

**Preliminary Geo-environmental Site Assessment
for:**

**New Property Development
20-24 Sussex Street, Sydney, New South Wales, 2000**



Report Date: 01 January 2021

 **Basic Report**

Project/Site Name: New Property Development

Prepared For: Smart Projects Pty Ltd

Site Address: 20-24 Sussex St,
Sydney, NSW 2000

Report Type: Basic

Client Ref: SJ-00248

Lot / DP: 1/-/DP1033719

GroundCheck Ref: 210012-DTB

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ATTACHMENTS

Indicates information has been identified within the local report search extent* and is included in this report

☐ Indicates information may exist within the local report search extent*, but it is not included in this type of report. Optional extra data can be purchased by ordering online through www.georeports.com.au

☐ Indicates no information has been identified within the local report search extent* and therefore is not attached to this report.

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> |  | A - NSW ePlanning Property Report (Premium Reports only) |
| <input type="checkbox"/> |  | B – NSW Land Registry Cadastral Records Search (Premium Reports only) |
| <input type="checkbox"/> |  | C - Relevant Soil Landscape Data Sheets (Premium Reports only) |
| <input type="checkbox"/> |  | D – Soil Profile Reports (Premium Reports only)** |
| <input type="checkbox"/> |  | E – Detailed Investigation Borehole Logs / Reports (Premium Reports only)** |
| <input type="checkbox"/> |  | F - WaterNSW Groundwater Bore Records (Premium Reports only)** |
| <input type="checkbox"/> |  | A1 – Optional Property Reports (Sewer, Land Titles, Lot Plans, Nearby DAs)** |

* Refer to following section for definition of search extents

** Subject to availability of re-publishable information in the within the local report search extent*



1. Scope of this report

This GroundCheck report provides a preliminary assessment of site conditions based on unique sources of published and unpublished geo-environmental data, prepared and presented by qualified and experienced geo-environmental consulting professionals. It describes the general distribution of expected subsurface materials including mapped geology, soil landscapes, acid sulfate soils, topography, flooding, insights from selected reports and borehole data, published groundwater and site contamination data in addition to optional detailed borehole log information (premium report only).

Commentary and mapping information herein is preliminary and general in nature and does not explicitly identify potential geo-environmental hazards such as, but not limited to, site-specific landslip/instability, effects of man-made fill, reactive sites (shrink/swell), site-specific flooding or erosion risk, coastal erosion, chemically aggressive soils or groundwater, unpublished soil or groundwater contamination, presence of existing structures, utilities, etc.

This Report is intended to provide basic overview of site conditions suitable for typical Council development application (DA) requirements and pre-feasibility assessment. However, the level of information required by some Authorities for some sites varies and prescriptive investigation and reporting requirements may apply which are beyond the scope of this report. The user should check relevant approval authority requirements to assess whether this report meets the site-specific approval requirements for the planning stage under consideration. Depending on site conditions, zoning and/or approval authority requirements, additional information beyond this report may include but not be limited to intrusive soil and/or groundwater investigations, sampling and testing, detailed risk assessment, site visits, detailed environmental site assessment and/or consideration of detailed groundwater impacts affecting the proposed or adjacent properties. This report is not intended to meet the full requirements of [NSW EPA Stage 1 or 2 Environmental Site Assessment Report requirements](#) although may be used as supporting information for these studies.

Information contained in this report is primarily factual and reliant on third party data providers. Users should seek professional opinion or advice on site specific constraints or hazards which may affect the study area or development under consideration. This information is provided as guidance only and is not intended to be an exhaustive statement of potential ground engineering constraints. Users should make their own assessment of ground engineering and site contamination risk and seek further advice to identify and mitigate potential geo-environmental risks.

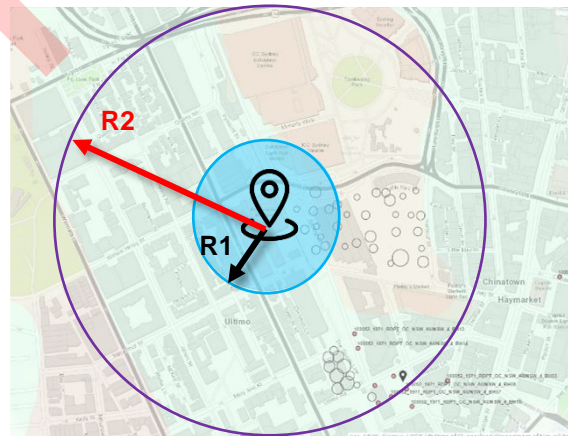
The coverage area of this report varies according to search parameter and is summarised below.

Search Extent Description

- Local (R1): Search extent typically 150m – 500m radius
- Regional (R2): Search extent typically 500m – 2,000m radius

Default search extents used in this report may vary according to the size of the subject site and density of available information nearby.

Search extents used in this report



Disclaimer: This report provides indicative overview of geo-environmental site conditions at the subject site based on selected information within the identified search extents. The information is preliminary in nature and is intended to provide general guidance appropriate for pre-feasibility assessments. The scope of this report is limited to desktop review of published and privately held information, without undertaking any physical site inspection, intrusive investigation or site-specific sampling or any physical or chemical testing of any type. Users of this report must satisfy themselves as to the suitability of the site for its intended use(s) by engaging professional advice regarding site conditions and site-specific risks. This should include undertaking appropriate site inspections, review of other available reports and records, intrusive investigations and testing, as required. This report does not purport to provide legal advice or an opinion on the value of the property or its condition. For any site development, further intrusive investigations are recommended to enable further characterisation of the type and distribution of subsurface materials, groundwater or any potential contamination. You should obtain independent advice before you make any decision based on the information within the report. Detailed Terms, Conditions and Limitations applicable to use of this report are set out at the end of this report.





2. Summary – Geo-environmental risk profile

Site: 20-24 Sussex St, City of Sydney



Aggregated Risk Profile:

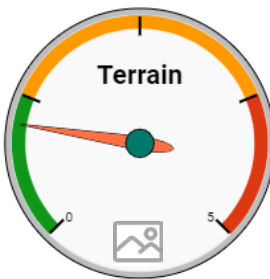
Favourable

Based on published records, limited geo-environmental risk indicators have been identified at this site. These may be acceptable to owners and regulators, although ongoing assessment of key risks may be required. Further investigation and advice from relevant practitioners may be appropriate to manage site-specific issues and to mitigate any adverse indicators identified below.

Subject Site:

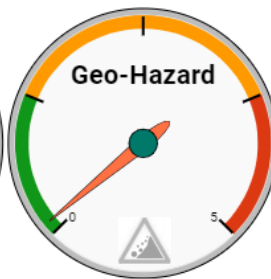


Geotechnical Risk Indicators



Typical Site Gradient:

- Gently sloping (<15°)
- Moderately sloping (15° to 25°)
- Steeply sloping (>25°)



Natural Landslip / Mine Subsidence²:

- Not identified in regional search extent
- Identified in regional search extent
- Identified on site or in local search extent



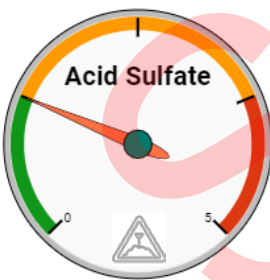
Suitability to Support Structures³:

- Favourable
- Intermediate
- Unfavourable

Sources Screened:

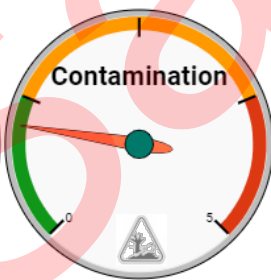
Key	Search
	NSW Govt. ePlanning Report
	Published Cadastre Records
	NSW Govt Cadastre Report
	Published Digital Elevation Model
	Published Site Imagery (Recent)
	Published Site Imagery (Historic)*
	Published Geology
	Published Soils
	Published Landslip
	GeoReports Landslip Database
	Published Mine Subsidence
	Published Flood Mapping
	Published Groundwater Bores
	Published Geotechnical Bores
	GeoReports Bore Database
	eSpade Soil Profile Records
	Published Acid Sulfate Soils
	Published Salinity Records
	Contamination – EPA Registered
	Contamination – EPA Notified
	Contamination – Natural Asbestos
	Contamination – Infrastructure

Environmental Risk Indicators



Mapped Acid Soils/ Salinity⁴:

- Low Risk
- Medium Risk
- High Risk



Contamination Indicators⁵:

- Not identified in regional search extent
- Identified in regional search extent
- Identified on site or in local search extent



Flooding⁶:

- Not identified in regional search extent
- Identified in regional search extent
- Identified on site or in local search extent

Legend

- Screening coverage available.
- Screening not in scope.
- Screening coverage not available.

*- Only available in parts of NSW.

1- Risk Profile is based on the weighted score of the six geotechnical and environmental property development risk factors published by [Newell et al 2006](#).
2- Where identified near the subject site, Mine subsidence and Landslip presence are given equal weighting. Mine Subsidence presence is based on published mapping and proximity to documented landslips. Refer to Section 10 for more details.
3- Suitability is categorised using Australian Std AS1170.4 site classifications: Favourable=Class A,B (Strong Rock, Rock), Intermediate=Class C (Shallow Soil), Unfavourable = Class D, E (, Deep or Soft Soil, Very Soft Soil). Subsurface conditions are indicative only and based on published data without intrusive investigations (Refer to Section 1).
4- Acid Sulfate Soils categorised using published mapping data. Refer to Section 11 for more details.
5- Indicative only - Refer to Sections 17 and 18 for details. Score based on limited screening of published contamination indicators in proximity of the site.
6- Flooding potential is based on site proximity to 1 in 100 year flood extent from mapping data. Refer to Section 14 for more details.





3. Site details

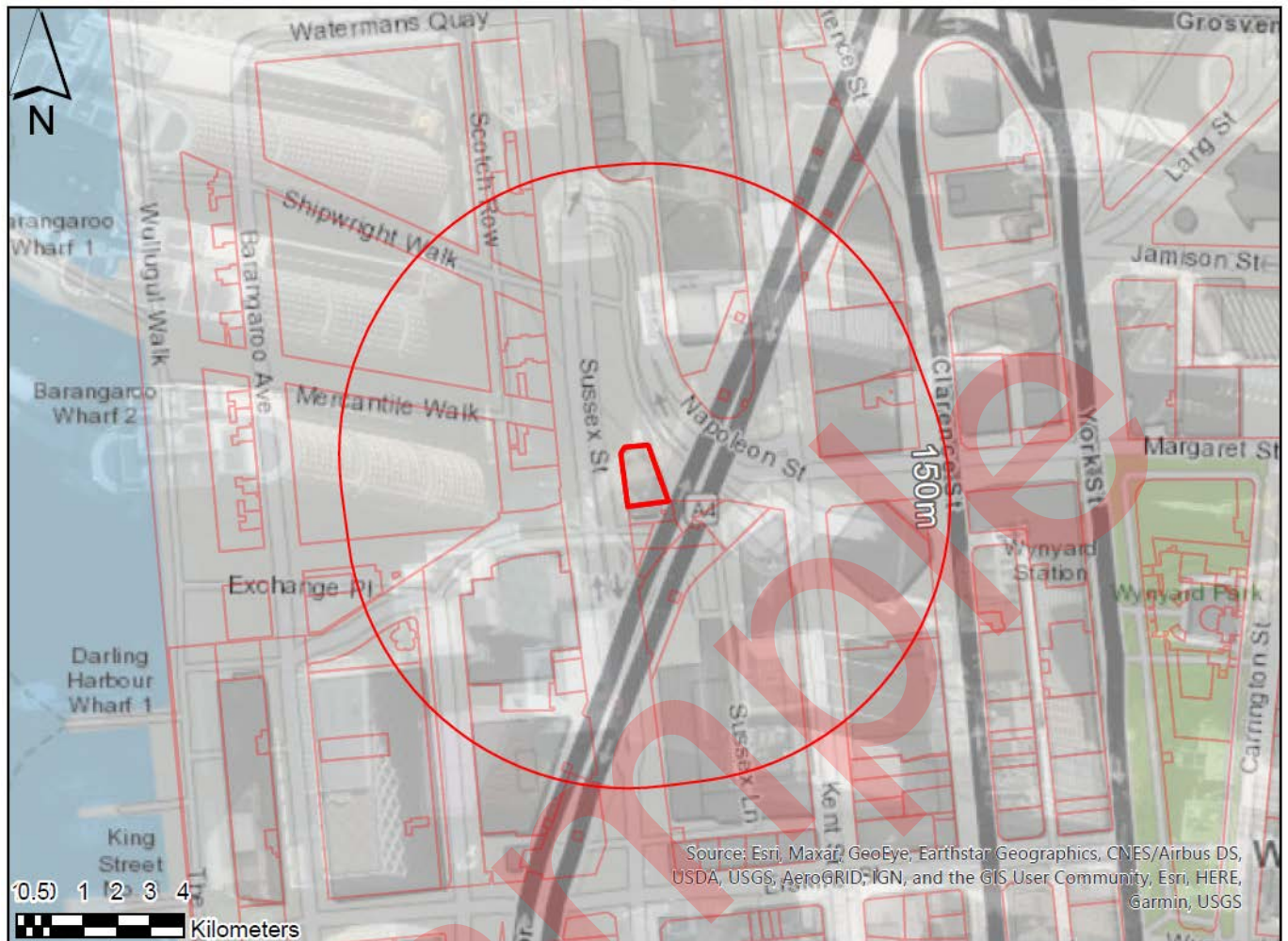


Figure 3.1 Site Location Plan

Regional Key Plan



Local Key Plan



Source / Licence Attribution



Source 1: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.
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Table 3.1 Property Details

Address:	20-24 Sussex St, Sydney, NSW 2000
Lot / Section / DP:	1/-/DP1033719
Local Govt Authority (LGA):	Council of the City of Sydney
Approximate Site Area:	575m ²
Land Zoning:	B8 - Metropolitan Centre: (pub. 14-12-2012)
Local Environmental Plan:	Sydney Local Environmental Plan 2012 (pub. 18-9-2015)
Max Building Height:	30 m
Heritage:	Former Big House Hotel Significance: State
Floor Space Ratio	7.5:1



4. Site imagery – Recent (2018)

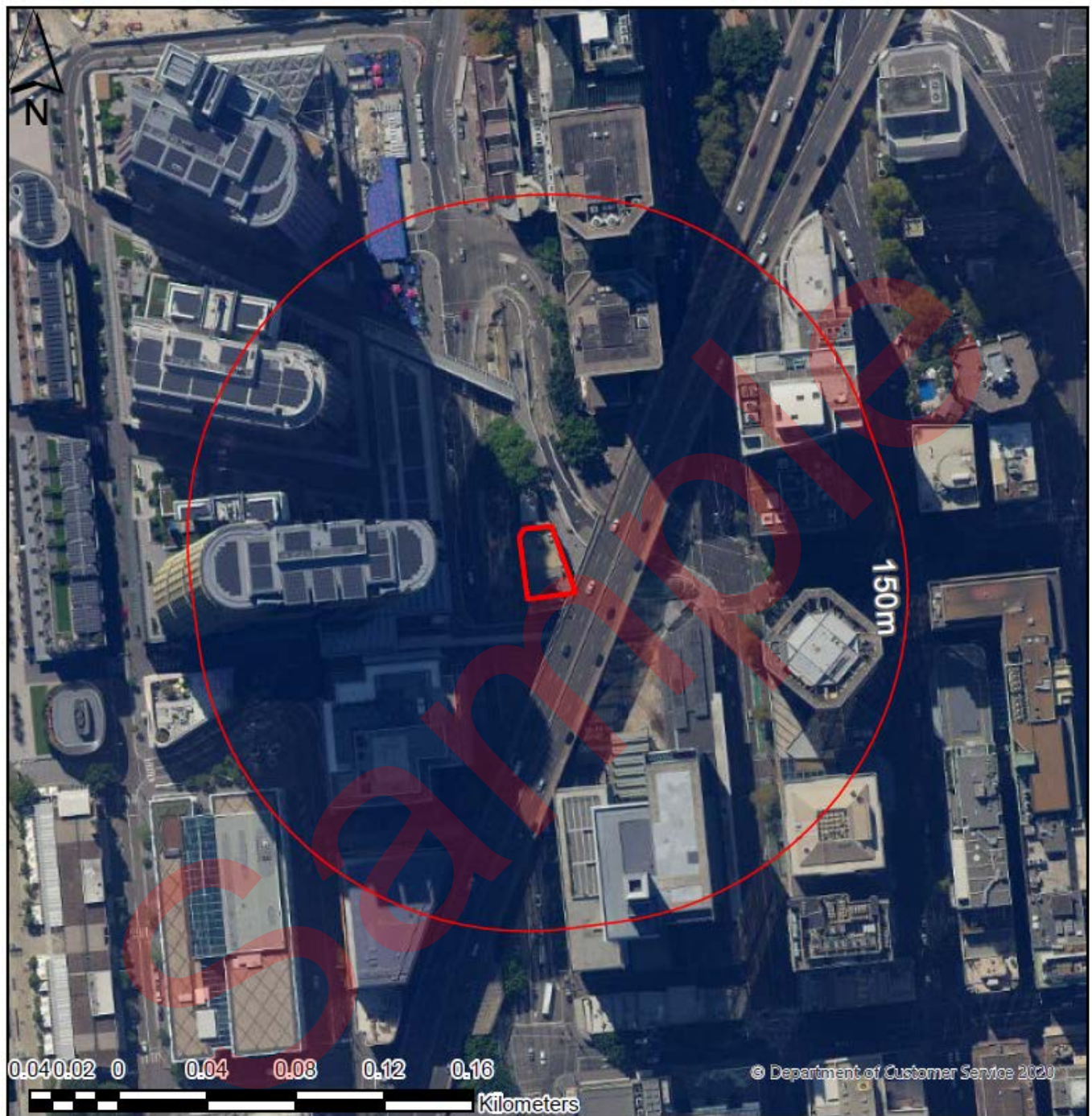


Figure 4.1: Recent Site Imagery

About this map

Recent satellite photography provides a record of site conditions and local land uses. Applications include topographic mapping, architecture, engineering, ecology, cultural heritage site characterisation and land use assessment.

Key Plan



Source / Licence / Attribution



Source 1: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.
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Source2: © State of New South Wales. For current information go to www.nsw.gov.au



5. Site imagery – Historical (1953)



Figure 5.1: Historical Site Imagery

About this map

Where historical aerial photographs are available, these can help identify topographic, geological and site features and how site conditions have changed over time. These can assist with site characterisation and identifying historic and/or evolving geo-environmental site constraints.

Key Plan



Source / Licence / Attribution



Source1: <https://six.nsw.gov.au/>
© Department Finance, Services & Innovation [2 January 2021]
Source2: © State of New South Wales. For current information go to www.nsw.gov.au.



6. Topography

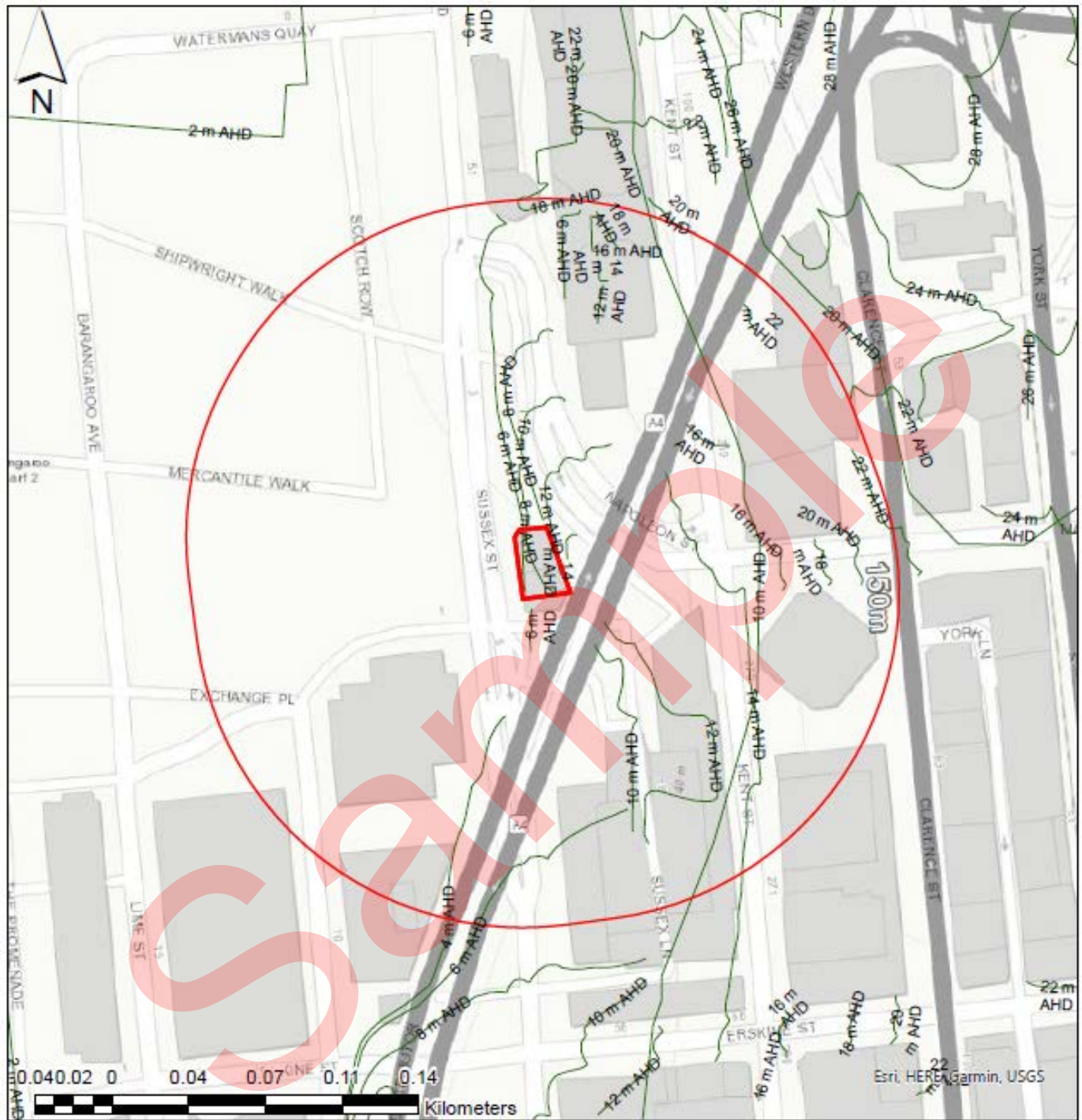


Figure 6.1 Site Topography

About this map

This map provides elevation contours, derived from a Digital Elevation Model (DEM). Further information about these map layers can be obtained from:

[Topographic Metadata](#)
[Cadastral Metadata](#)

Key Plan



Source / Licence / Attribution



Source 1: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aergrid, IGN, IGP, swisstopo, and the GIS User Community. © ESRI This work is licensed under the Esri Master License Agreement. Source 2: Topo/Cadastral, © Department Finance, Services and Innovation





7. Site Terrain

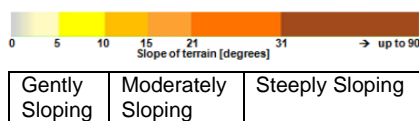


Figure 7.1 Site Terrain

About this map

This map provides a colorized representation of slope, overlaid with shading derived from a Digital Elevation Model (DEM). Site gradients indicate the potential for slope instability and is used by some Councils to screen for slope instability risk and to applying zoning restrictions to properties.

Terrain Legend



Source / Licence / Attribution



Source 1: NMA, Geodatastyrelsen, GSA, GSI and the GIS User Community.
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Source 2: Topo/Cadastre, © Department Finance, Services and Innovation



8. Geology

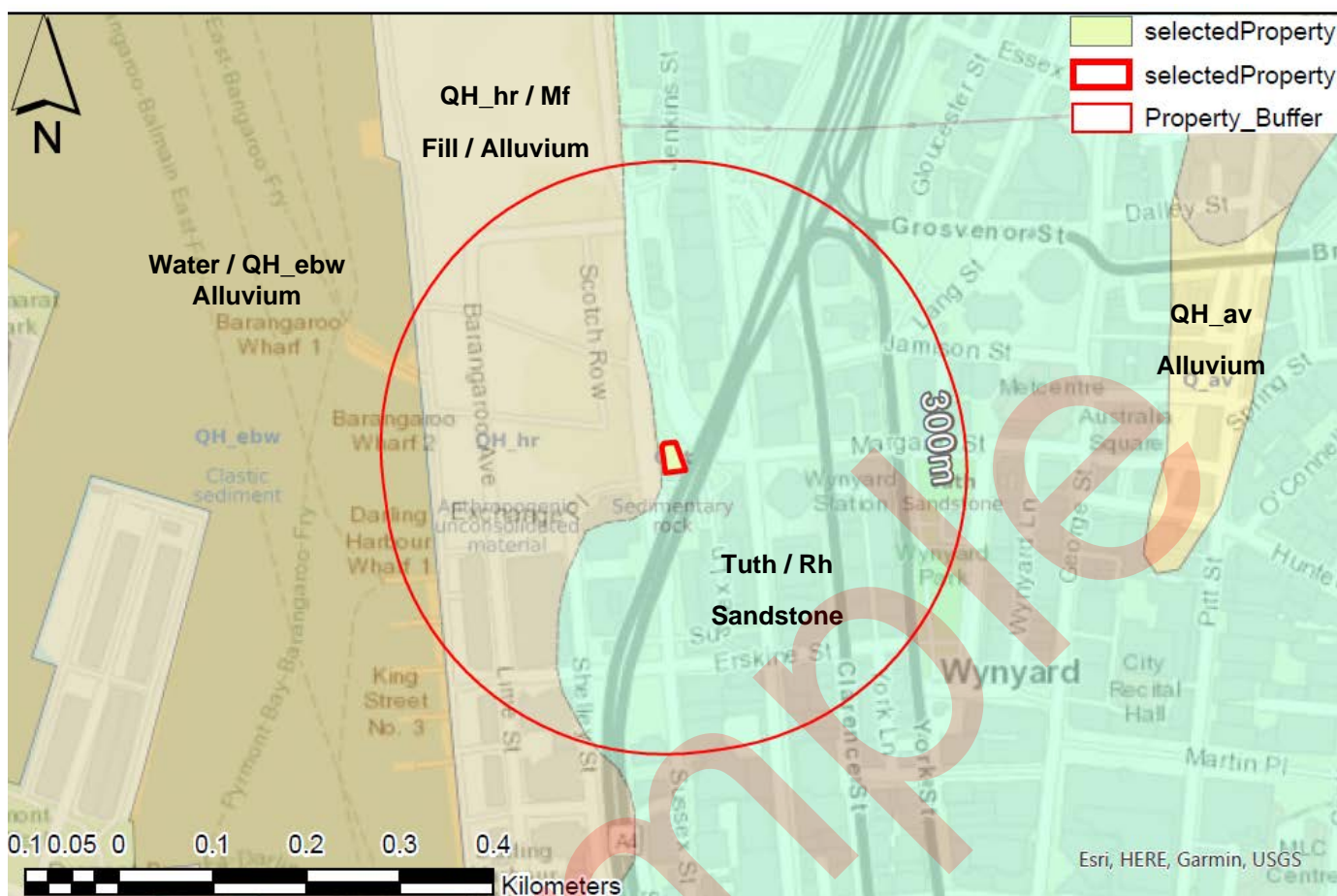


Figure 8.1: Geological Map

About this map

This map shows the distribution of surface geology as published by Geoscience Australia. It features natural soils, man-made fill areas and outcropping bedrock. This can be used to broadly characterise the expected materials occurring near ground surface.

Key Plan



Source / Licence / Attribution



Source 1: New South Wales Seamless Geology dataset, version 1.1 [Digital Dataset]. Geological Survey of New South Wales, NSW Department of Planning and Environment, Maitland Source2: © State of New South Wales and Department of Regional NSW 2020

Table 8.1 Geology Details

Legend*	Formation	Description
QH_hr / Mf	Man-made Fill	Man-made fill. Man-made reclaimed estuarine fill areas. Variable anthropogenic dredging / filling activities including placement of estuarine sand and mud, demolition rubble, industrial and/or household waste.
QH_ebw / Qht, Qha	Quaternary (Holocene) Alluvium	Estuarine basin and bay (subaqueous). Marine sand, silt, clay, shell, gravel. Suffix "w" denotes under water.
QH_av / Qha	Quaternary (Holocene) Alluvium	Undifferentiated alluvial valley deposits. Silt, clay, fluvial sand, gravel.
Tuth / Rh	Hawkesbury Sandstone	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses. Massively bedded with relatively thin and discontinuous residual soils.
Water	Water	Water

*-Abbreviations are provided for both the NSW Seamless Geology dataset (2019) / 1:100k hardcopy geology maps published by Geoscience Australia





9. Soil landscape

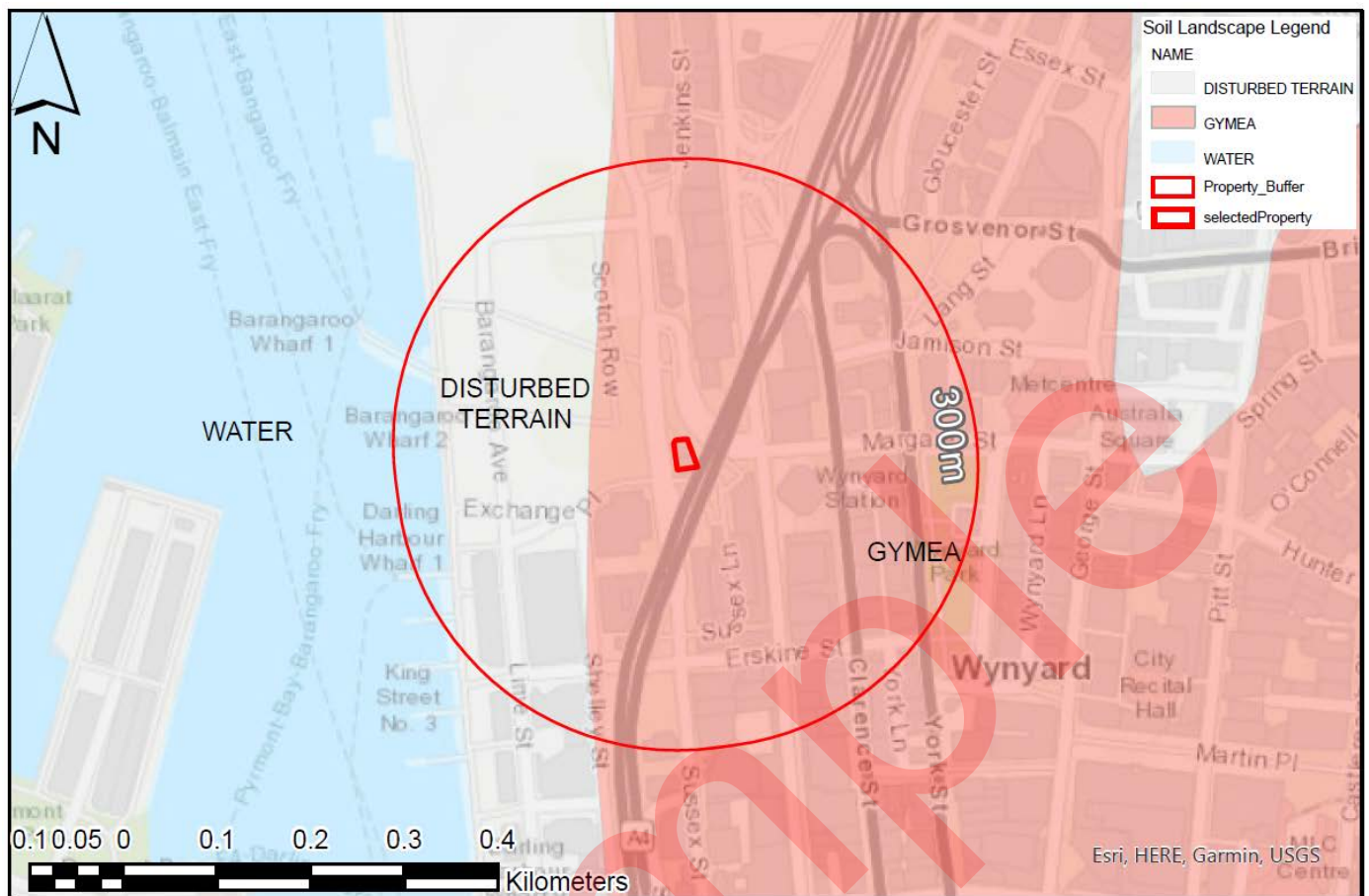


Figure 9.1: Soil Landscape Map

About this map

This soil landscape map provides an inventory of soil and landscape properties of the area and identifies major soil and landscape qualities and constraints. It integrates soil and topographic features into single units with relatively uniform land management requirements.

Key Plan



Source / Licence / Attribution



Source: Soil Landscapes mapping information from espade.environment.nsw.gov.au © State of NSW and Office of Environment and Heritage 2020

Table 9.1 Soil Landscape Details

Legend	Name / Process	Description
gy	GyMEA / Erosional	Shallow to moderately deep (30-100 cm) dark brown to yellow-orange loamy sand to sandy loam. Small sandstone and platy ironstone fragments, charcoal fragments and roots are common.
Fill	Man-made Fill / Disturbed Terrain	Disturbed fill and reclaimed areas commonly capped with variably compacted soil and rock fill materials of varying depth. May contain voids, obstructions, waste or contaminated materials.
Water	Water	Water



10. Landslip and mine subsidence

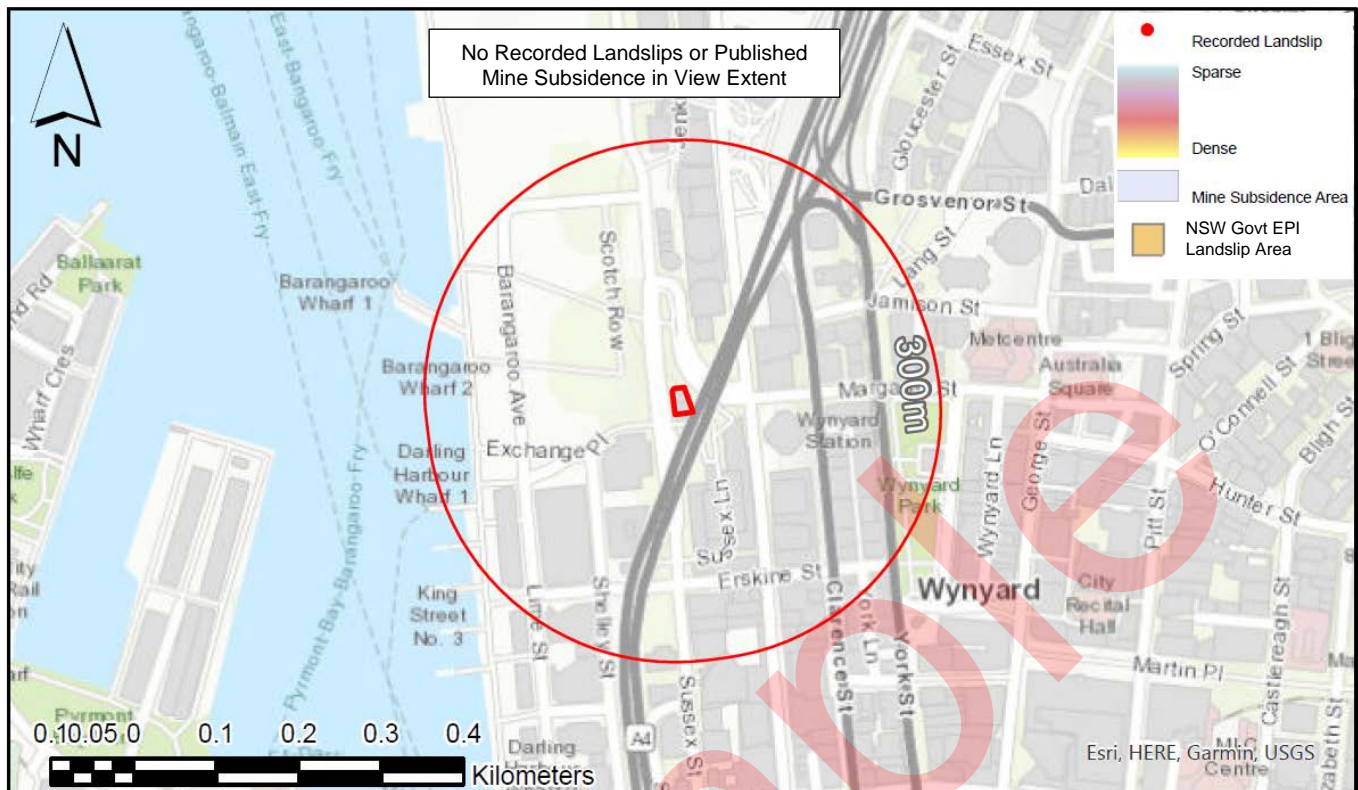


Figure 10.1: Landslip and mine subsidence map

About this map	Key Plan	Source / Licence / Attribution
<p>This map layer identifies land potentially affected by landslip and/or mine subsidence. It includes areas zoned as susceptible to these hazards by the relevant NSW planning authorities and also areas near recorded landslips as published by Geoscience Australia and relevant technical journals.</p>		<p>Source 1: https://www.planningportal.nsw.gov.au Source 2: https://sdi.nsw.gov.au/nswsdi © State Government of NSW and Department of Planning and Environment 2014. Others: See references below.</p>

Landslip mapping overview

Landslip hazard mapping in this report utilizes a range of information sources to characterize the potential susceptibility this type of geo-hazard. Information sources are described in more detail below:

- The landslip risk map layer published by Department of Planning and Environment NSW identifies land where development implications exist for areas prone to Landslide Risk as designated by the relevant NSW environmental planning instrument (EPI). The EPI contains provisions relating to landslide susceptibility conditions and identifies the how risks of development are managed. These are "Additional Local Provisions" that can be found in Part 6 of the EPI.
- A landslip heat-map generated using the Australian Landslide Database (2012) provided by Geoscience Australia which has more than 3,000 entries detailing landslides and sets of landslides since 1842 throughout Australia, Lord Howe Island, Norfolk Island and Macquarie Island. This heatmap has been filtered to exclude human-induced landslides and has been augmented with published landslide occurrences in the Pittwater local government area, published by Macgregor et al, Australian Geomechanics Vol 42 No 1 March 2007.

Mine subsidence mapping overview

A mine subsidence district is a land zoning tool administered by Subsidence Advisory (SA) NSW under the Coal Mine Subsidence Compensation Act 2017 to help protect homes and other structures from potential mine subsidence damage. Districts are proclaimed in areas where there are potential subsidence risks from underground coal mining that has occurred or may take place in the future. SA NSW regulates building and subdivision works within districts so that new homes and structures are built to an appropriate standard that reduces the risk of damage should subsidence occur. If you are planning to build or subdivide within a district, you need to obtain prior approval from SA NSW. Applications must be submitted and approved before you commence work. For more information, visit: <https://www.subsidenceadvisory.nsw.gov.au/development-guidelines>

Note: This information is indicative only; Users of this report must satisfy themselves as to the site-specific risks and suitability of the site for its intended use(s) by engaging professional advice regarding site conditions and site-specific risks.



11. Acid sulfate soils (ASS) and salinity

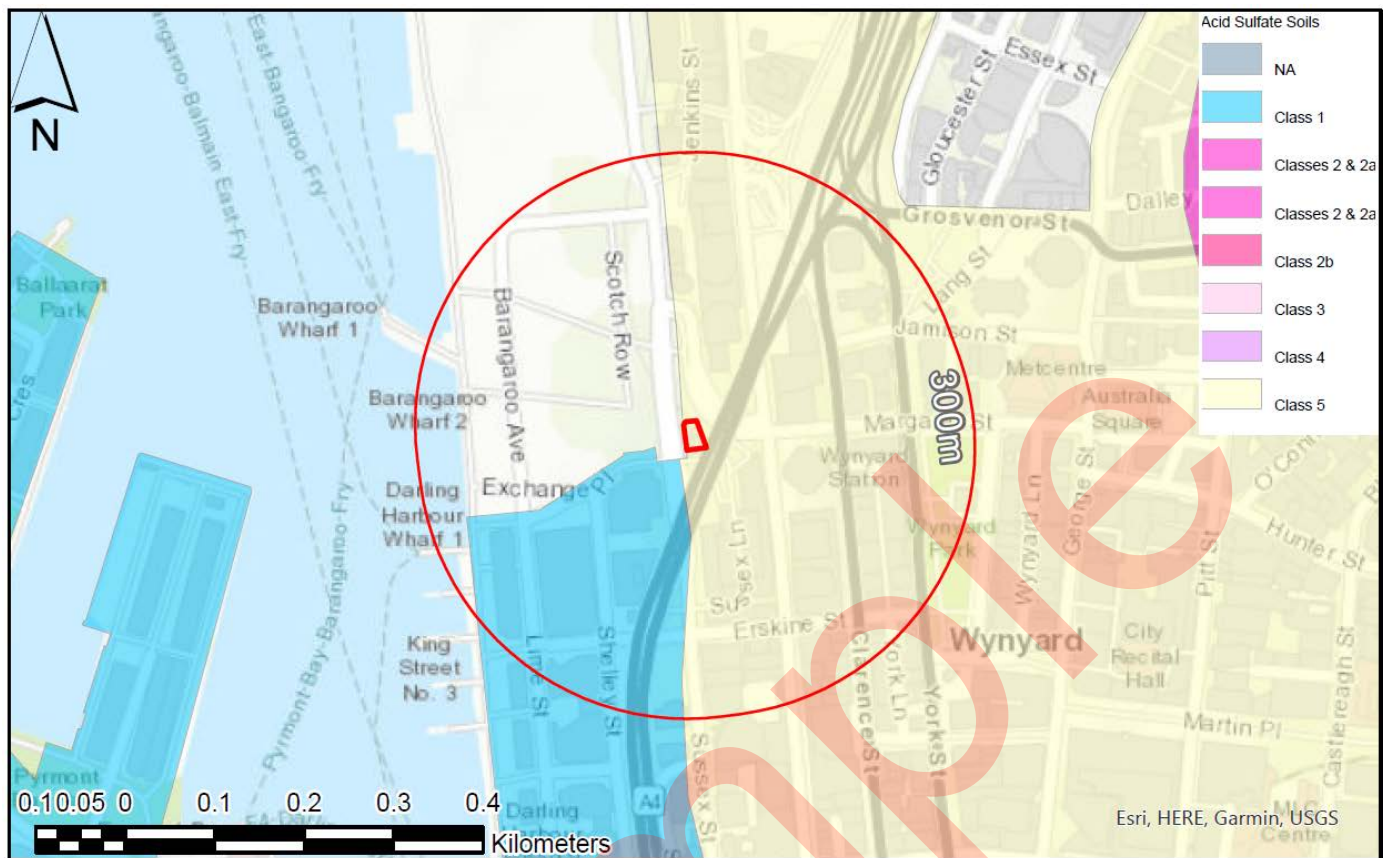


Figure 11.1: Acid Sulfate Soils and Salinity

About this map

Acid sulfate soils are natural sediments that contain iron sulfides. When disturbed or exposed to air (often by excavation or drainage) these soils can release acid, damaging built structures and harming animals and plants. Salinity is accumulation of salt in land and water to a level that damages the natural and built environment.

Key Plan



Source / Licence / Attribution



Source:1. ASS mapping © State Government of NSW and Department of Planning and Environment 1995
Source 2: Salinity mapping © State Government of NSW and Department of Planning and Environment 2017

Guidelines for managing ASS risk

This spatial dataset identifies areas of land showing the extent of acid sulfate soils. 5 different classes are shown based on the likelihood of the acid sulfate soils being present in particular areas and at certain depths.

- Class 1: Acid sulfate soils in a class 1 area are likely to be found on and below the natural ground surface.
- Class 2: Acid sulfate soils in a class 2 area are likely to be found below the natural ground surface.
- Class 3: Acid sulfate soils in a class 3 area are likely to be found beyond 1 metre below the natural ground surface.
- Class 4: Acid sulfate soils in a class 4 area are likely to be found beyond 2 metres below the natural ground surface.
- Class 5: Acid sulfate soils are not typically found in Class 5 areas but are within 500 metres of class 1,2,3 or 4 land.

The [NSW Acid Sulfate Soils Manual \(ASSMAC, 1998\)](#) outlines how to assess and manage the impacts of proposed works in areas likely to contain acid sulfate soils. The [EPA Waste Classification Guidelines \(2014\)](#) apply to acid sulfate soils that need to be transported and treated offsite.

Guidelines for managing Salinity risk

This spatial dataset shown above identifies land where development implications exist due to the presence of salinity as designated by a NSW environmental planning instrument. Salinity is the accumulation of salt in land and water to a level that damages the natural and built environment. Salinity usually occurs with other natural resource problems such as decreasing soil and water quality, erosion and loss of native vegetation. Further guidelines and advice on how to manage and mitigate the risk of adverse effects on development can be found at this link: <https://www.environment.nsw.gov.au/topics/land-and-soil/soil-degradation/salinity>



12. Existing investigations



Figure 12.1: Borehole Map

About this map

This map shows where geo-environmental investigation locations have been identified from database searches. Investigations typically comprise boreholes drilled for site investigation purposes and the data shown also includes other types of investigation data such as test pits and cone penetration test (CPT) data.

Key Plan



Source / Licence / Attribution



Source: 1. Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.
Source 2: <https://www.georeports.com.au/index.html>

Investigation database - overview

The above map shows both public investigation data from various sources, and unpublished data held in the GeoReports database. Investigation datapoints typically comprise boreholes, test pits and probes (mainly Cone Penetration Tests, CPTs). Reports may be factual or interpretive and / or contain additional investigation datapoints, laboratory test data or other types of intrusive or geophysical test data. At some locations contamination investigation and test data may also exist. A summary of available investigation datapoints and reports in the search extent is provided below with a more detailed breakdown on the following page. The quality of third-party investigation data can vary significantly in terms of its age (and associated logging standards), positional accuracy, sampling intensity, depth, institutional environment, dataset accuracy, coherence and interoperability. A quality score which takes into account these 5 considerations has been assigned to each item overleaf using the [GeoReports data quality framework](#) to assist users when assessing the reliability of this information. Conditions are likely to vary between known locations and can also vary with time due to post-investigation disturbance. The sub-surface conditions should be taken as indicative and representative only at investigation locations.

Table 12.1 Summary of records in search extent

Type	Map Search Extent	No. Records	Comment
Investigation locations – Downloadable	500m x 500m	4	Downloadable individually here or in Premium Report
Investigation locations - Private	500m x 500m	234	Contact us for insights / assistance
Reports - Downloadable	500m x 500m	8	Downloadable individually here or in Premium Report
Reports - Private	500m x 500m	33	Contact us for insights / assistance

Note: Multiple datapoints can exist at a single location; the tabulated number of records may exceed the number of points shown in the map.





13. Tabulated investigation data

Table 13.1: Downloadable Datapoints and Reports within 500m x 500m Search Extent

Name	Report Date	Data Owner	Data Publisher	Description	Excerpt	Data Type	Coordinates (Decimal Degrees)	Data Quality Score (1=Poor, 5=Good)*	Link to buy data
100050_1983_RDPT_OC_GEF_AUNSW_4_BH01	1983	NSW Govt	Geological Survey NSW	Factual and Interpretive geotechnical report including typed borehole logs from 4 cored boreholes, site photos and schematic section	Geotechnical investigation for redevelopment of old quarry site	BH	-33.863759 151.203513	2	LINK
100050_1983_RDPT_OC_GEF_AUNSW_4_BH02						BH	-33.863635 151.203639	2	LINK
100050_1983_RDPT_OC_GEF_AUNSW_4_BH03						BH	-33.863643 151.203332	2	LINK
100050_1983_RDPT_OC_GEF_AUNSW_4_BH04						BH	-33.863448 151.203577	2	LINK
100050_1983_RDPT_OC_GEF_AUNSW_4_RPT						RPT	-33.863621 151.203515	2	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0001152	1984	Geological Survey of NSW Department Planning, Industry and Environment	Public Works Department, Civil Engineering Division	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Site Inspection, Review existing documentation located at Engineering geology investigation of existing buildings adjacent to Grafton Wharf Sandstone Quarry, Sydney [Inc. Borehole Logs] - Civil Engineering Division - dec 1984 - [Report No. EG84007]	RPT	-33.863212 151.203471	3	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0001514	1996	Geological Survey of NSW Department Planning, Industry and Environment	NSW Department of Public Works and Services, Geotechnical Engineering Group,	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Drilling, Point load tests (PLTs), Soil Sample Analysis, Supplied material sample analysis located at Kent, Napoleon and Sussex Street and Sussex Lane (KENS) site, Sydney: yellowblock sandstone investigation - Geotechnical Engineering - April 1996 - [Report No. 96GA56A]	RPT	-33.865349 151.203996	3	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0001515	1996	Geological Survey of NSW Department Planning, Industry and Environment	NSW Department of Public Works and Services,	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Core sample analysis, Point load tests (PLTs), Drilling, Supplied material sample analysis located at Kent, Napoleon and Sussex Street and Sussex Lane (KENS) site, Sydney : yellowblock sandstone investigation, additional diamond drilling - - June 1996 - [Report No. 96GA56B]	RPT	-33.865349 151.203996	3	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0002768	1991	Geological Survey of NSW Department Planning, Industry and Environment	NSW Department of Public Works and Services,	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Drilling, Core sample analysis located at Sydney CBD investigations for sources of "yellowblock" sandstone - Geotechnical Centre - August 1991 - [Report No. 91082]	RPT	-33.8658 151.2037	3	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0002772	1996	Geological Survey of NSW Department Planning, Industry and Environment	NSW Department of Public Works and Services,	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Drilling, Plate Load Test (PLT), Core sample analysis located at Sydney Cove Authority : Cumberland Street sandstone investigation, The Rocks / John Young, - July 1996 - [Report No. 96GA88a]	RPT	-33.8623 151.2058	3	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0002734	1999	Geological Survey of NSW Department Planning, Industry and Environment	NSW Department of Public Works and Services,	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Drilling, Core sample analysis located at St. Patricks redevelopment : laboratory test results - Geotechnical Engineering - 24 November 1999 - [Report No. 99GE94A-S1]	RPT	-33.8631 151.206	3	LINK
100054_2019_RPT_OC_GEF_AUNSW_4_G T0002735	2000	Geological Survey of NSW Department Planning, Industry and Environment	NSW Department of Public Works and Services,	A collection of NSW geotechnical reports, Government Geotechnical Report Database Project (GGRD).	Drilling, Core sample analysis located at St. Patricks redevelopment site : laboratory test results (2nd lift quarry blocks) / John Young, - 26 October 2000 - [Report No. 00GF57A-S5]	RPT	-33.8631 151.206	3	LINK

Tables 13.1 & 13.2: Investigation database summary

Note: Maximum 20 locations included in breakdown. Please [contact GeoReports](#) for more information or advice relating to investigation data in this search extent.





14. Groundwater bores

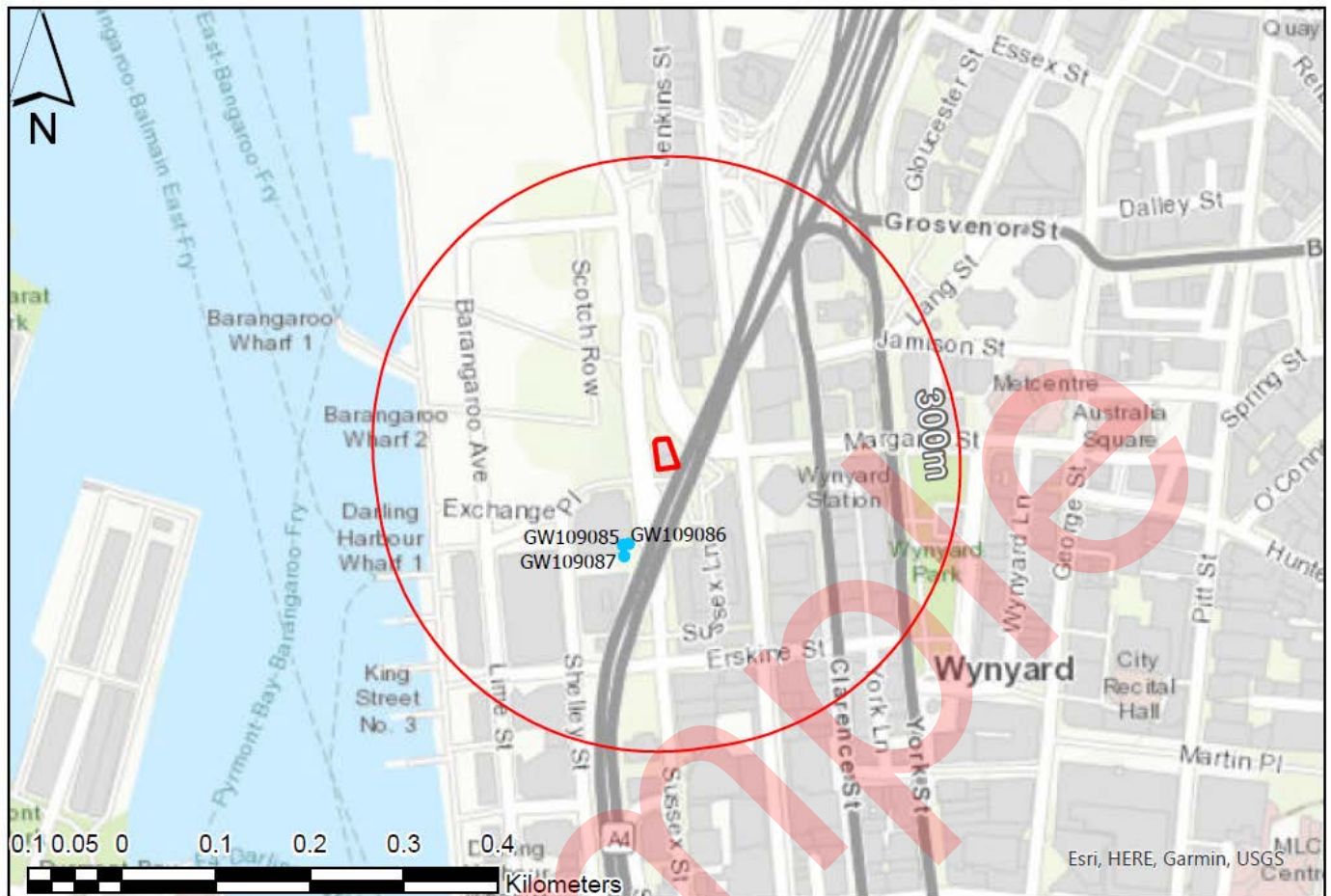


Figure 14.1: Groundwater Bores

About this map

This map shows where groundwater bores have been identified from a search of the DPI / Water NSW database covering the time period from 1900 to May 2016. Each datapoint shown on the map is associated with a bore construction record which can include ground conditions from a drillers log and basic information about groundwater levels and strikes.

Key Plan



Source / Licence / Attribution



Source 1:
<https://www.planningportal.nsw.gov.au>. © State Government of NSW and Department of Planning and Environment 2014.
Source 2: © State of New South Wales through WaterNSW

Groundwater bores - overview

This map shows the location of groundwater bores (also known as wells) within the search extent. Groundwater bores can be installed for a range of reasons including groundwater extraction, recharge or monitoring purposes. WaterNSW holds a database containing over 130,000 groundwater monitoring bore records which typically contain including information including drilling records, bore construction details (such well screening details), groundwater yield quantities and sometimes water quality data and descriptions of the soil and rock stratigraphy encountered during bore drilling.

A listing of groundwater bores identified with the search extent is provided on the following page. Summary reports for these groundwater bores can be downloaded individually [here](#) or as an inclusion in GeoReports [Premium Reports](#).

Table 14.1 Summary of records in search extent

Type	Map Search Extent	No. Well Records
Groundwater Bores	500m x 500m	3

Note: Multiple datapoints can exist at a single location; the tabulated number of records may exceed the number of points shown in the map.





15. Tabulated groundwater bore data

Table 15.1: Groundwater Wells within 500m x 500m Search Extent

Name	Well Installation Date	Well Depth (m)	Coordinates (Decimal Degrees)	Ground Elevation (m AHD)	Link to Well Report (Free)
GW109087	22-07-08	8.5	-33.865969 151.203028	13.2	LINK
GW109086	22-07-08	5.68	-33.865881 151.203008	13.2	LINK
GW109085	22-07-08	5.68	-33.865872 151.203064	13.2	LINK

Sample

Table 15.1: Groundwater Bore Summary

Note: Maximum 30 locations included in above breakdown. Please [contact GeoReports](#) for more information or advice relating to groundwater data in this search area.





16. Flooding

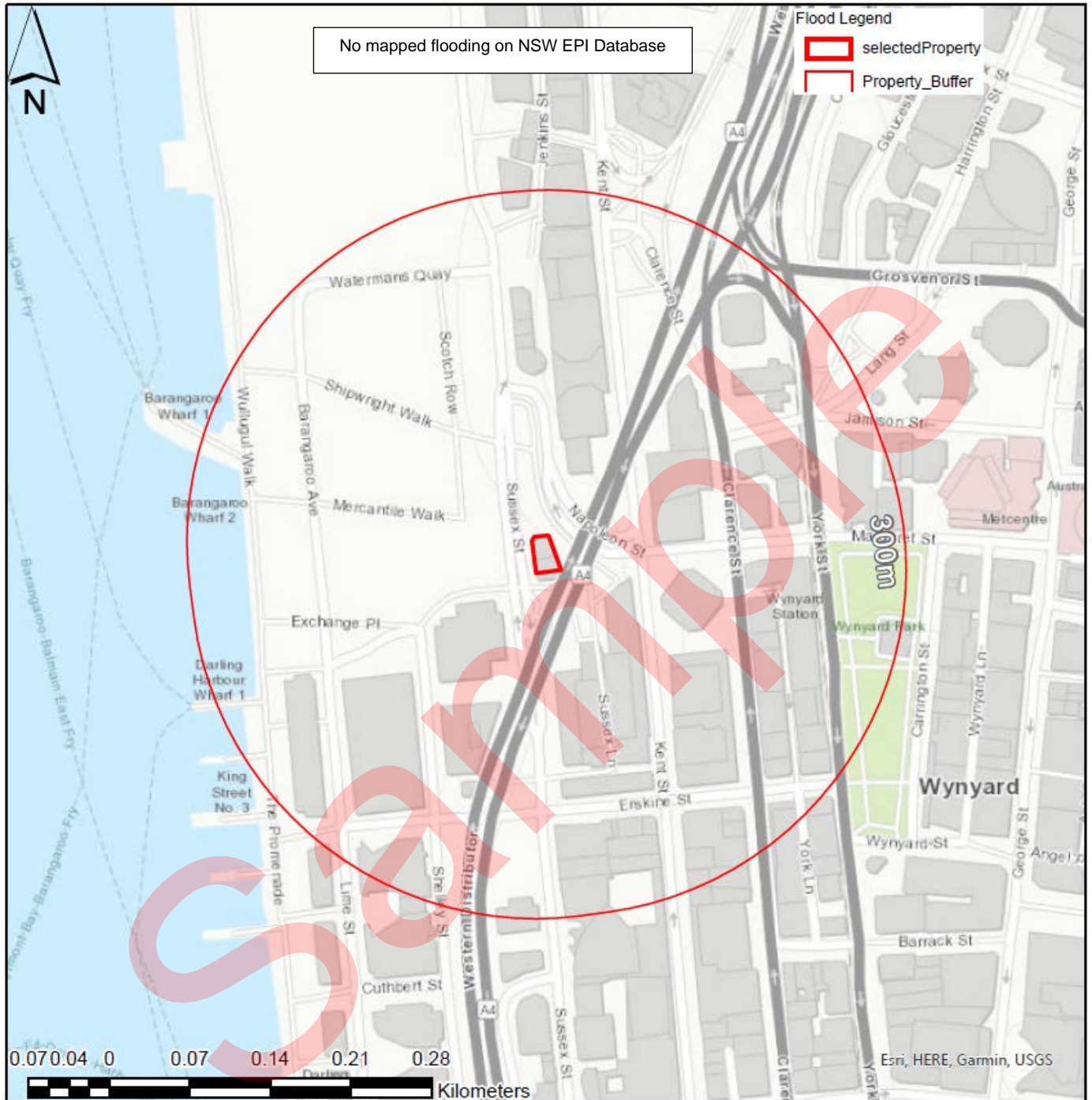


Figure 14.1: Flood Map

About this map

This map identifies land where there is a risk of flooding as designated by the relevant NSW environmental planning instrument (EPI). The specific EPI is described as 0.5m above the 100 year floodplain which covers an area less than, but sometimes more than the Probable Maximum Flood (PMF).

Key Plan



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Source: <https://www.planningportal.nsw.gov.au>. © State Government of NSW and Department of Planning and Environment 2014.



17. Contamination indicators - regional

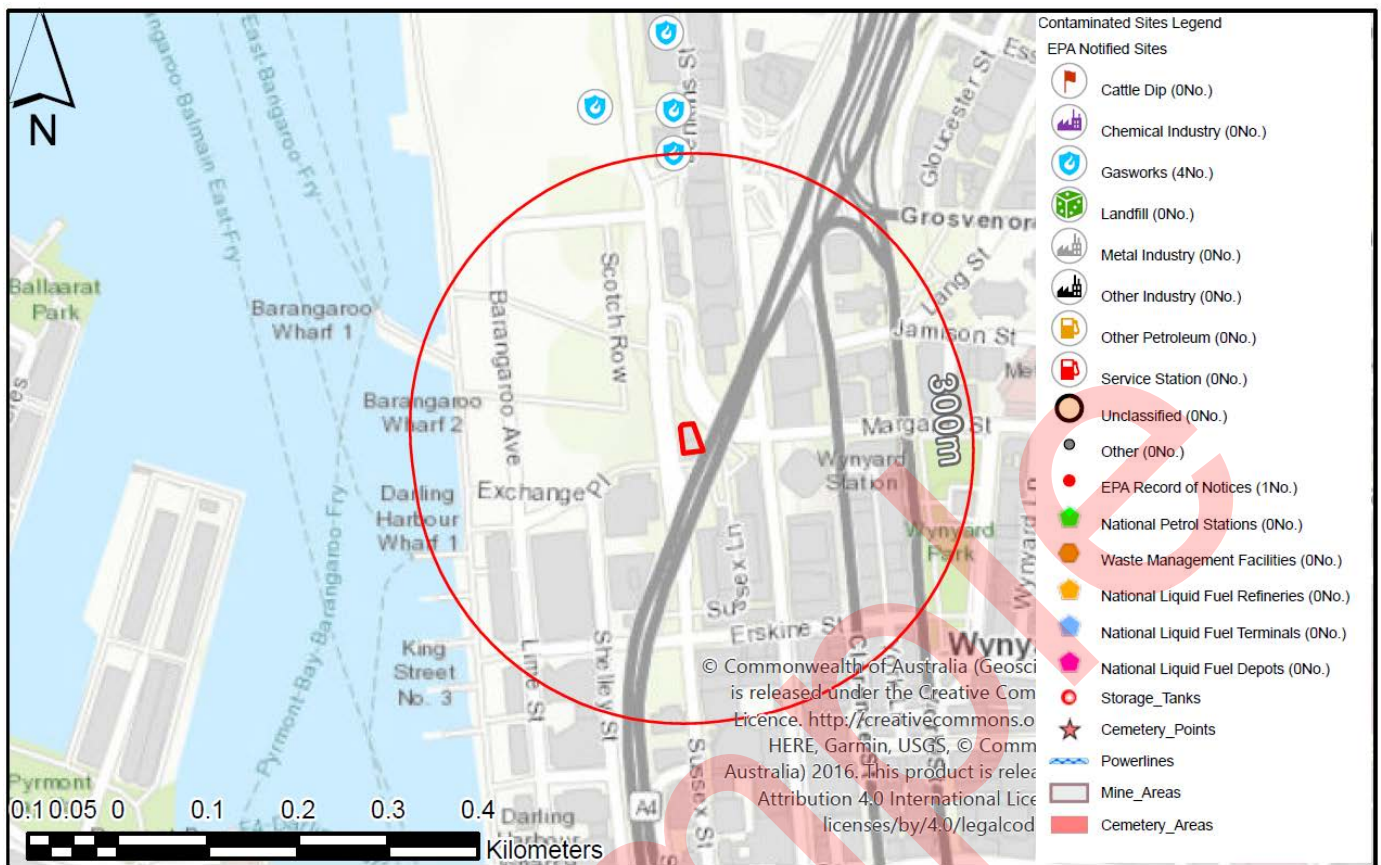


Figure 17.1: Contamination indicators – regional

About this map	Key Plan	Source / Licence / Attribution
<p>This map identifies locations of known current or historic contamination based on published NSW EPA data on potentially contaminating activities such as fuel depots, energy infrastructure, heavy industry, mining and cemeteries. It provides only an indication of potential contamination at any given site. Data is current as of 16 December 2019.</p>		<p>Source / Licence / Attribution</p> <p></p> <p>Source: 1. Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community Other Sources: See below / report</p>
<p>This map shows features and land uses associated with potentially contaminating activities. Sources include:</p> <ol style="list-style-type: none"> Contaminated land - EPA record of notices Contaminated land - List of NSW contaminated sites notified to EPA Geoscience Australia – database of liquid fuel facilities, Geoscience Australia – database of waste management facilities Geoscience Australia - database of naturally occurring asbestos Geoscience Australia - database of oil and gas pipelines Geoscience Australia – database of storage tanks, powerlines, mine areas, cemeteries <p>Further details about each map layer shown are provided below:</p> <p>1. Contaminated land - EPA record of notices</p> <p>The NSW EPA triggers assessment and remediation of significantly contaminated land by sending written notices to those responsible for cleaning up the contamination. The EPA makes these notices, which include preliminary investigation orders, available to the public through the record of notices. The record is updated as notices are issued. Notices will generally appear on the record within 2 weeks of being issued. Refer to the EPA website for further details of each site identified above.</p> <p>2. Contaminated land - List of NSW contaminated sites notified to EPA</p> <p>This database lists NSW contaminated sites notified to EPA which are records under section 58 of the Contaminated Land Management Act, 1997. A site will be on the Contaminated Land: Record of Notices only if the EPA has issued a regulatory notice in relation to the site under the <i>Contaminated Land Management Act 1997</i>. The sites appearing in the list of NSW contaminated sites notified to the EPA indicate that the notifiers consider that the sites are contaminated and warrant reporting to EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. For more about the NSW EPA record of notices, see here: https://apps.epa.nsw.gov.au/clm/aboutclmrecord.htm</p>		



18. Contamination indicators - local

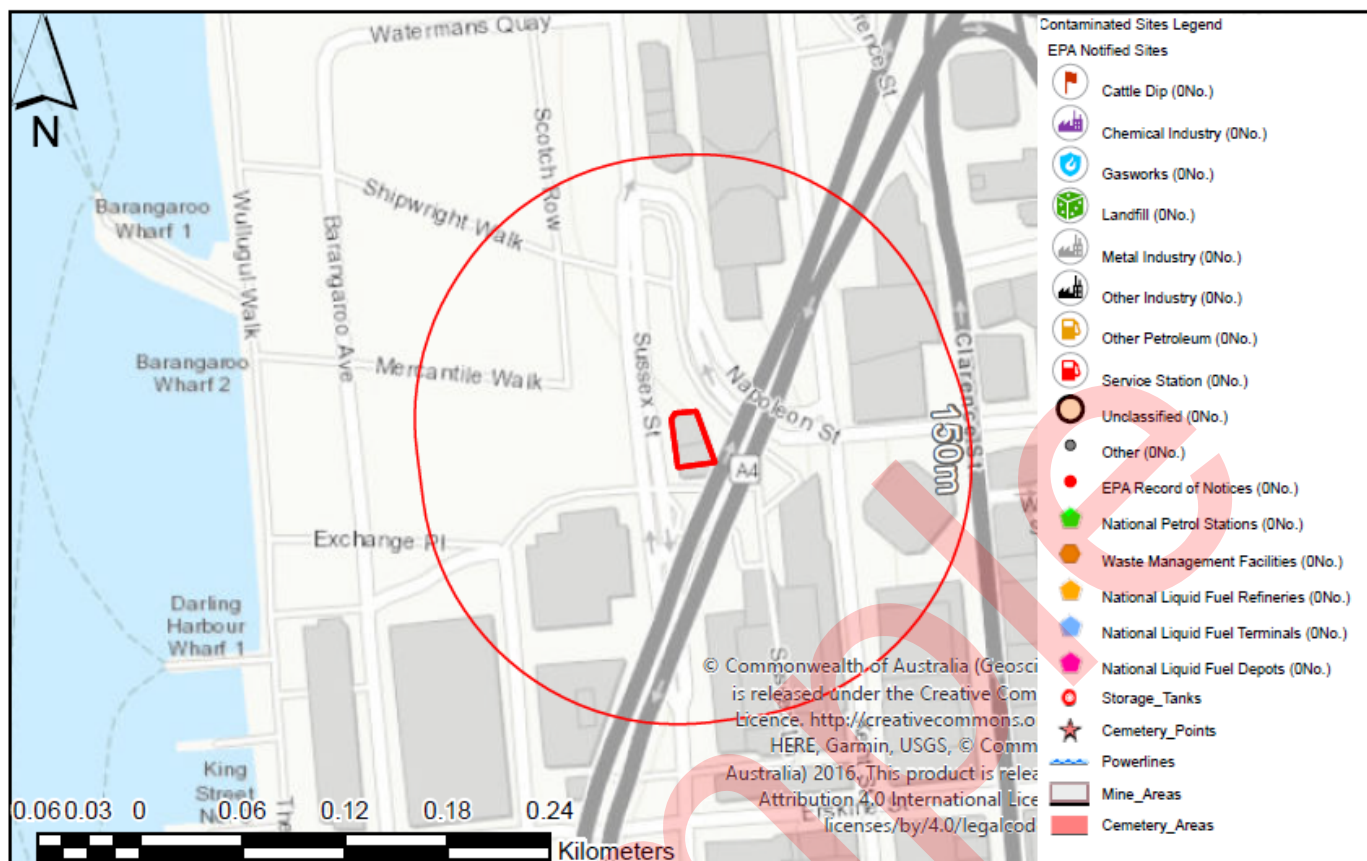


Figure 18.1: Contamination indicators – local

About this map

This map identifies locations of known current or historic contamination based on published NSW EPA data on potentially contaminating activities such as fuel depots, energy infrastructure, heavy industry, mining and cemeteries. It provides only an indication of potential contamination at any given site. Data is current as of 16 December 2019.

Key Plan



Source / Licence / Attribution



Source:1. Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Other Sources: See below / report

Contamination screening indicators - Continued from previous sheet

3. Geoscience Database of National Liquid Fuel Facilities - © Commonwealth of Australia (Geoscience Australia) 2016
This map layer provides access to the National Liquid Fuel Facilities Datasets, representing the spatial locations of all known liquid fuel depots, refineries, terminals and petrol stations located within Australia.

4. Database of Waste Management Facilities - © Commonwealth of Australia (Geoscience Australia) 2017
The Waste Management Facilities map layer presents the spatial locations of Australia's known landfills, waste transfer stations and a large number of waste reprocessing facilities. The data are a compilation of Australian, jurisdictional government, council and industry databases.

5. Database of naturally occurring asbestos - © NSW Department of Industry, 2019
This layer shows areas within NSW where naturally occurring asbestos has been found, or has the potential to be found within 10 metres of the surface. The areas are based on the existing 1:250,000 geological mapping with additional use of 1:25 000 lithological mapping in the Broken Hill area. The datasets also include point data information on sites where naturally occurring asbestos has been found, and petrographic information on asbestos and its host rocks.

6. Database of oil and gas pipelines © Commonwealth of Australia (Geoscience Australia) 2017
This layer shows an Oil and Gas Pipelines Database which contains known spatial locations of onshore and offshore pipelines or pipeline corridors used to transport natural gas, oil and other liquids within Australia's mainland and territorial waters.

7. Database of storage tanks, powerlines, mines, others © Commonwealth of Australia (Geoscience Australia) 2019
Selected features from a map layer including culture, habitation, industry and utility themes from the Geoscience Australia 250K Topographic Data. In this layer, Storage Tank means large vessels of a commercial or industrial nature, used for the storage of liquids (not water) or gases and usually associated with refineries, chemical and sewage treatment plants or rural properties.

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Attachment A1



Optional Property Reports
(Sewer, Land Titles, Lot Plans, Nearby DAs)

Sample



Sample