.
- **1961:** The whole site area is occupied by buildings, including the areas between the larger structures which appeared possibly vacant in the 1930 and 1943 images.
- **1975:** A new multistorey building has been constructed in the northern portion of the site which is significantly taller than the buildings previously in this location, and has an associated courtyard adjoining Castlereagh Street. This building obscures a large portion of the site due to the angle of the aerial photograph.
- **1986:** The site appears mostly unchanged from the 1975 imagery.
- **1994:** A new multistorey building is present in the south-west of the site, at the corner of Pitt Street and Liverpool Street.
- **2005:** A new multistorey building is present in the south-west of the site, at the corner of Pitt Street and Liverpool Street, replacing the building noted in the 1994 aerial.
- **2016:** The site appears mostly unchanged from the 2005 imagery. Dungate Lane is visible, which was previously obscured by the adjoining buildings.
- **2019:** The site appears consistent to the 2016 imagery.

3.2 Title Details

Relevant details from a historical review of the land titles for the site are listed in **Table 3.1**. A copy of title search results is provided in **Appendix C**.

Table 3.1: Summary of Historical Title Search

Lot 1 DP 66428	
Date	Registered Proprietor
20.9.1910 (1910 to 1947)	Louisa Snell (Married Woman) & her deceased estate
9.10.1947 (1947 to 1951)	Joseph Henry Snell (Gentleman) & his deceased estate (Application by Transmission not investigated)
11.7.1951 (1951 to 1952)	Mary Lista Hawkins (Married Woman) (Application by Transmission not investigated)
14.2.1952 (1952 to 1969)	Booth Holdings Pty Limited
27.11.1969 (1969 to 1972)	332 Pitt Street (Victoria House) Pty Limited
30.11.1972 (1972 to 1972)	Loftus Properties Limited
30.11.1972 (1972 to 1980)	State Superannuation Board
17.3.1980 (1980 to 1987)	Australian Dental Association (New South Wales Branch)

Lot 1 DP 66428	
Date	Registered Proprietor
14.10.1987 (1987 to Date)	Edremo Holdings Pty Limited

Lot B DP 183853	
Date	Registered Proprietor
9.8.1912 (1912 to 1920)	Theodore John Marks (Architect)
7.5.1920 (1920 to 1929)	Roche and Hampton Motors Limited Now Amalgamated Properties Limited
4.10.1929 (1929 to 1931)	William Morgan (Gentleman)
1.9.1931 (1931 to 1977)	Tooth & Co Limited
20.1.1977 (1977 to 1995)	Holpitt Pty Limited
5.4.1995 (1995 to 2005)	Evangelos Lekopoulos (Licence) Mary Lekopoulos (Married Woman)
24.8.2005 (2005 to 2009)	Dencal Pty Limited
10.6.2009 (2009 to 2014)	Pubcorp Pty Limited
12.9.2014 (2014 to 2016)	Globalwide Investments Pty Ltd
12.5.2016 (2016 to Date)	# Han's Sydney Pty Ltd

Lot 1 DP 70702, Lot 1 DP78245 (under the same property)	
Date	Registered Proprietor
19.12.1927 (1927 to 1947)	Castlereagh Properties Limited
7.1.1947 (1947 to 1950)	Edward Gabriel Glass (Furniture Dealer) Samuel Bertie Solomon (Furniture Dealer)
13.11.1950 (1950 to 1953)	E.G. Glass & Company Pty Limited
22.9.1953 (1953 to 1958)	Edels Pty Limited
26.11.1958 (1958 to 1964)	245 Castlereagh Street Pty Limited
5.11.1964 (1964 to 1981)	Legal & General Assurance Society Limited
16.12.1981 (1981 to 1983)	Administrative and Clerical Officers' Association Commonwealth Public Service (N.S.W. Branch)
21.11.1983	Strata Plan No. 20900 (Common Property Areas only investigated from this date up to 8.11.1993)
21.11.1983 (1983 to 1993)	The Proprietors – Strata Plan No. 20900
8.11.1993	Strata Plan No. 20900 now cancelled (All land investigated from here on)
8.11.1993 (1993 to 1996)	Trustees of the Sisters of Mercy (North Sydney)
18.6.1996 (1996 to Date)	# The Returned and Services League of Australia (New South Wales Branch) (Trustees for the ANZAC House Trust)

Lot 1 DP 90016	
Date	Registered Proprietor
6.10.1920 (1920 to 1980)	Central Property Co Limited Now Central Property Co Pty Limited
29.9.1980 (1980 to 1981)	United Broadcasting Co Pty Limited
25.3.1981 (1981 to 1988)	Victor Frankenstein (Surgical Suppliers) Peter Thomas Frankenstein (Surgical Suppliers)
21.11.1988 (1988 to 1994)	Kiso Holdings Pty Limited Bridgegow Pty Limited Minlor Holdings Pty Limited
25.11.1994 (1994 to 2003)	Vitalwork Pty Limited
8.9.2003 (2003 to 2015)	Assets & Properties Pty Limited
13.8.2015 (2015 to Date)	# Han's Sydney Pty Ltd

Lot 10 DP 857070	
Date	Registered Proprietor
21.12.1906 (1906 to 1927)	James Paroissien Johnson (Gentleman)
7.6.1927 (1927 to 1932)	Sargents Limited
30.12.1932 (1932 to 1941)	James Paroissien Johnson (Gentleman) & his deceased estate
7.1.1941 (1941 to 1949)	Cecil Paroissien Johnson (Grazier) Theodore Worth Storey (Grazier) (Application by Transmission not investigated)
28.6.1949 (1949 to 1955)	Walter Paroissien Johnson (Student)
24.1.1955 (1955 to 1975)	Australia and New Zealand Bank Limited
18.8.1975 (1975 to 1987)	C.E.C. Investments Pty Limited
5.11.1987 (1987 to 1988)	Paclyn Pty Limited
11.10.1988 (1988 to 2000)	Dindori Holdings Pty Limited Now Prima Developments Pty Limited

Lot A DP 448971	
Date	Registered Proprietor
12.11.1911 (1911 to 1925)	Reginald Campbell Galbraith (Merchant) & his deceased estate
11.12.1925 (1925 to 1931)	Wallace John Carson (Esquire) (Application by Transmission not investigated)
29.4.1931 (1931 to 1959)	The Permanent Trustee Company of New South Wales Limited Now Permanent Trustee Company of New South Wales Limited
5.5.1959 (1959 to 1967)	126 Liverpool Street Sydney Pty Limited
8.9.1967 (1967 to 1979)	James Sarikas (Milk Bar Proprietor) Mary Sarikas (Married Woman)
8.10.1979 (1979 to 1990)	Peter Maniatis (Restaurant Proprietor) Irene Maniatis (Married Woman)
19.7.1990 (1990 to 2005)	Goodsip Pty Ltd
23.5.2005 (2005 to 2008)	Capital Diamond Pty Limited

Lot A DP 448971	
Date	Registered Proprietor
26.5.2008 (2008 to 2015)	AMP Capital Investors Limited
17.11.2015 (2015 to Date)	# VIG-CC Pty Limited

Lot 3 DP 1044304	
Date	Registered Proprietor
31.7.1915 (1915 to 1915)	George Patrick Dwyer (Gentleman)
10.12.1915 (1915 to 1917)	Larke Hoskins and Company Limited
30.7.1917 (1917 to 1952)	Investments Proprietary Limited
23.7.1952 (1952 to 1955)	John Danks and Son Proprietary Limited
1.7.1955 (1955 to 1963)	Griffs (N.S.W.) Pty Limited
20.9.1963 (1963 to 1977)	Frank Griff & Sons Pty Limited
11.7.1977 (1977 to 1985)	The Commonwealth of Australia
20.9.1985 (1985 to 2003)	Australian Telecommunications Commission Now Australian and Overseas Telecommunications Corporation Limited Now Australian and Overseas Telecommunications Limited Now Telstra Corporation Limited

Lot B DP 448971	
Date	Registered Proprietor
12.11.1911 (1911 to 1925)	Reginald Campbell Galbraith (Merchant)
11.12.1925 (1925 to 1931)	Wallace John Carson (Esquire) (Transmission Application not investigated)
29.04.1931 (1931 to 1959)	The Permanent Trustee Company of New South Wales Limited
05.05.1959 (1959 to 1963)	128 Liverpool Street Pty Limited
06.08.1963 (1963 to 2018)	Louran Investments Pty Limited
05.07.2018 (2018 to date)	# Han's Sydney Pty Limited

Lot C DP 448971	
Date	Registered Proprietor
12.11.1911 (1911 to 1925)	Reginald Campbell Galbraith (Merchant)
11.12.1925 (1925 to 1931)	Wallace John Carson (Esquire) (Transmission Application not investigated)
29.04.1931 (1931 to 1959)	The Permanent Trustee Company of New South Wales Limited
05.05.1959 (1959 to 1975)	130 Liverpool Street Pty Limited
26.05.1975	Insula Australia Pty Limited

Lot C DP 448971	
Date	Registered Proprietor
(1975 to 1981)	
24.03.1981 (1981 to 1984)	Bernard George Appleton (Manager) Anne Burmond Appleton (Married Woman)
09.04.1984 (1984 to 2012)	Stephen George Rose Stella Anne Rose
01.03.2012 (2012 to 2018)	Jinlida Investments Pty Ltd
16.08.2018 (2018 to date)	# Han's Sydney Pty Limited

denotes current registered proprietor

3.3 Council Records

A copy of the Planning Certificates for representative properties within the Site were obtained from City of Sydney, and are included in **Appendix D**. Relevant information for the site is summarised below.

- The site is currently zoned B8 Metropolitan Centre under the Sydney Local Environmental Plan (LEP) 2012.
- Under the City of Sydney (LEP) 2012, the site cannot be developed without consent.
- The land is not affected by the Coastal Protection code under the Coastal Protection Act 1979.
- The land is not affected by Section 15 of the Mine Subsidence Compensation Act 1961 proclaiming land to be a Mine Subsidence District.
- The site is partially affected by road widening or road realignment under (a) Roads Act 1993 and (c) any resolution, i.e. Lot B DP 183853.
- The site is not affected by road widening or road realignment under (b) Any Environmental Planning Instrument.
- The land is not affected by policy adopted by the Council which restricts the development of the land because of the likelihood of bush fire, tidal inundation or subsidence.
- The land is not reserved for acquisition.
- The land is not declared to be significantly contaminated land and not subject to any management orders under the *Contaminated Land Management (CLM) Act 1997*. The land is not the subject of an approved voluntary management proposal or site audit statement within the meaning of the *CLM Act 1997*.

3.4 EPA Records

A search of the EPA's public register under the Protection of the Environment Operations Act 1997 was undertaken (**Appendix E**). The search identified that, for the site, there were:

- No prevention, clean-up or prohibition notices; and
- No transfer, variation, suspension, surrender or revocation of an environment protection licence.

A search was also undertaken through the EPA's public contaminated land register (**Appendix E**). The search identified that there have been no notices issued under the Contaminated Land Management Act 1997 (CLM Act) for the site. The site has not been notified to the EPA as containing significant contamination.

3.5 Australian and NSW Heritage Register

A search of the Australian Heritage Trust database and the NSW Heritage Inventory did not reveal any Heritage listed items at the site.

3.6 Integrity Assessment

The information obtained from the historical sources reviewed are in general agreement. Therefore, JBS&G consider that the information provided in this historical assessment has an acceptable level of accuracy.

4. Assessment of Potential Contamination

4.1 Potential Areas of Environmental Concern

Based on the history review and observations of the site, potential AECs and associated COPCs have been identified and are presented in **Table 5.1**.

Table 5.1: Areas of Environmental Concern and Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Fill materials used to create current site levels	Heavy metals, TRH, BTEX, PAHs, OCPs, PCBs and asbestos
Historical demolition of previous structures	Lead, asbestos

4.2 Potentially Contaminated Media

Surface soils/fill material are potentially contaminated media based upon:

- The unidentified sources of the fill material potentially imported to the site to establish current site levels and/or to backfill service trenches;
- Historical demolition of previous structures that potentially contained hazardous materials (lead, asbestos) which may have impacted underlying soils. It is noted that historical aerials indicate multiple structures at the site were demolished to construct the existing buildings, with the possible exception of the building in Lot B, DP183853, which appears to predate 1930; and
- Potential for a UST to have been abandoned in-situ and now covered by pavement.

Based on the potential leachability of identified contaminants in surface soils/fill material, vertical migration of those contaminants through the soil profile may occur. Consequently, natural soils underlying fill/surface soils are considered to be a potentially contaminated media.

The potential leachability of the identified contaminants of concern indicates groundwater and soil vapour are potentially contaminated media. The potential for contamination of groundwater and/or soil vapour will depend upon the actual nature, occurrence and characteristics of contamination within the overlying fill material and natural soils.

4.3 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is determined by:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminant identified as part of the site history review are generally in either a solid form (e.g. heavy metals, asbestos) or liquid form (e.g. TRH from fuel, oil, lubricants etc). Dependent upon concentrations, there is the potential for TRH/VOC impacts to occur in vapour form underlying the site, although this is unlikely in the absence of significant soil/groundwater impacts.

The ground surface of the site is predominantly hardstand. As such, there is low potential for windblown contaminants to migrate from the site.

Migration of contaminants via groundwater is considered possible. Additionally, vapour generation associated with volatile and semi-volatile COPC (TRH, BTEX, VOCs) is identified as a potential migration pathway, particularly where there is evidence of a UST or where impacted fill is identified.

5. Discussion

The site is used for commercial purposes as offices with ground level food outlets and retail stores, and appears well maintained and in good condition. There were no odours or significant staining observed on the ground surfaces and no exposed surface soil. However, AECs were identified as part of the historical review and site inspection and are discussed further below.

Based on review of aerial photographs the site appears to have been used for commercial and/or residential purposes. There are no indications that industrial activities have been carried out at the site. Multiple structures appear to have been demolished historically, which indicates there is potential for contamination associated with hazardous building materials at the site. Historical aerials indicate structures have been demolished in all lots, with the possible exception of Lot B, DP183853, which contains a building appearing to predate the earliest available historical aerial image (1930). Additionally, a large number of underground services were evident at the site and there is a potential for contamination associated with potential importation of materials to backfill service trenches. Two underground car parks exist at the site that appear to have been excavated into natural materials. As such, areas not occupied by basement car parks are considered most likely to be affected by contamination associated with historical demolition of structures.

Additionally, there is potential for historical 'filling' activities associated with levelling of the sites to construct original site structures. The likelihood of this is unknown due to structures occupying the site since before the earliest available historical aerial (1930), and the original site topography being unknown. Redevelopment of the site over time would also likely have led to the removal of some historical impacts to the site.

If present, fill materials at the site would be of an unknown origin, and therefore have the potential to be contaminated. Impacts associated with historical filling may be present in all areas of site, outside of the footprint of basement car parks.

6. Conclusions and Recommendations

Based on the findings of this investigation and subject to the limitations in **Section 7**, the following conclusions are made:

- From a limited site inspection, the site generally appears well maintained and in good condition.
- While the potential for significant contamination at the site is low, a targeted program of intrusive investigations would be necessary to determine if contamination is present at the site. An intrusive investigation at the site should target potential fill materials in Dungate Lane, and within existing building footprints, with the exception of areas occupied by basement car parks.
- It is considered unlikely that activities at the site will have contaminated the land to a degree that would prevent the redevelopment of the site for mixed commercial and residential land-use.
- In the event that contamination is identified at the site, it is anticipated that the site can be made suitable for the proposed land uses.

7. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

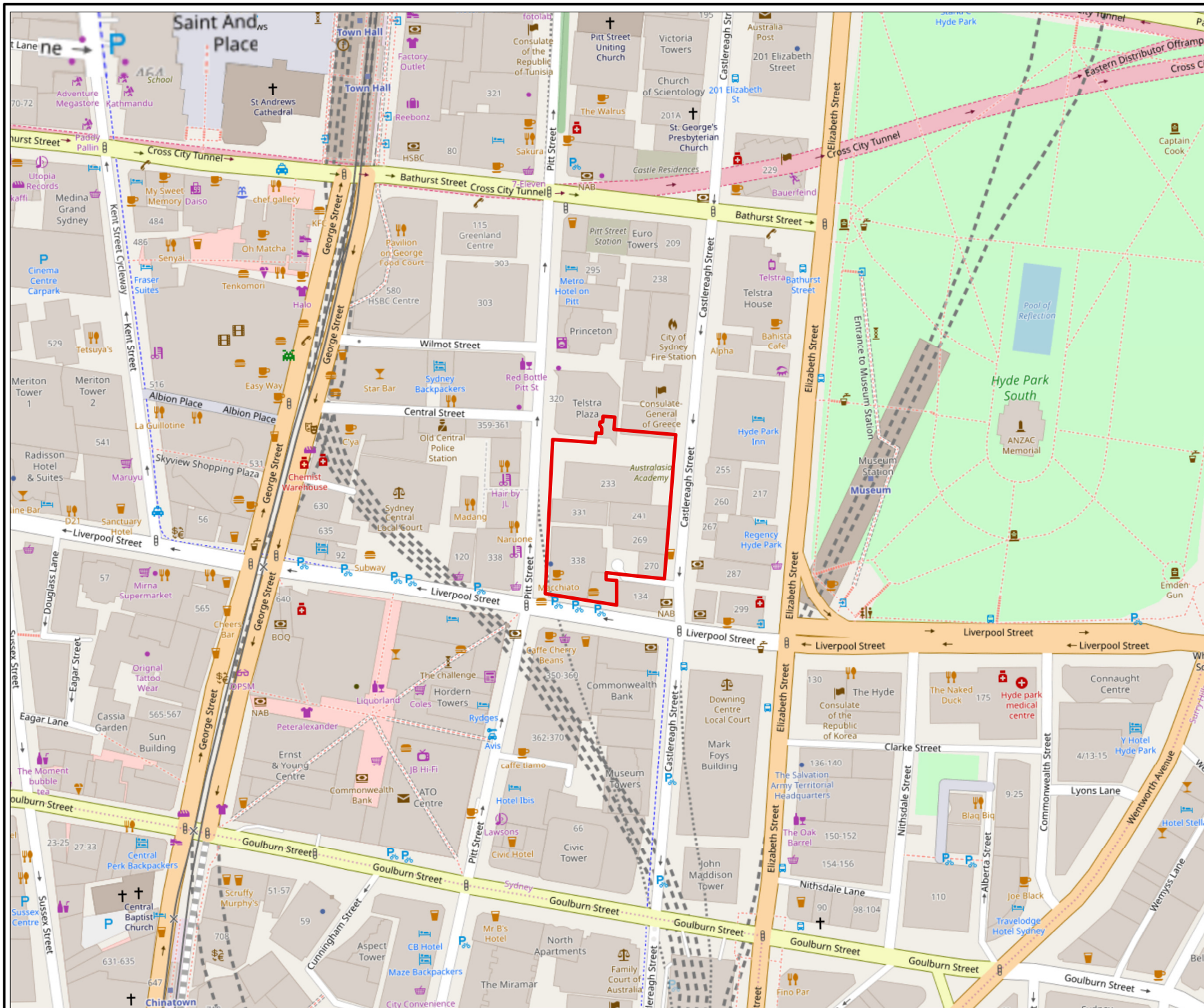
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures



Legend:
 Approximate Site Boundary



Job No: 52188

Client: Hans Sydney Pty Ltd

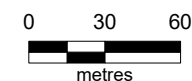
Version: R01 Rev A

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:3,000

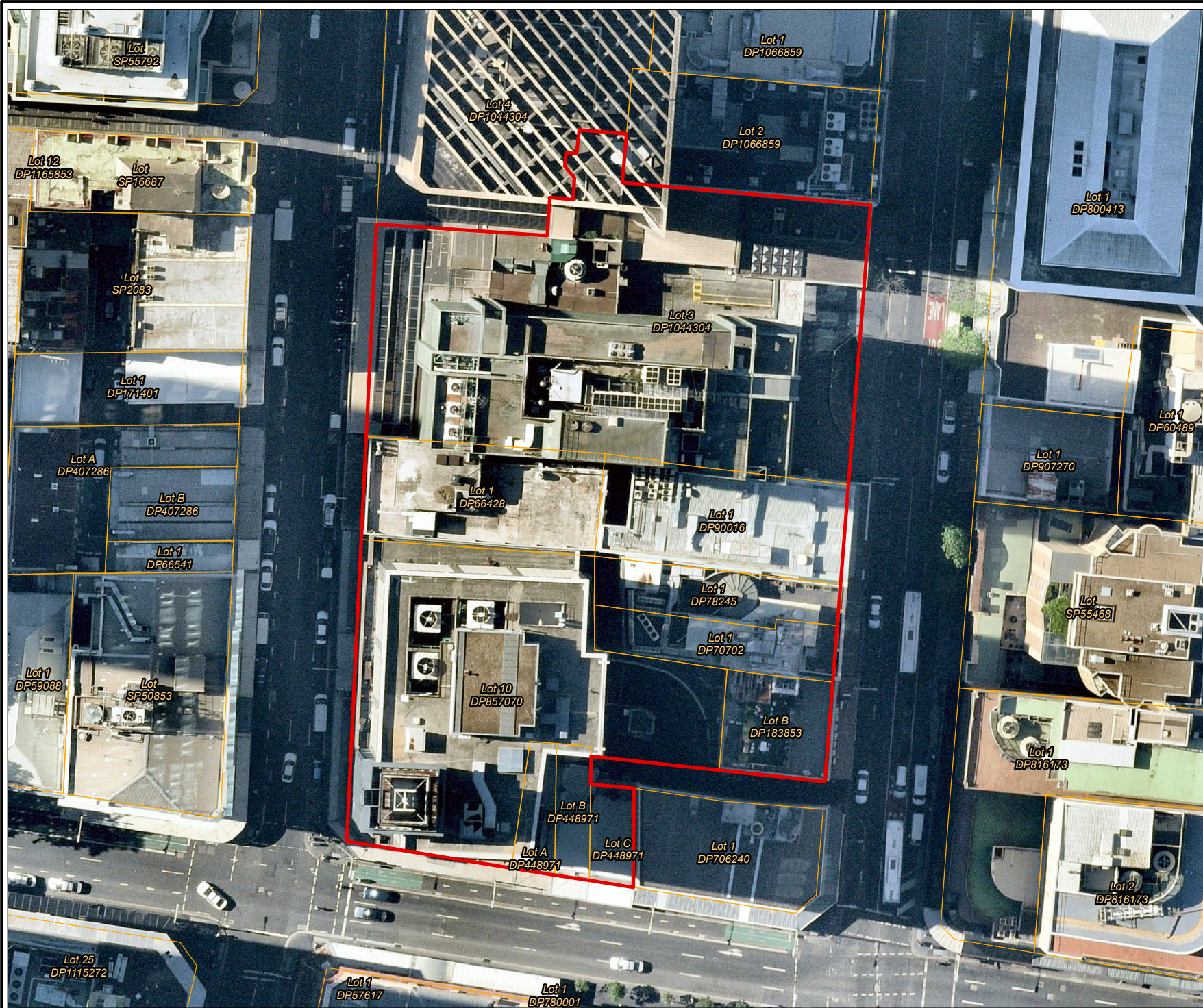


Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

SITE LOCATION

FIGURE 1



Appendix A Groundwater Bore Records

NSW Office of Water

Work Summary

GW112175

Licence: 10BL158267	Licence Status: ACTIVE
Authorised Purpose(s): MONITORING BORE Intended Purpose(s): MONITORING BORE	
Work Type: Bore Work Status: Equipped Construct.Method: Owner Type: Private	
Commenced Date: Completion Date: 01/03/1999	Final Depth: Drilled Depth:
Contractor Name: Driller: Unkown Unknown Assistant Driller:	
Property: N/A GWMA: GW Zone:	Standing Water Level: Salinity: Yield:

Site Details

Site Chosen By:	County Form A: CUMBE Licensed:	Parish CUMBE.1	Cadastre 1//87644
Region: 10 - Sydney South Coast River Basin: - Unknown Area/District:	CMA Map: Grid Zone:	Scale:	
Elevation: 0.00 m (A.H.D.) Elevation Source: Unknown	Northing: 6250024.0 Easting: 335131.0	Latitude: 33°52'38.1"S Longitude: 151°13'02.5"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112175 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water

Work Summary

GW200690

Licence: 20BL171676	Licence Status: ACTIVE
Authorised Purpose(s): DOMESTIC Intended Purpose(s): DOMESTIC	
Work Type: Spear	
Work Status:	
Construct.Method:	
Owner Type: Private	
Commenced Date:	Final Depth:
Completion Date: 20/12/2007	Drilled Depth:
Contractor Name:	
Driller: Jarrod Ronald Bright	
Assistant Driller:	
Property: 1/2-4 PACIFIC AVE ETTALONG BEACH 2257	Standing Water Level:
GWMA:	Salinity:
GW Zone:	Yield:

Site Details

Site Chosen By:			
Form A:	County	Parish	Cadastre
Licensed:	CUMBE	CUMBE.1	1//76609
Region: 20 - Hunter	CMA Map:		
River Basin: - Unknown	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6249340.0	Latitude: 33°53'00.2"S	
Elevation Source: Unknown	Easting: 334928.0	Longitude: 151°12'54.2"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Map Interpretation	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

***** End of GW200690 *****

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NSW Office of Water

Work Summary

GW112180

Licence: 10BL158267	Licence Status: ACTIVE
Authorised Purpose(s): MONITORING BORE Intended Purpose(s): MONITORING BORE	
Work Type: Bore	
Work Status: Equipped	
Construct.Method:	
Owner Type: Private	
Commenced Date:	Final Depth:
Completion Date: 01/03/1999	Drilled Depth:
Contractor Name:	
Driller: Unkown Unknown	
Assistant Driller:	
Property: N/A	Standing Water Level:
GWMA:	Salinity:
GW Zone:	Yield:

Site Details

Site Chosen By:	County	Parish	Cadastre
	Form A: CUMBE	CUMBE.5	5 66692
	Licensed:		
Region: 10 - Sydney South Coast	CMA Map:		
River Basin: - Unknown	Grid Zone:		Scale:
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6249351.0	Latitude: 33°52'60.0"S	
Elevation Source: Unknown	Easting: 335167.0	Longitude: 151°13'03.5"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112180 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water

Work Summary

GW109238

Licence: 10BL602378	Licence Status: ACTIVE
Authorised Purpose(s): MONITORING BORE Intended Purpose(s): MONITORING BORE	
Work Type: Battery Spears, Filter Pack	
Work Status:	
Construct.Method: Auger	
Owner Type: Private	
Commenced Date:	Final Depth: 7.50 m
Completion Date: 19/08/2008	Drilled Depth: 7.50 m
Contractor Name: INVIRODRILL	
Driller: Lloyd Norman Whitsed	
Assistant Driller:	
Property: TEPCORP HOLDINGS PTY LTD 350-352 BOURKE STREET SURRY HILLS 2010 NSW	Standing Water Level: 4.590
GWMA:	Salinity: Fresh
GW Zone:	Yield:

Site Details

Site Chosen By:	County	Parish	Cadastre
	Form A: CUMBE	CUMBE.1	1//533894
	Licensed:		
Region: 10 - Sydney South Coast	CMA Map:		
River Basin: - Unknown	Grid Zone:		Scale:
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6249391.0	Latitude: 33°52'58.6"S	
Elevation Source: Unknown	Easting: 335069.0	Longitude: 151°12'59.7"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.50	150			Auger
1		Annulus	Waterworn/Rounded	1.00	7.50				Graded
1	1	Casing	Pvc Class 18	0.00	1.50	50			Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	1.50	7.30	50		1	Slotted In Hole, PVC Class 18, SL: 5.8mm, A: 0.20mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
4.50	7.50	3.00	Unknown	4.59					

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	ASHPHALT	Ash	

0.10	0.40	0.30	FILL,BRICK,SANDSTONE	Fill	
0.40	2.50	2.10	CLAY BROWN	Clay Loam	
2.50	7.50	5.00	SHALE, RED/GREY	Shale	

Remarks

*** End of GW109238 ***

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NSW Office of Water

Work Summary

GW109239

Licence: 10BL602379	Licence Status: ACTIVE
Authorised Purpose(s): MONITORING BORE Intended Purpose(s): MONITORING BORE	
Work Type: Bore	
Work Status:	
Construct.Method: Auger	
Owner Type: Private	
Commenced Date:	Final Depth: 7.45 m
Completion Date: 19/08/2008	Drilled Depth: 7.45 m
Contractor Name: INVIRODRILL	
Driller: Lloyd Norman Whitsed	
Assistant Driller:	
Property: TEPCORP HOLDINGS PTY LTD 4 - 12 HILL STREET SURRY HILLS 2010 NSW	Standing Water Level: 4.570
GWMA:	Salinity: Fresh
GW Zone:	Yield:

Site Details

Site Chosen By:	County Form A: CUMBE Licensed:	Parish CUMBE.1	Cadastre 2/78252
Region: 10 - Sydney South Coast	CMA Map:		
River Basin: - Unknown	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6249385.0	Latitude: 33°52'58.8"S	
Elevation Source: Unknown	Easting: 335107.0	Longitude: 151°13'01.2"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.45	150			Auger
1		Annulus	Waterworn/Rounded	1.00	7.45				Graded
1	1	Casing	Pvc Class 18	0.00	1.50	50			Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	1.50	7.20	50		1	Slotted In Hole, PVC Class 18, SL: 5.7mm, A: 0.20mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
3.00	7.40	4.40	Unknown	4.57					

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	ASHPHALT	Ash	

0.10	0.60	0.50	FILL BROWN, GRAVEL, CLAY	Fill	
0.60	2.90	2.30	CLAY BROWN ORANGE, RED, SILT MOIST	Clay Loam	
2.90	7.45	4.55	SHALE RED, GREY, CLAY BANDS	Shale	

Remarks

*** End of GW109239 ***

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

NSW Office of Water

Work Summary

GW109086

Licence: 10BL602334	Licence Status: ACTIVE
Authorised Purpose(s): MONITORING BORE Intended Purpose(s): MONITORING BORE	
Work Type: Bore	
Work Status:	
Construct.Method:	
Owner Type: Other Govt	
Commenced Date:	Final Depth: 5.68 m
Completion Date: 22/07/2008	Drilled Depth: 5.68 m
Contractor Name: CH2M HILL	
Driller: Unkown Unknown	
Assistant Driller:	
Property: SYDNEY WATER 21 - 25 SUSSEX STREET SYDNEY 2000 NSW	Standing Water Level:
GWMA:	Salinity:
GW Zone:	Yield:

Site Details

Site Chosen By:			
Form A: CUMBE	County: CUMBE	Parish: CUMBE.53	Cadastre: 1/87659
Licensed:			
Region: 10 - Sydney South Coast		CMA Map:	
River Basin: - Unknown	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6251262.0	Latitude: 33°51'57.2"S	
Elevation Source: Unknown	Easting: 333781.0	Longitude: 151°12'10.8"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.80	120			Unknown
1	1	Casing	P.V.C.	0.00	3.20	40			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
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Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.50	0.50	FILL,MEDIUM TO COARSE	Fill	
0.50	1.00	0.50	FILL,SILTY SAND	Fill	
1.00	1.80	0.80	FILL,CLAYEY SAND FINE GRAINED	Fill	
1.80	2.00	0.20	FILL,GRAVELLY SAND	Fill	
2.00	3.20	1.20	FILL,SAND WITH SOME SILT	Fill	
3.20	3.80	0.60	FILL SILTY SAND	Fill	

3.80	4.50	0.70	FILL CLAY SILT SAND MIXTURE	Fill	
4.50	5.68	1.18	SAND,FINE TO MEDIUM GRAINED	Sand	

Remarks

*** End of GW109086 ***

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NSW Office of Water

Work Summary

GW113599**Licence:** 10BL604366**Licence Status:** ACTIVE**Authorised Purpose(s):** MONITORING BORE
Intended Purpose(s): MONITORING BORE**Work Type:** Bore**Work Status:** Equipped**Construct.Method:****Owner Type:** Private**Commenced Date:****Completion Date:** 09/02/2010**Final Depth:****Drilled Depth:****Contractor Name:****Driller:** Unkown Unknown**Assistant Driller:****Property:** BARANGAROO DELIVERY
AUTHORITY WHARF 8 HICKSON
ROAD BARANGAROO 2000 NSW**Standing Water Level:****GWMA:**
GW Zone:**Salinity:**
Yield:

Site Details

Site Chosen By:

County	Parish	Cadastre
Form A: CUMBE	CUMBE.53	5/876514
Licensed:		

Region: 10 - Sydney South Coast**CMA Map:****River Basin:** - Unknown
Area/District:**Grid Zone:****Scale:****Elevation:** 0.00 m (A.H.D.)
Elevation Source: Unknown**Northing:** 6251505.0
Easting: 333687.0**Latitude:** 33°51'49.2"S
Longitude: 151°12'07.3"E**GS Map:** -**MGA Zone:** 0**Coordinate Source:** Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

Remarks

31/07/2014: Nat Carling, 31-July-2014; Added status, drill method, depth & updated work type.

***** End of GW113599 *****

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NSW Office of Water

Work Summary

GW109649

Licence: 10BL602485	Licence Status: ACTIVE
Authorised Purpose(s): MONITORING BORE Intended Purpose(s): MONITORING BORE	
Work Type: Bore	
Work Status:	
Construct.Method: Auger - Hollow Flight	
Owner Type: Private	
Commenced Date:	Final Depth: 7.20 m
Completion Date: 03/05/2008	Drilled Depth: 7.20 m
Contractor Name: ENVIRONMENT INVESTIGATION SERVICES	
Driller: Nicholas Alexander Kontos	
Assistant Driller:	
Property: WEST APARTMENTS PTY LTD 485 - 511 WATTLE STREET ULTIMO 2007 NSW	Standing Water Level: 2.950
GWMA:	Salinity:
GW Zone:	Yield: 1.000

Site Details

Site Chosen By:	County Form A: CUMBE Licensed:	Parish CUMBE.45	Cadastre 1/546296
Region: 10 - Sydney South Coast	CMA Map:	Scale:	
River Basin: - Unknown Area/District:	Grid Zone:		
Elevation: 0.00 m (A.H.D.) Elevation Source: Unknown	Northing: 6249352.0 Easting: 333320.0	Latitude: 33°52'58.9"S Longitude: 151°11'51.6"E	
GS Map: -	MGA Zone: 0	Coordinate Source: Unknown	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.20	100			Auger - Hollow Flight
1		Annulus	Waterworn/Rounded	1.00	7.20				Graded
1	1	Casing	Pvc Class 18	0.00	1.10	61	51		Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	1.10	7.20	61		1	Casing - Machine Slotted, PVC Class 18, Screwed, SL: 42.0mm, A: 0.20mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
3.20	6.20	3.00	Unknown	2.95		1.00			

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

9/14/2016allwaterdata.water.nsw.gov.au/wgen/users/789154051/gw109649.wsr.htm

0.00	4.80	4.80	FILL,GREY,BROWN,GRAVEL,CLAY,SILT	Fill	
4.80	5.90	1.10	SILTY SAND,LT GREY,RED,MED COARSE GRAINED	Silty Sandstone	
5.90	7.20	1.30	SANDSTONE RED BROWN,WEATHERED WITH CLAY BANDS	Sandstone	

Remarks

*** End of GW109649 ***

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Appendix B Aerial Photographs



Legend:
 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500



02040



metres


Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 1930**

FIGURE 1930



Legend:
 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

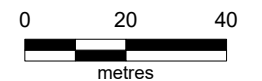
Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500




Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 1943**

FIGURE 1943

**Legend:**

 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

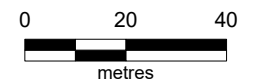
Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500

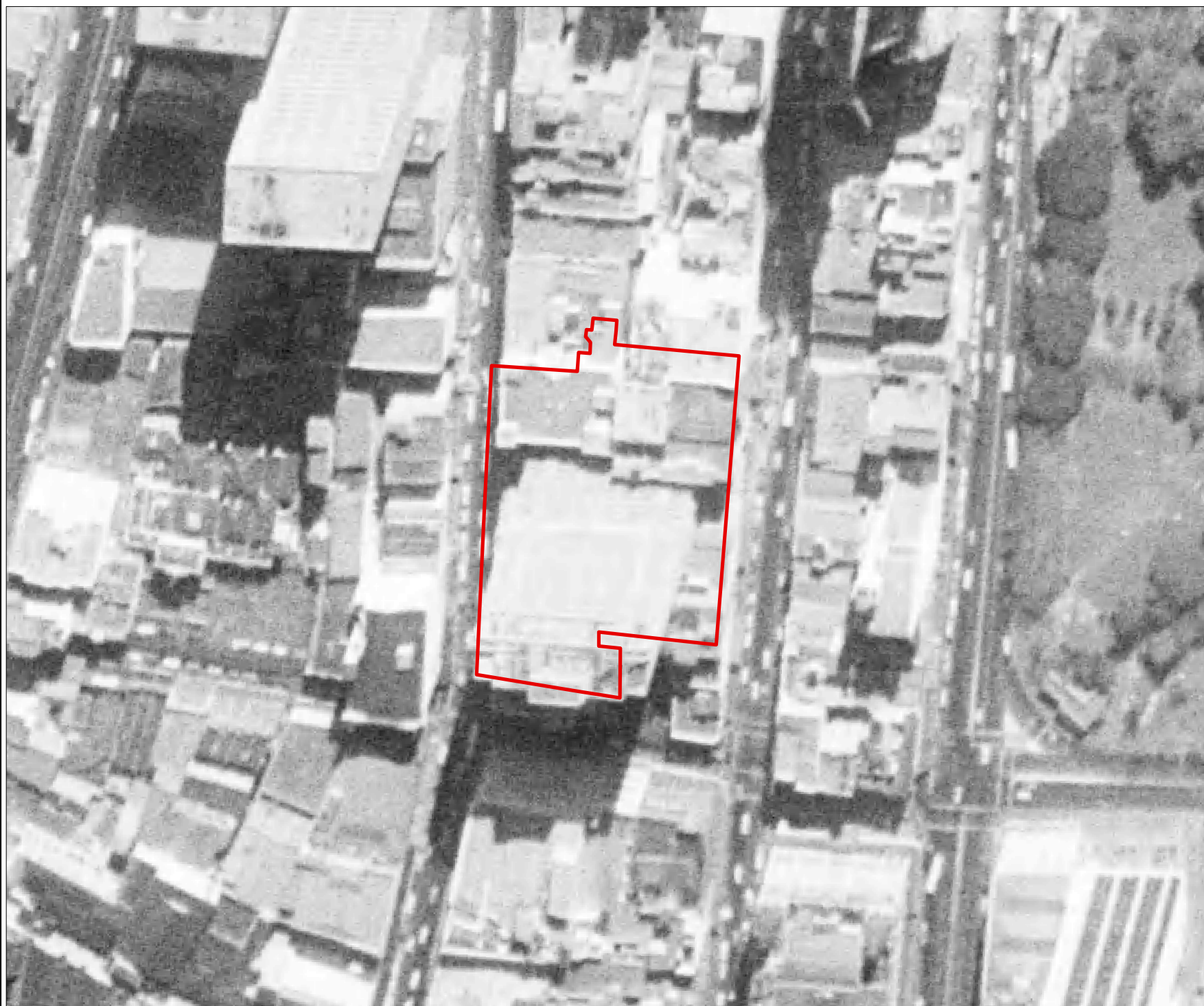



Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 1961**

FIGURE 1961

**Legend:**

 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

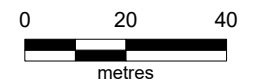
Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500

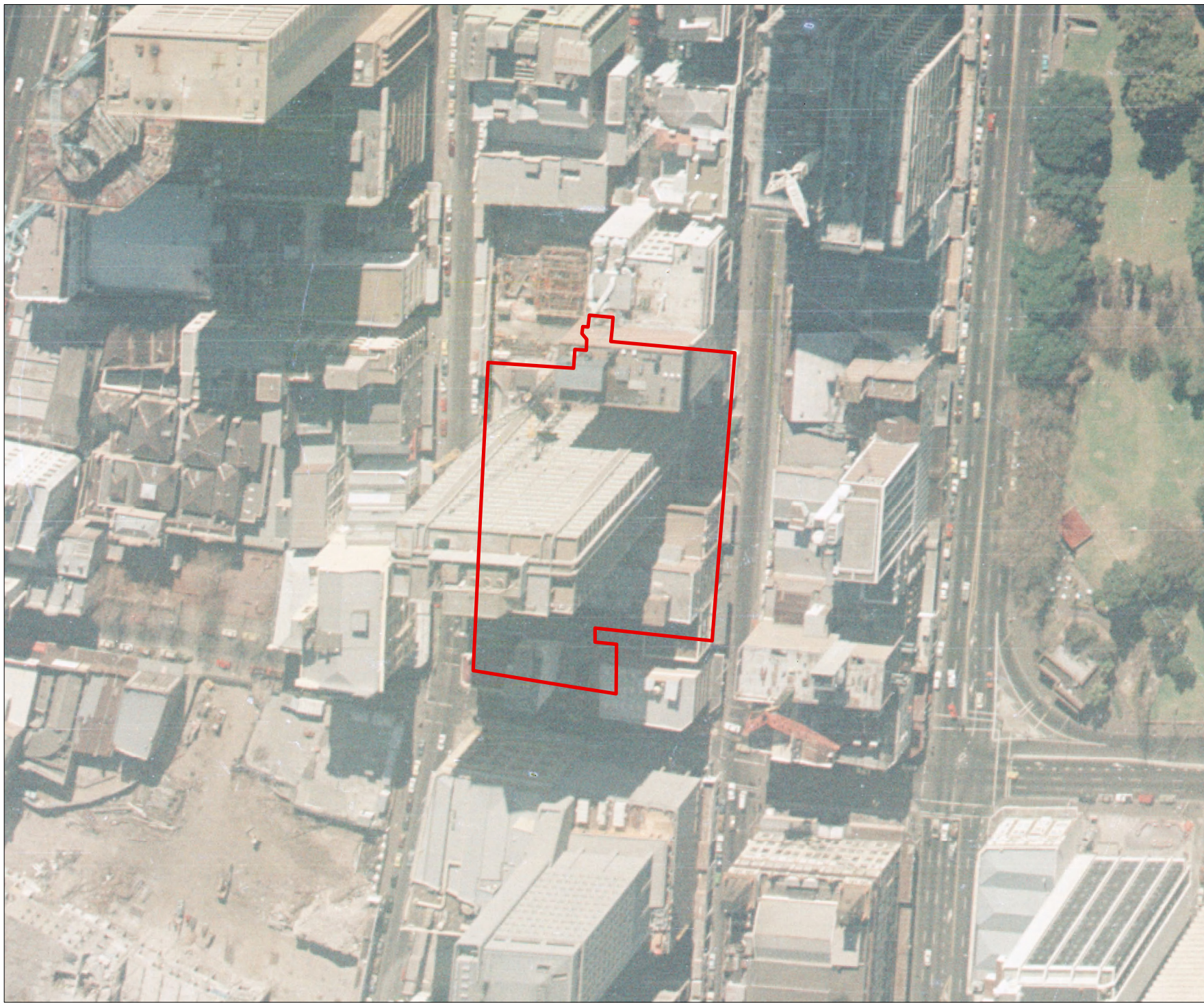


Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 1975**

FIGURE 1975



Legend:
 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500



02040



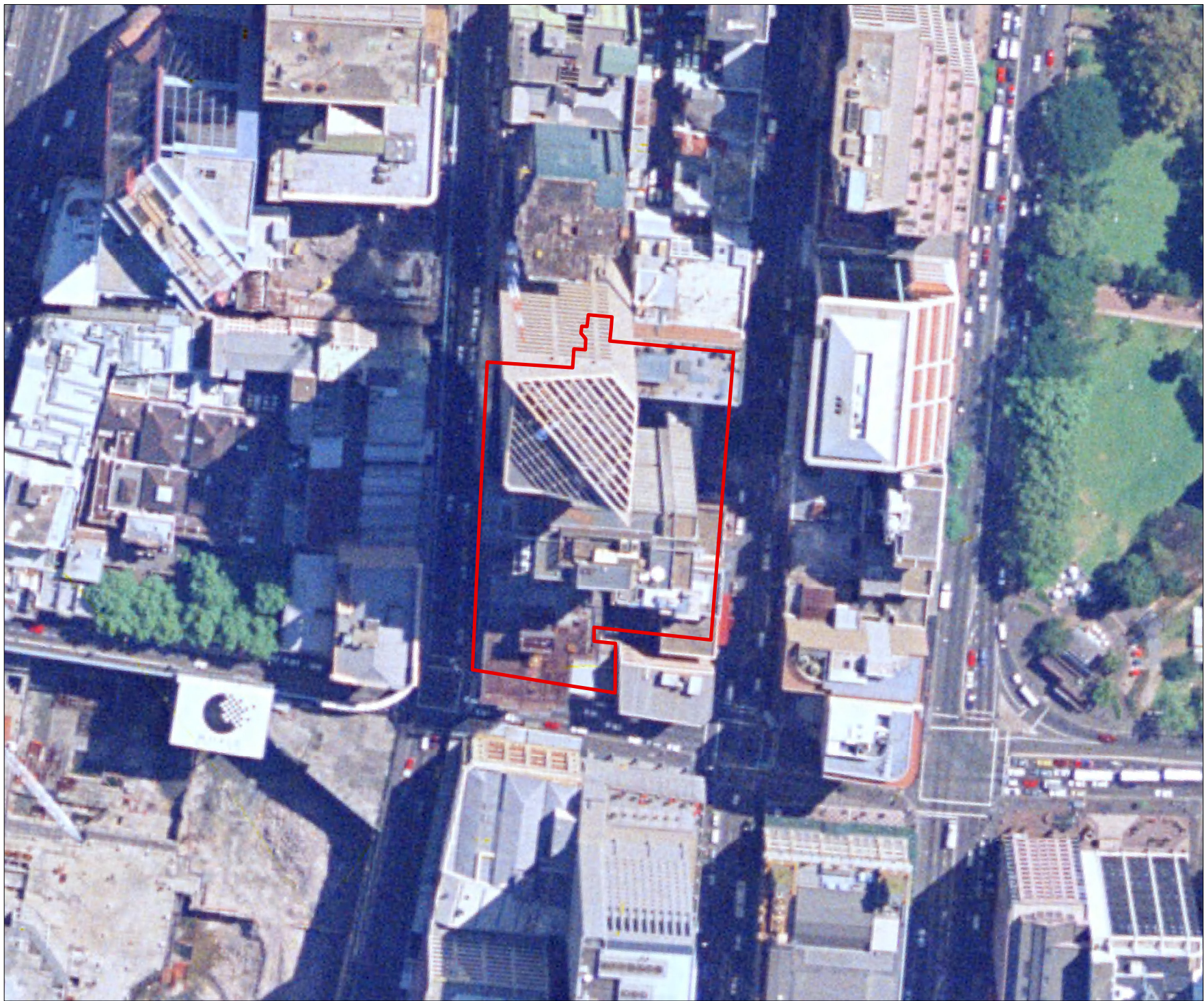
metres

Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 1986**

FIGURE 1986



Legend:
 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500



02040



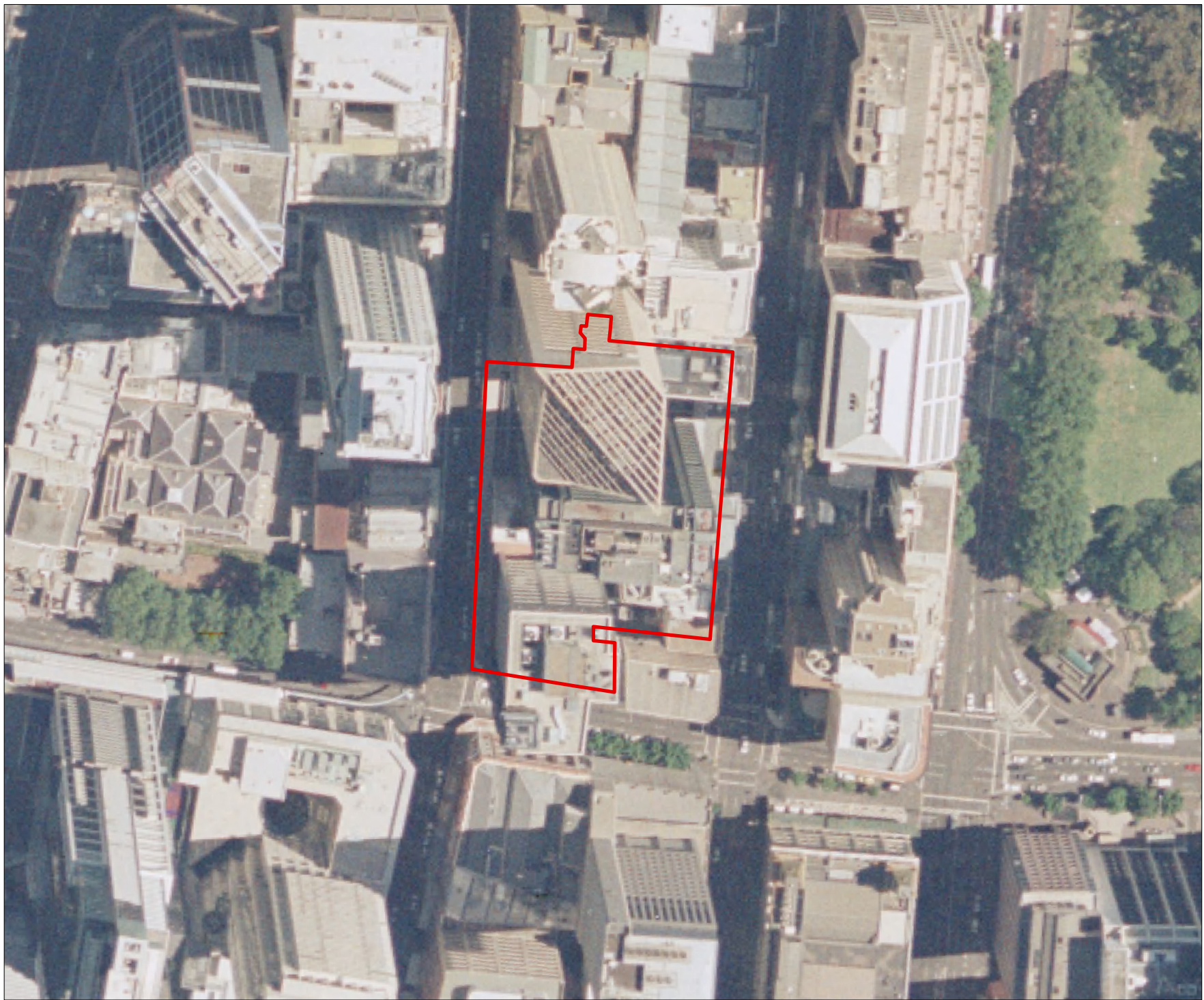
metres


Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 1994**

FIGURE 1994




Legend:
 Approximate Site Boundary




Job No: 57557	
Client: Hans Sydney Pty Ltd	
Version: Aerials	Date: 22-Nov-2019
Drawn By: CA	Checked By: CB

Scale 1:1,500



02040



metres

Coor. Sys. GDA 1994 MGA Zone 56


338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 2005**

FIGURE 2005



Legend:

 Approximate Site Boundary



Job No: 57557

Client: Hans Sydney Pty Ltd

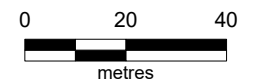
Version: Aerials

Date: 22-Nov-2019

Drawn By: CA

Checked By: CB

Scale 1:1,500



Coor. Sys. GDA 1994 MGA Zone 56

338 Pitt Street, Sydney, NSW

**HISTORICAL AERIAL
IMAGERY - 2016**

FIGURE 2016