



# Preliminary Site Investigation Report

Project  
**Proposed Site Rezoning**  
**130 Killeaton Street, St Ives NSW**

Prepared for  
**X-Sealant**  
**c/o The Planning Hub**

Date  
**14/04/2021**

Report No  
**14772-ER-1-1**



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## Document Control

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Should additional information that may impact on the findings of this report be encountered or site conditions change, Alliance reserves the right to review and amend this report.

## Executive Summary

Alliance Geotechnical Pty Ltd (Alliance) was engaged by X-Sealant c/o The Planning Hub to undertake a Preliminary Site Investigation (PSI) at 130 Killeaton Street, St Ives, NSW (refer **Figure 1**, with the 'site' boundaries outlined in **Figure 2**).

At the commencement of the project, Alliance had the following project appreciation:

- The site is currently not owned by the client;
- The site is currently occupied and being used for residential purposes;
- The site is currently zoned as SP2 'Infrastructure – Educational Establishment' and is proposed to be rezoned as R4 'High Density Residential';
- The site is proposed for re-zoning to high density residential with preliminary plans for a proposed five storey apartment with two basement levels. In the context of land contamination, this is considered to be a land use scenario comprising:
  - Residential with minimal opportunities for soil access including dwellings with fully and permanently paved yard space such as high rise buildings and flats.
- The proposed land use scenario will include use of a reticulated potable water supply at the site;
- A PSI is required to assist the client in addressing Council comments made in 'pre-planning proposal application meeting report' (reference no. 2021/381101) for the proposed rezoning of land;
- The client does not require the report to be reviewed by a Certified Environmental Practitioner – Site Contamination Specialist (CEnvP-SC).

The objectives of this project were to:

- Assess the potential for land contamination to be present at the site as a result of current and previous land use activities;
- Assess whether identified potential land contamination would present an unacceptable human health or ecological exposure risk, based on the proposed land use scenario;
- Assess whether the site is suitable, in the context of land contamination, for the proposed land use scenario; and
- Provide recommendations for further investigations, and management or remediation of land contamination (if warranted).

The following scope of works was undertaken address the project objectives:

- A desktop review of site history;
- A site walkover to inform an understanding of current site conditions;
- Assessment of data and reporting.

The nominated scope of works was undertaken with reference to relevant sections of NEPC (2013), NSW EPA (2020b), and WA DOH (2009).

A number of areas of environmental concern (AEC) and contaminants of potential concern (COPC) associated with potential land contaminating activities undertaken at the site, have been identified as part of this project. The AEC, land contaminating activity and COPC are presented in the table below. The locations of the identified AEC are presented in **Figure 3**.

ID	AEC	Land Contaminating Activity (Source)	COPC
AEC01	Residential Dwelling Footprint	Uncontrolled filling, pesticide application, and future demolition works (~500m <sup>2</sup> and ~0.5m thick)	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, pesticides, polychlorinated biphenyl, metals, asbestos, anthropogenic materials
AEC02	Hardstand materials including driveway	Uncontrolled filling (~600m <sup>2</sup> and ~0.5m thick)	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, pesticides, polychlorinated biphenyl, metals, asbestos, anthropogenic materials
AEC03	Rear yard	Uncontrolled filling (~1,200m <sup>2</sup> and ~0.5m thick)	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, pesticides, polychlorinated biphenyl, metals, asbestos, anthropogenic materials

Based on the assessment undertaken by Alliance of site history information and site walkover observations, in the context of the proposed land use scenario and objectives of this project, Alliance has made the following conclusions:

- There is potential that previous activities at the site associated with the historically importation of fill material, demolition of structures, and pesticide application within building footprints may have resulted in contamination of land at the property.
- The site is currently zoned as SP2 'Infrastructure – Educational Establishment', and is used for residential / boarding house purposes, with accessible soils access present in areas surrounding the current site structures.
- The proposed land rezoning of the site to R4 'High Density Residential' land use, when compared to the current use of the site, is likely to result in reduced opportunities for soil access and end user exposure to contamination, due to the presence of multi-level residential structures with fully and permanently paved surrounding yard space.
- Based on the contamination risks that have been identified by this investigation, and with due regard of the intended land use associated with the proposed rezoning of the site, Alliance consider that any potential contamination at the site identified in this PSI is unlikely to preclude rezoning, and can be managed during development application (DA) stage for the proposed development.
- Specific assumptions that apply to the adopted land use scenario for this investigation, are presented in **Section 9** of this report.

Based on those conclusions, Alliance makes the following recommendations:

- A Stage 2 – Detailed Site Investigation (DSI) should be undertaken for development application (DA) purposes to characterise potential contamination and associated human health risks identified in this PSI;
- Given the potential land contamination identified at the site, the DSI should be completed post-demolition of structures to assist with providing access for the characterisation of potential land contamination identified by this PSI;
- The DSI should be undertaken by a suitably experienced environmental consultant.

This report must be read in conjunction with the **Important Information About This Report** statements at the front of this report.

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## TABLE OF CONTENTS

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Background.....	1
1.2	Objectives.....	1
1.3	Scope of Work .....	1
<b>2</b>	<b>Site Identification .....</b>	<b>3</b>
2.1	Site Details.....	3
2.2	Site Layout.....	3
<b>3</b>	<b>Site Environmental Setting.....</b>	<b>4</b>
3.1	Geology.....	4
3.2	Site Topography and Elevation .....	4
3.3	Acid Sulfate Soils.....	4
3.4	Hydrogeology and Hydrology .....	4
<b>4</b>	<b>Regulatory Records .....</b>	<b>6</b>
4.1	Contaminated Land Management Act 1997.....	6
4.2	Protection of the Environment Operations (POEO) Act 1997 .....	6
4.3	Work Health and Safety Regulation 2017 .....	6
4.4	Environmental Planning and Assessment (EP&A) Act 1979.....	7
<b>5</b>	<b>Site History .....</b>	<b>8</b>
5.1	Historical Land Titles .....	8
5.2	Aerial Photography .....	8
5.3	Meteorology .....	13
5.4	Incidents.....	14
5.5	Complaints.....	14
5.6	Anecdotal Evidence .....	14
5.7	Previous Contamination Assessments .....	14
<b>6</b>	<b>Site Walkover.....</b>	<b>15</b>
6.1	Current Land Use .....	15
6.2	Site Boundaries .....	16
6.3	Surfaces and Buildings .....	17
6.4	Infrastructure.....	18
6.5	Surface Water and Drainage .....	19
6.6	Hazardous Building Materials.....	19
6.7	Chemical Handling and Storage.....	20
6.8	Underground and Aboveground Storage Tanks.....	20
6.9	Septic Systems .....	20

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6.10	Waste.....	20
6.11	Fill Material.....	20
6.12	Staining and Odours.....	21
6.13	Phytotoxicity.....	21
6.14	Land Use on Adjacent Land.....	22
<b>7</b>	<b>Per and Poly-Fluoroalkyl Substances (PFAS) .....</b>	<b>23</b>
<b>8</b>	<b>Chemical Control Orders.....</b>	<b>24</b>
<b>9</b>	<b>Conceptual Site Model.....</b>	<b>25</b>
9.1	Preamble.....	25
9.2	Land Use.....	25
9.2.1	Adopted Land use Scenario.....	25
9.2.2	Assumptions for Adopted Land Use Scenario.....	25
9.3	Sources of Contamination.....	25
9.4	Receptors.....	26
9.4.1	Identified Receptors.....	26
9.4.2	Assumptions for Identified Receptors.....	26
9.5	Exposure Pathways.....	27
9.5.1	Human Health.....	27
9.5.2	Management Limits for Petroleum Hydrocarbons.....	28
9.5.3	Hazardous Ground Gases.....	29
9.5.4	Aesthetics.....	29
9.5.5	Terrestrial Ecosystems.....	31
9.5.6	Groundwater.....	32
9.6	Source, Pathway and Receptor Links.....	35
<b>10</b>	<b>Duty to Report Contamination .....</b>	<b>38</b>
<b>11</b>	<b>Conclusions and Recommendations .....</b>	<b>39</b>
<b>12</b>	<b>References.....</b>	<b>40</b>

## FIGURES

Figure 1	Site Locality Plan
Figure 2	Site Layout Plan
Figure 3	Areas of Environmental Concern

## APPENDICES

APPENDIX A	– Land Titles
APPENDIX B	– Groundwater Records
APPENDIX C	– Bureau of Meteorology Information
APPENDIX D	– NSW EPA Records
APPENDIX E	– Council Records

# 1 Introduction

## 1.1 Background

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- The Client does not require the report to be reviewed by a Certified Environmental Practitioner – Site Contamination Specialist (CEnvP-SC).

## 1.2 Objectives

The objectives of this project were to:

- Assess the potential for land contamination to be present at the site as a result of current and previous land use activities;
- Assess whether identified potential land contamination would present an unacceptable human health or ecological exposure risk, based on the proposed land use scenario;
- Assess whether the site is suitable, in the context of land contamination, for the proposed land use scenario; and
- Provide recommendations for further investigations, and management or remediation of land contamination (if warranted).

## 1.3 Scope of Work

The following scope of works was undertaken address the project objectives:

- A desktop review of site history;
- A site walkover to inform an understanding of current site conditions;
- Assessment of data and reporting.

The nominated scope of works was undertaken with reference to relevant sections of NEPC (2013), NSW EPA (2020b), and WA DOH (2009).

## 2 Site Identification

### 2.1 Site Details

Site identification details are presented in **Table 2.1**.

**Table 2.1 Site Identification Details**

Cadastral Identification	Lot 1 in DP748682
Geographic Coordinates (Google Earth)	33°43'40" S and 151°10'02" E
Site Area	Approximately 2,900m <sup>2</sup>
Local Government Authority	Ku-ring-gai Council
Current Zoning	P2 Infrastructure – Educational Establishment

### 2.2 Site Layout

The layout of the site is present in **Figure 2**. The layout plan also includes locations on site of:

- Site access points; and
- Current buildings / structures.

### 3 Site Environmental Setting

#### 3.1 Geology

The Department of Mineral Resources Geological Survey of NSW Sydney 1:100,000 Geological Series Sheet 9130 (Edition 1) 1983, indicated that the site is likely to be underlain by Bringelly Shale, comprising shale, carbonaceous claystone, laminite, fine to medium grained lithic sandstone, tuff, and rare coal.

#### 3.2 Site Topography and Elevation

A detail and level survey plan of the site indicated that:

- The topography of the site is generally flat with some minor south facing slopes; and
- The surface of the site was located at an elevation of approximately 159m Australian Height Datum (AHD) in the north east and 162m AHD in the south west.

#### 3.3 Acid Sulfate Soils

- N: no known occurrence

Further assessment of acid sulfate soils, in the context of this project is considered not warranted.

#### 3.4 Hydrogeology and Hydrology

A review of maps held on file by Alliance, indicated that surface water bodies located on or near the site included:

- Cowan Creek located approximately 1.65km to the west.

Based on the location of the identified surface water bodies and the site surface topography, the inferred groundwater flow direction at the site is considered likely to be towards the southwest.

Based on site surface topography and site elevation, the inferred surface water flow direction at the site is considered likely to be towards the southwest.

A search of <https://www.environment.nsw.gov.au/eSpade2WebApp> was undertaken by Alliance and information considered relevant and related to the hydrogeological landscape for the locality of the site is presented in **Table 3.4**.

**Table 3.4 Site Locality Hydrogeological Landscape**

Aquifer Types	Unconfined in fractured rock and through sandstone pores (dual porosity) Lateral flow through unconsolidated colluvial sediments on slopes Overland flow where bedrock is exposed
Hydraulic Conductivity	High Range: >10 m/day
Aquifer Transmissivity	Moderate to high

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	Range: 2→100 m <sup>2</sup> /day
Specific Yield	Moderate to high Range: 5→15%
Hydraulic Gradient	Moderate to steep Range: 10→30%
Groundwater Salinity	Fresh Range: <0.8 dS/m
Depth to Water Table	Deep Range: > 6m

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A search of <https://realtimedata.waternsw.com.au/water.stm> indicated that:

- There is one registered groundwater features located within a 500m radius of the site; and
- Authorised use of the monitoring well includes:
  - Domestic.

Information presented in records obtained for these registered groundwater monitoring wells, indicated that:

- Boreholes were drilled to a depth of 68.60m below ground level;
- The geology encountered during drilling (using rotary methods) included clay, shale, and sandstone.
- Depth to standing water level in those wells was approximately 51.5m.
- The domestic wells were located in an inferred upgradient location of the site.

A copy of the online search record is presented in **Appendix B**.

## 4 Regulatory Records

### 4.1 Contaminated Land Management Act 1997

A search of the NSW EPA online contaminated land record of notices indicated that the site (and land located immediately adjacent to the site) was not the subject of:

- Orders made under Part 3 of the Contaminated Land Management (CLM) Act 1997;
- Notices available to the public under section 58 of the CLM Act
- An approved voluntary management proposal under the CLM Act that has not been fully carried out and where NSW EPA approval has not been revoked;
- Site audit statements provided to the NSW EPA under section 53B of the CLM Act that relate to significantly contaminated land;
- Where practicable, copies of anything formerly required to be part of the public record; or
- Actions taken by NSW EPA (or the previous State Pollution Control Commission) under section 35 or 36<sup>1</sup> of the Environmentally Hazardous Chemicals Act 1985.

A copy of the search record is presented in **Appendix D**.

A search of the NSW EPA online list of NSW contaminated sites notified to NSW EPA indicated that the site (and land located immediately adjacent to the site) was not on the list. A copy of a relevant extract of the search record is presented in **Appendix D**.

### 4.2 Protection of the Environment Operations (POEO) Act 1997

A search of the NSW EPA online POEO public register indicated that the site (and land located immediately adjacent to the site) was not the subject of a licence, application, notice, audit, pollution study or reduction program.

A copy of the search record is presented in **Appendix D**.

### 4.3 Work Health and Safety Regulation 2017

A SafeWork NSW Schedule 11 hazardous chemicals (dangerous goods)<sup>2</sup> search for the site was not undertaken.

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<sup>1</sup> Sections 35 and 36 of the Environmentally Hazardous Chemicals Act 1985 have been repealed. Notices under these sections are treated by the CLM Act as management orders.

<sup>2</sup> Under the Work Health and Safety Regulation

The review of historical aerial photography and historical land title ownership records undertaken by Alliance (refer **Section 5.1** and **5.2** of this report), did not suggest a potential for licensable quantities of Schedule 11 hazardous chemicals (dangerous goods) to have been stored on the site.

Alliance considers that further assessment of the storage of licensable quantities of Schedule 11 hazardous chemicals (dangerous goods), within the context and objectives of this project, is considered not warranted.

#### **4.4 Environmental Planning and Assessment (EP&A) Act 1979**

A copy of the planning certificate issued under section 10.7 (2) & (5) of the EP&A Act was obtained, and indicated that within the meaning of the CLM Act, the site was not:

- Significantly contaminated land;
- Subject to a management order;
- The subject of an approved voluntary management proposal;
- Subject to an ongoing maintenance order; or
- The subject of a site audit statement.

The planning certificate for the site provided reference to the NSW Loose-Fill Asbestos Register, which identifies locations where loose-fill asbestos has been identified and reported. A search of the register indicated that the site was not listed on the register.

A copy of the the site planning certificate and register search is presented in **Appendix E**.

## 5 Site History

### 5.1 Historical Land Titles

Alliance undertook a review of a selection of historical land title ownership records of the site. Information obtained during that review indicated that registered proprietors of the site since 1878, have included:

- Private individuals (a stonemason) between 1878 and 1935;
- Trustees for the 'Trustees of the Passionist Fathers' between 1935 and 1987;
- Trustees of the Roman Catholic Church for the Diocese of Broken Bay between 1987 and 2021; and
- AHG Homebush Pty Ltd (a proprietor) from 2021 to date.

There were no leases or easements reported for the site.

Further assessment of these land contaminating activities, in the context of other historical evidence reviewed during this project, and observations made during the site walkover (refer **Section 6** of this report), is considered warranted.

A copy of the historical land title search record is presented in **Appendix A**.

### 5.2 Aerial Photography

Alliance undertook a desktop review of a selection of readily available historical aerial photographs of the site. Copies of each of the aerial photographs reviewed, including a demarcation of the indicative site boundary, are presented below.

Image 5.2.2 Aerial Photograph - 1943

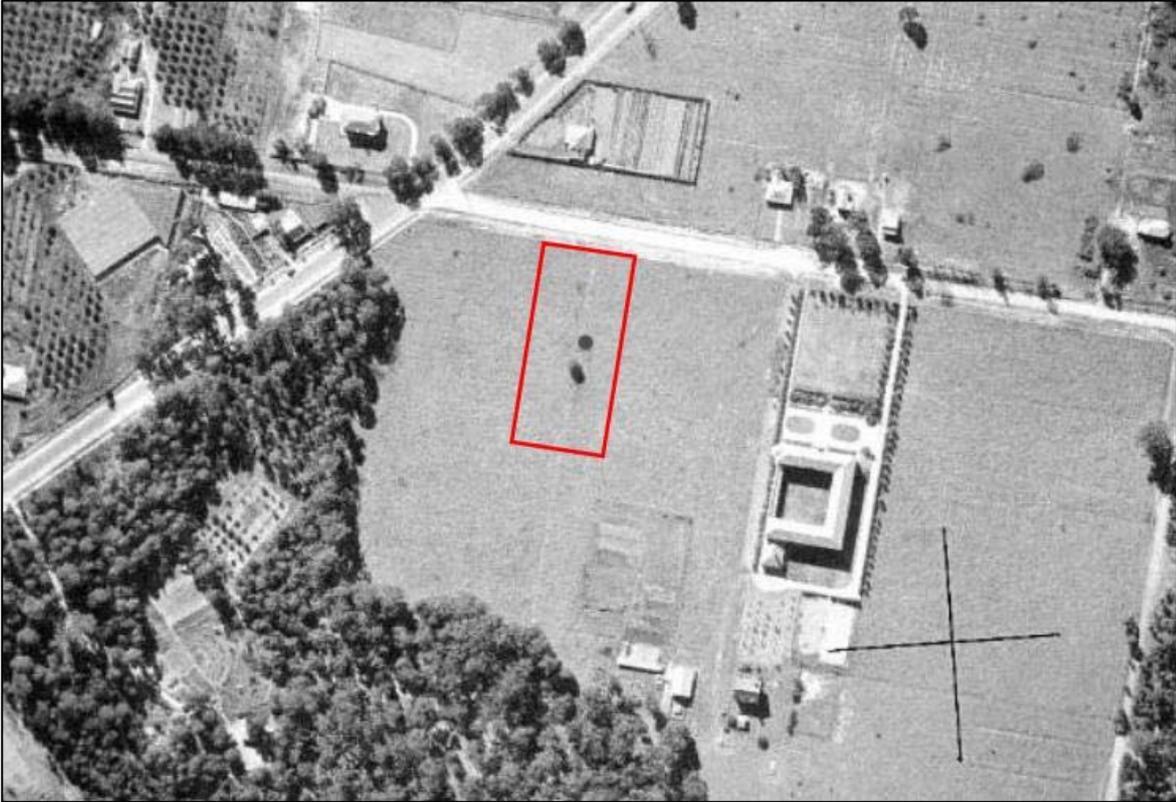


Image 5.2.3 Aerial Photograph - 1970



Image 5.2.4 Aerial Photograph - 1982



Image 5.2.5 Aerial Photograph - 1991



Image 5.2.6 Aerial Photograph - 2005



Image 5.2.7 Aerial Photograph - 2014



Image 5.2.8 Aerial Photograph - 2022



The findings of the historical aerial photography review are presented in **Table 5.2**.

Table 5.2 Historical Aerial Photography Review

Photograph Date	Observations of Site	Observations of Surrounding Land
1943	Structures are not present and the site appears to be a paddock.	Rural residential land use to the north and west, with paddocks surrounding, and commercial style structure to the east, potential school, or aged care facility.
1970	No significant change since previous image.	Low density residential land use to the north and west.
1982	No significant change since previous image.	Increase in low density residential land use to the north and south-west.
1991	A residential dwelling is present in the centre of the site, with scattered trees cover present in remains areas of the site. A driveway has appeared to the north of the dwelling, as well as some planting of trees in the southern portion.	Commercial structures have appeared to the south-east.
2005	No significant change since previous image.	A commercial structure to the east of the site has been demolished.
2014	No significant change since previous image.	A large commercial precinct has been constructed to the immediate east of the site.
2021	No significant change since previous image.	Low density residential dwellings have been demolished to the west of the site, and have been replaced by a multi-storey residential structure.

The review of historical aerial photography indicated a potential for land contaminating activities to have been undertaken on the site, specifically uncontrolled filling between 1982 and 1991.

Further assessment of these identified potential land contaminating activities, is considered warranted.

### 5.3 Meteorology

The Bureau of Meteorology website (<http://www.bom.gov.au/climate/data/index.shtml?bookmark=200>) was accessed and a search conducted for climatic information measured by the nearest bureau station to the site. A summary of data obtained from that search is presented in **Table 5.3**.

Table 5.3 Local Meteorology Data Summary

Weather Station Location and Identifier	Mean Annual Temperature (°C)		Mean Annual Rainfall (mm)
	Maximum	Minimum	
Macquarie Park - 066156	22.8	11.2	1125.5

A copy of the meteorology search record is presented in **Appendix C**.

#### **5.4 Incidents**

There was no evidence provided to Alliance regarding incidents at the site.

#### **5.5 Complaints**

There was no evidence provided to Alliance regarding complaints about the site.

#### **5.6 Anecdotal Evidence**

There was no anecdotal evidence regarding the site, provided to Alliance.

#### **5.7 Previous Contamination Assessments**

Alliance was not provided with copies of any previous contamination assessments.

## 6 Site Walkover

A site walkover was undertaken by a suitably experienced Alliance environmental consultant (Jacob Walker), on 10 March 2022. During the walkover, Alliance made observations of the general condition of the site, land use activities being undertaken on the site, as well as land use activities on the land located immediately adjacent to the site. Information on these observations is presented in **Section 6.1** to **Section 6.14**.

### 6.1 Current Land Use

The land use scenario at the time of the walkover appeared to be low-density residential, comprising a dwelling in the centre of the site, surrounded by trees.

Image 6.1.1 View of dwelling in centre of site



Image 6.1.2 View of yard to the rear



## 6.2 Site Boundaries

The western, eastern and southern site boundaries were fenced, with the exception of a walkway through to Mona Vale Road on the western boundary. The northern boundary was not fenced.

Image 6.2.1 View of frontage, facing south



### 6.3 Surfaces and Buildings

The following site surfaces were observed during the walkover:

- The central northern portion of the site was covered by a concrete pavement driveway, that was in fair condition, with some cracking observed.
- The curtilage of the site on the western, eastern and southern boundaries was unsealed and vegetated with grass and established large trees.

The following buildings were observed during the walkover:

- A two-storey brick and terracotta tile roofed dwelling, with an attached double garage in the central portion of the site;

Image 6.3.1 View of concrete driveway



## 6.4 Infrastructure

The following infrastructure was observed during the walkover:

- Concrete entry / exit driveway adjacent to the northern boundary, with a surface water strip drains at the entrance, draining to a concrete lined pit in the north western corner of the site;

Image 6.4.1 View of the drainage pit



## 6.5 Surface Water and Drainage

No surface water bodies were observed on site.

Based on observations made during the walkover, site drainage mechanisms are likely to include:

- Infiltration into site soils, where soil permeability allows it;
- Overland surface flow following site topography, towards subsurface drainage pipes or existing overland flow pathways; and
- Inflow to downpipes attached to building roofs and gutters, into subsurface drainage pipes.

## 6.6 Hazardous Building Materials

There was no visual evidence observed during the walkover of potential asbestos containing materials on the surface of the site.

A hazardous building materials survey was not within the scope of this project.

## 6.7 Chemical Handling and Storage

There was no visual evidence of handling and storage of chemicals at the site.

## 6.8 Underground and Aboveground Storage Tanks

There was no visual evidence observed during the walkover of aboveground storage tanks (AST) or underground storage tanks (UST).

## 6.9 Septic Systems

There was no visual evidence observed of septic systems on the site.

## 6.10 Waste

There was no visual evidence observed during the walkover to indicate the storage of wastes on the site.

## 6.11 Fill Material

There was no visual evidence observed to suggest widespread or significant filling observed at the site, with the exception of the rear yard, which appeared to undulate in and around the trees, where is likely that fill material exists.

Image 6.11.1 View of undulating rear yard



## 6.12 Staining and Odours

There was no olfactory evidence detected of significant or widespread odours at the site. There was no visual evidence noted of significant or widespread staining at the site.

## 6.13 Phytotoxicity

There was no visual evidence observed to suggest widespread or significant phytotoxic impact in the form of plant stress and/or dieback in vegetation present on the site. Similar observations were made of vegetation on land immediately beyond the site boundaries.

Image 6.13.1 View of tree coverage across the majority of the site



## 6.14 Land Use on Adjacent Land

Observations made from the site boundary, indicated land use activities on adjacent land were comprised of the following:

- North – Killeaton Road, with low density residential beyond;
- East – high density residential;
- West – high density residential and school oval; and
- South – Catholic Primary School.

Image 6.14.1 View of adjacent high density residential land use to the east



## 7 Per and Poly-Fluoroalkyl Substances (PFAS)

Per and Poly-Fluoroalkyl Substances (PFAS) are a group of chemicals that are manufactured for their unique properties. There are numerous PFASs that may be present in the environment. Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are two major PFASs, that were originally found as components in products used to provide stain resistance or as firefighting foams. Some PFASs have been recognised as highly persistent, potentially bio-accumulative and toxic, and have been detected in the environment, wildlife, people and food. When considering potential for PFAS to be present on a site, Section 6 of HEPA (2020) advises that consideration should be given to identifying the presence of:

- Major primary sources of PFAS, including major commercial, industrial and government facilities, infrastructure and activities that historically or currently use or store PFAS containing products, nothing that all PFAS formulations should be considered, such as surfactants used in chrome plating or firefighting, hydraulic fluids and lubricants, and wastes and liquid wastes;
- Other primary sources where PFAS is or has been used, such as firefighting training facilities, foam deluge system installations, metal plating works, car washes, and electricity generation and distribution facilities;
- Secondary sources where diffuse PFAS inputs are or have been received, such as landfills, wastewater treatment facilities, liquid waste treatment facilities, and bio-solids stockpiles.

Along with the guidance in Section 6 of HEPA (2020), Alliance has also adapted the PFAS decision matrix presented in EnRisk (2016), to facilitate a preliminary screening of the potential for PFAS to be present on site. That screening process is presented in **Table 7**.

**Table 7 PFAS Screening Process**

<b>Preliminary PFAS Screening Questions</b>	<b>Evidence</b>
Is there evidence of major commercial, industrial and government facilities, infrastructure and activities that historically or currently use or store PFAS containing products?	No
Is there evidence of fuel <sup>3</sup> fires on the site?	No
Is there evidence of foam deluge systems, metal plating works, car washes, or electricity generation / distribution on the site?	No
Is there evidence of landfill, wastewater treatment, liquid waste treatment, bio-solid stockpiles or paper mill wastes on site?	No
Is there evidence of fire training occurring at the site?	No
Is there evidence of fire training occurring up gradient or adjacent to the site?	No
Is there evidence of the presence of an airport or fire station, up-gradient of, or adjacent to, the site?	No

Based on the results of the preliminary PFAS screening questions above, further assessment of PFAS related land contamination risks at the site, is considered not warranted.

<sup>3</sup> Fuels could include solvents, petrol, diesel and kerosene

## 8 Chemical Control Orders

Chemical control orders (CCO) are created under Part 3, Division 5 of the Environmentally Hazardous Chemicals Act 1985, and are used to selectively and specifically control particular chemicals, or chemical wastes, to limit their potential or actual impact on the environment. Alliance has adopted the matrix presented in **Table 8** (which is based on the NSW EPA CCO available at the time of this project), to facilitate a preliminary screening of the potential for those control order chemicals to be present on site.

**Table 8 Chemical Control Order Preliminary Screening**

Preliminary CCO Screening Questions	Assessment
Were aluminium smelter wastes used or stored on site? <sup>4</sup>	No
Were dioxin contaminated wastes generated or stored on site? <sup>5</sup>	No
Were organotin wastes generated or stored on site? <sup>6</sup>	No
Were polychlorinated biphenyls (PCB) used or stored on site? <sup>7</sup>	No
Were scheduled chemicals <sup>8</sup> used, or wastes stored, on site? <sup>9</sup>	Yes

Observations made during the site walkover, identified the following potential sources of CCO related chemicals for the site:

- Historical use of pesticides within the dwelling footprint and crawlspace (application of organochlorine pesticides);

Based on the results of the preliminary CCO screening questions above, further assessment of CCO related land contamination risks at the site is warranted.

<sup>4</sup> SPCC 1986, 'Chemical Control Order In Relation to Aluminium Smelter Wastes Containing Fluoride and/or Cyanide' dated 21 March 1986

<sup>5</sup> NSW EPA 1986, 'Chemical Control Order In Relation to Dioxin-Contaminated Waste Materials' dated 14 March 1986

<sup>6</sup> NSW EPA 1989, 'Chemical Control Order In Relation to Organotin Wastes' dated 11 March 1989

<sup>7</sup> NSW EPA 1997, 'Polychlorinated Biphenyl Chemical Control Order' dated 20 June 1997

<sup>8</sup> Primarily organochlorine pesticide (OCP) compounds, with some industrial by-products

<sup>9</sup> NSW EPA 2004, 'Chemical Control Order in Relation to Scheduled Chemical Wastes'

## 9 Conceptual Site Model

### 9.1 Preamble

A conceptual site model (CSM) is a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The initial CSM is constructed from the information obtained during the PSI and it can be used to identify data gaps and inform a decision on whether a detailed site investigation (DSI) is required.

The CSM identifies complete and potential pathways between the known or potential source(s) and the receptors. Where a pathway between a source and a receptor is incomplete, the exposure to chemical substances via that pathway cannot occur, but the potential for that pathway to be completed (for example, by abstraction of groundwater or a change in land use) should be considered in the assessment.

### 9.2 Land Use

#### 9.2.1 Adopted Land use Scenario

For the purpose of this project, Alliance understands that the proposed land use scenario for the site, associated with the proposed rezoning, includes:

- Residential with minimal opportunities for soil access including dwellings with fully and permanently paved yard space such as high rise buildings and flats.

#### 9.2.2 Assumptions for Adopted Land Use Scenario

Section 3 of NEPC (2013i) advises that the residential with minimal access to soil land use scenario includes high-density residential, not including a private garden. This land use scenario assumes typical residential unit blocks, consisting of multistorey buildings where living areas are on the ground floor (constructed on a ground level slab or above subsurface structures including basement car parks or storage areas).

Occupants of the buildings would have access to yard spaces that are largely covered by permanent paving, with some small areas of landscaping or lawns. Opportunities for direct access to soil by residents of these buildings are therefore minimal but there may be some potential for residents to inhale, ingest or come into direct dermal contact with dust (particulates) derived from the soil on the site.

The scenario does not include landscaped/playground (including sandpit) areas used for recreation within a high-density development. These are considered a 'public open space' land use scenario.

### 9.3 Sources of Contamination

A number of potential land contaminating activities have been identified for the site, based on the site history review and site walkover observations. These include:

- Uncontrolled demolition;

- Uncontrolled filling;
- Pesticide application for termite treatment; and
- Use of hazardous building materials in the existing structure.

Table J1 in Appendix J of AS 4482.1-2005 and Appendix A in DUAP (1998) provides guidance on chemicals associated with land uses activities. That guidance provides a basis for deciding on contaminants of potential concern (COPC) for each relevant land use activity. Information on COPC adopted for this project is presented in **Section 9.6** of this report.

## 9.4 Receptors

### 9.4.1 Identified Receptors

Based on the adopted land use scenario in **Section 9.2**, receptors at the site may include residents, intrusive maintenance workers, ecological (terrestrial and/or aquatic) ecosystems.

### 9.4.2 Assumptions for Identified Receptors

The human receptors at a residential with minimal access to soils site, would typically include adults, children and infants who spend the majority of their time indoors within the residential properties, with some limited use of communal outdoor areas on site. The residents that are considered to be most susceptible to health risks associated with soil contaminants are the residents of ground floor units, due to the greatest potential for outdoor soil to be tracked indoors and vapour intrusion occurring with residences immediately overlying contaminated soil.

Intrusive maintenance workers are assumed to be adult workers who carry out work in shallow trenches (maximum depth of 1m). The work may include work related to telephone, electricity, gas, water and sewer. It is also assumed that the workers will follow industry accepted procedures in relation to health and safety. The assumptions do not extend to work in deep trenches (such as deep sewers), on the basis that deep trench work would usually require confined space health and safety procedures to be followed, including the use of personal protective equipment.

In the context of petroleum hydrocarbons, exposure<sup>10</sup> may occur through:

- Inhalation of volatiles from contaminants at any depth (soil and groundwater); and
- Direct contact (dust inhalation, ingestion and dermal contact) for contaminated soils from surface to 2m below ground surface (i.e. trench walls for surface to 1m, trench floor 1 to 2m below ground surface).

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<sup>10</sup> Section 2.1.4 of Friebel, E & Nadebaum, P 2011

Potential acute exposure risks or explosion hazards associated with very high concentrations of vapours are not considered in this scenario.

## 9.5 Exposure Pathways

### 9.5.1 Human Health

#### 9.5.1.1 *Dermal Contact / Ingestion / Dust Inhalation*

Site history information and observations made during the site walkover, indicated a potential for contaminants to be present in soils at the site in association with potential uncontrolled filling and pesticide application, which could present a dermal contact, ingestion or dust inhalation risk to human health.

The proposed land use scenario associated with the rezoning is likely to include unsealed and open space areas, where a pathway between identified receptors and direct contact, ingestion and dust inhalation contaminant sources, may be complete.

Based on the investigation findings, further assessment of dermal contact, dust inhalation and ingestion risk is warranted.

#### 9.5.1.2 *Vapour Intrusion / Inhalation*

A vapour intrusion / inhalation exposure risk to human health can be present when a vapour source (either primary or secondary<sup>11</sup>) is present. For this investigation the available site history information and the observations made during the site walkover, did not indicate the potential for a vapour source to be present on the site. Further assessment of vapour intrusion / inhalation risks associated with primary and secondary sources is considered not warranted.

Site history information and observations made during the site walkover, indicated a potential for a historical uncontrolled filling to be present at the site. However, Alliance notes that the activity of transporting, placement and spreading of uncontrolled fill soils would typically include significant disturbance of those soils, that can result in the volatilisation of those contaminants that could normally present a vapour intrusion / inhalation risk (e.g. light fraction petroleum hydrocarbons, naphthalene and chlorinated hydrocarbons). On that basis, Alliance considers that the potential for contaminants to be present in uncontrolled filling, at concentrations which could present a vapour intrusion / inhalation risk, would be low. As such further assessment of vapour intrusion / inhalation risks associated with uncontrolled filling is considered not warranted.

#### 9.5.1.3 *Asbestos*

Bonded asbestos containing material (ACM) is comprised of asbestos bound in a matrix (including cement or resin), which is in sound condition, although possibly broken or fragmented.

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<sup>11</sup> Primary sources typically include underground storage tanks. Secondary sources typically include significantly contaminated soil or groundwater.

Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheeting, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).

Asbestos fines (AF) include free fibres, small fibre bundles and small fragments of ACM<sup>12</sup> that would pass through a 7mm x 7mm aperture sieve.

FA and AF are considered to be 'friable' asbestos, which is material that is in a powder form or that can be crumbled, pulverised or reduced to powder by hand pressure when dry.

Asbestos poses a risk to human health when asbestos fibres are made airborne and inhaled. The assessment of sites contaminated with asbestos in soil should aim to describe the nature and quantity of asbestos in soil in sufficient detail to enable a risk management plan to be developed for the proposed land use scenario.

Site history information and observations made during the site walkover, indicated a potential for ACM, FA and/or AF to be present in soils at the site, in association with possible historical uncontrolled filling activities.

As the proposed land use scenario associated with the rezoning is likely to include unsealed and open space areas, where a pathway between identified receptors and asbestos in soils may be complete, further assessment of asbestos exposure risk is considered warranted.

### 9.5.2 Management Limits for Petroleum Hydrocarbons

Section 2.9 of NEPC (2013a) states that there are a number of policy considerations which reflect the nature and properties of petroleum hydrocarbons:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosive hazards; and
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services by hydrocarbons.

Section 2.9 of NEPC (2013a) notes that:

- CME (2008) includes management limits to avoid or minimise these potential effects. Application of management limits requires consideration of site specific factors such as depth of building basements and services, and depth to groundwater, to determine the maximum depth to which the limits should apply.

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<sup>12</sup> For bonded ACM fragments to pass through a 7mm x 7mm sieve implies a substantial degree of damage which increases the potential for fibre release.

- Management limits may have less relevance at operating industrial sites (including mine sites) which have limited or no sensitive receptors in the area of potential impact.
- The presence of site total petroleum hydrocarbon (TPH) contamination at the levels of the management limits does not imply that there is no need for administrative notification or controls in accordance with jurisdiction requirements.

Site history information and walkover observations did not indicate a potential for petroleum hydrocarbon contamination to be present on site. On that basis, further assessment of petroleum hydrocarbons in soils, in the context of those policy decisions, is considered not warranted.

### 9.5.3 Hazardous Ground Gases

NSW EPA (2020a) provides advice on ground gases that if present in the pore space of soils and rocks, and can adversely impact human health and safety or the integrity of structures. The ground gases that are generally of concern in this context are:

- Bulk ground gases, including methane, carbon dioxide, carbon monoxide, hydrogen, hydrogen sulphide, and petroleum vapours; and
- Trace ground gases including radon, volatile organic compounds and mercury vapour.

Alliance has reviewed site history information review and site walkover observations in the context of sources and origins of hazardous ground gases in Table 1 and Table 2 of NSW EPA (2020a). Based on that review, Alliance considers that further assessment of hazardous ground gases in the context of this project, is considered not warranted.

### 9.5.4 Aesthetics

Aesthetic issues generally relate to the presence of low-concern or non-hazardous inert foreign material (refuse) in soil or fill resulting from human activity. Sites that are assessed as being acceptable from a human health and environmental perspective may still contain foreign material<sup>13</sup>. Sites may have some soil discolouration from relatively inert chemical waste (e.g. ferric metals) or residual odour (e.g. natural sulfur odour).

Assessment should be undertaken in the context of the sensitivity of the proposed land use scenario (e.g. higher expectations apply to residential properties with gardens compared with industrial settings). General assessment considerations should include:

- That chemically discoloured soils or large quantities of various types of inert refuse, particularly if unsightly, may cause ongoing concern to site users;

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<sup>13</sup> Geotechnical issues related to the presence of fill should be treated separately to assessment of site contamination.

- The depth of the materials, including chemical residues, in relation to the final surface of the site;
- The need for, and practicality of, any long-term management of foreign material;
- The presence of small quantities of non-hazardous material and low odour residue (e.g. weak petroleum odours) that will decrease over time should not be a cause of concern in most circumstances
- Sites with large quantities of well-covered known inert material that present no health hazard such as brick fragments and cement wastes, are usually of low concern for non-sensitive and sensitive land uses; and
- Caution should be used when assessing sensitive land uses, such as residential, when large quantities of various fill types and demolition rubble are present.

Alliance has adapted guidance in Section 3.6.2 and Section 3.6.3 of NEPC (2013a) to facilitate a preliminary assessment of potential aesthetic risks, identified during review of site history information and site walkover observations. The results of the preliminary assessment are presented in **Table 9.5.4**, and they are used to assess whether the need for further assessment to be undertaken, has been triggered.

**Table 9.5.4 Preliminary Aesthetics Screening**

<b>Preliminary Aesthetics Screening Questions</b>	<b>Assessment</b>
Is there potential for highly malodorous soils or extracted groundwater (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in soil or extracted groundwater, organosulfur compounds) to be present on site?	No
Is there hydrocarbon sheen on surface waters at site?	No
Is there potential for discoloured chemical deposits or soil staining with chemical waste other than of a very minor nature, to be present in site soils;	No
Is there potential for large monolithic deposits of otherwise low risk material, e.g. gypsum as powder or plasterboard or cement kiln dust, to be present in site soils;	No
Is there potential for putrescible refuse including material that may generate hazardous levels of methane such as a deep fill profile of green waste or large quantities of timber waste, to be present in site soils?	No
Is there potential for residue from animal burial (e.g. former abattoir sites) to be present in site soils.	No
Is there potential for large quantities of non-hazardous inert material to be present in site soils?	Yes
Is there potential for high odour residue material to be present in site soils?	No
Is there potential for large quantities of various fill types and demolition rubble to be present in site soils proposed for residential land use?	Yes

Site history information and observations made during the site walkover, and considered during the aesthetics risk assessment, indicated the following potential aesthetics risks for the site:

- Future demolition of the dwelling, which may contain hazardous building materials; and
- Uncontrolled filling associated with the rear yard, and the soils beneath structures and hardstand materials onsite.

Further assessment of aesthetic risks is considered warranted.

### 9.5.5 Terrestrial Ecosystems

Site history information and observations made during the site walkover, indicated a potential for contaminants, which may present a risk to terrestrial ecosystems, may be present on site.

Section 3.4.2 of NEPC (2013a) states that:

- A pragmatic risk-based approach should be taken when assessing ecological risk in residential and commercial / industrial land use settings;
- In existing residential and urban development sites, there are often practical considerations that enable soil properties to be improved by addition of ameliorants with a persistent modifying effect or by the common practice of backfilling or top dressing with clean soil;
- In other cases, all of the site soils will be removed during site development works or relocated for the formation of new land forms;
- Sites may also be backfilled with clean soil / fill and the fate of any excavated contaminated soil should be considered in this process; and
- Commercial and industrial sites may have large building structures and extensive areas covered with concrete, other pavement or hardstand materials and may have limited environmental values requiring consideration while in operational use.

Alliance has considered the potential for sensitive ecological receptors to be present at the site, in the context of site history information, site walkover observations and the proposed land use scenario.

Alliance notes that:

- Observations of flora onsite were limited to a limited number of scattered trees at the boundary of the site, with evidence of observed native herbaceous flora species across the site;
- The proposed land use scenario will include extensive soil excavation and removal across the site and covering the majority of the site with hardstand pavements and building footprints;
- Mammals are unlikely to access the site following construction of proposed buildings and hardstand areas;
- Invertebrates currently present at the site (including soil fauna, earthworms and insects) are likely to be removed during bulk excavation works and/or significant disturbed during proposed building construction works;
- Birds are unlikely to remain onsite following removal of the scattered trees at the site boundary, and construction of the new buildings and hardstand areas;
- Reptiles unlikely to remain onsite following removal of the scattered trees at the site boundary, bulk excavation works, and construction of the new buildings and hardstand areas;

On the basis that, further assessment of terrestrial ecosystem risks is considered not warranted.

### 9.5.6 Groundwater

Section 2.2 of NSW DEC (2007) provides guidance on the need for the potential for groundwater contamination to be assessed, for the purposes of evaluating whether it may pose an unacceptable risk to human health and/or the environment.

Section 3.2 of NEPC (2013d) provides guidance on the environmental values (that are conducive to public benefit, welfare, safety or health) and that require protection from the effects of pollution, waste discharge and deposits. These values include:

- Ecosystem protection;
- Aquaculture and human consumers of food;
- Agricultural water (irrigation and stock water);
- Recreation and aesthetics;
- Drinking water; and
- Industrial water.

Each of these values is considered in sub-sections 9.5.6.1 to 9.5.6.6.

#### 9.5.6.1 Aquatic Ecosystem Protection

In the context of aquatic ecosystems, ANZG (2018) defines level of protection is the degree of protection afforded to a water body based upon its ecosystem condition (current or desired health status of an ecosystem relative to the human degree of disturbance). Selecting a level of protection should consider:

- Maintaining the existing ecosystem condition, or
- Enhancing a modified ecosystem by targeting the most appropriate level of condition.

ANZG (2018) recognises three categories of current or desired ecosystems:

- High conservation or ecological value systems;
- Slightly to moderately disturbed ecosystems; and
- Highly disturbed ecosystems.

Alliance has undertaken an assessment of the likely nearest aquatic ecosystem to the site (refer **Section 3.4**) and considers that it is a freshwater system. Following review of site specific attributes, and in the context of guidance provided in ANZG (2018)<sup>14</sup>, Alliance considers that the nearest aquatic ecosystem is:

- A highly disturbed system, on the basis that the aquatic ecosystem is measurably degraded and of lower ecological value.

Groundwater at the site is considered likely to discharge to the nearest downgradient surface water body identified for the site (refer **Section 3.4**). That surface water body is considered likely to be polluted and be of a quality that is not consistent with natural background water quality.

Geology at the site is likely to include low permeability clays, which would limit vertical migration of soil contaminants (if present) into groundwater.

The shallowest groundwater at the site is likely to be transient perched groundwater generally present at the soil-bedrock interface, after heavy rain events. Data on natural background water quality for transient groundwater is generally not available. Subsequently, comparison of site specific shallow transient groundwater data against background quality is therefore not practical.

Based on this, Alliance considers that further assessment of aquatic ecosystem protection as a groundwater value, is not warranted.

#### 9.5.6.2 *Aquaculture and Human Consumers of Food*

Groundwater at the site is considered likely to discharge to the nearest surface water body identified for the site (refer **Section 3.4**).

The nearest surface water body to the site is not located on or adjacent to the site and is located a significant distance (1.65km) from the site. Alliance considers it unlikely that occupants of the site would frequent that surface water body for the collection and consumption of aquatic based foods, at a rate that the intake would present an unacceptable risk to human health.

The nearest surface water body identified for the site (refer **Section 3.4**) appears to be a creek line and is likely to be shallow in nature. Alliance considers it unlikely that the surface water body would contain an aquatic food source suitable for human consumption.

Based on this, Alliance considers that further assessment of aquaculture and human consumers of food as a groundwater value, is not warranted.

#### 9.5.6.3 *Agricultural (Irrigation and Stock Water)*

The groundwater bore search in **Section 3.4** did not identify any registered groundwater bores within a 500m radius of the site, that were authorised for irrigation or stock watering purposes.

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<sup>14</sup> <https://www.waterquality.gov.au/anz-guidelines/resources/key-concepts/level-of-protection>

The shallowest groundwater at the site is likely to be transient perched groundwater generally present at the soil-bedrock interface, after heavy rain events, and therefore, unlikely to be a reliable groundwater abstraction source for irrigation and stock watering purposes.

Urban development on the site and urban development on land down gradient of the site, is considered likely to prevent agricultural land use activities from being undertaken, which would mitigate the potential for abstraction of groundwater for irrigation and stock watering.

Based on this, Alliance considers that further assessment of agricultural water as a groundwater value, is not warranted.

#### 9.5.6.4 Recreation and Aesthetics

**Section 3.4** of this report did not identify licensed recreational water abstraction bores within a 500m radius of the site. Further to this McNally (2009) advises that:

- Deeper regional groundwater present in the fractures of the Ashfield / Bringelly Shale (in western Sydney) is generally saline, typically in the range of 5,000-50,000mg/L (due to their salt content); and
- Ashfield and Bringelly Shale (in western Sydney) are also considered to have no value as sources of groundwater.

The current land use scenario for the site includes a reticulated drinking water system. Urban development surrounding the site is also considered likely to include a reticulated drinking water system. Alliance considers use of reticulated water as a recreational water source (e.g. filling up swimming pools or ponds on site) is considered a more plausible scenario.

On that basis, installation of groundwater wells on site for the purpose of groundwater abstraction and use as a recreational water source (e.g. filling up swimming pools or ponds on site) is considered unlikely.

Groundwater at the site is considered likely to discharge to the nearest surface water body identified for the site (refer **Section 3.4**).

The nearest surface water body identified for the site (refer **Section 3.4**) appears to be a creek line, is likely to be shallow in nature, and has limited access to the general public. Alliance considers it is unlikely that the surface water body would be used for:

- Sports in which the user comes into frequent direct contact with water, either as part of the activity or accidentally, for example, swimming or surfing (primary contact);
- Sports that generally have less-frequent body contact with the water, for example, boating or fishing (secondary contact); or
- Visual passive recreational use, for example, pleasant places to be near or to look at (no body contact).

Based on this, Alliance considers that further assessment of recreation and aesthetics as a groundwater value, is not warranted.

#### 9.5.6.5 *Drinking Water*

The groundwater bore search in **Section 3.4** did not identify any registered groundwater bores within a 500m radius of the site, that were authorised for drinking water purposes.

The shallowest groundwater at the site is likely to be transient perched groundwater generally present at the soil-bedrock interface, after heavy rain events, and therefore, unlikely to be a reliable groundwater abstraction source for drinking water purposes.

McNally (2009) advises that:

- Deeper regional groundwater present in the fractures of the Ashfield and Bringelly Shale (in western Sydney) is generally saline, typically in the range of 5,000-50,000mg/L (due to their salt content), and therefore not suitable for drinking purposes; and
- Ashfield and Bringelly Shale (in western Sydney) are also considered to have no value as sources of groundwater.

The current land use scenario for the site includes a reticulated drinking water system. Urban development surrounding the site is also considered likely to include a reticulated drinking water system. Alliance considers use of reticulated water as a drinking water source onsite is a more plausible scenario.

Installation of rainwater collection tanks on site (for use as a secondary source of drinking water) is also considered a more plausible scenario.

On that basis, further assessment of drinking water as a groundwater value, is considered not warranted.

#### 9.5.6.6 *Industrial Use*

The groundwater bore search in **Section 3.4** did not identify any registered groundwater bores within a 500m radius of the site, that were authorised for industrial purposes.

The shallowest groundwater at the site is likely to be transient perched groundwater generally present at the soil-bedrock interface, after heavy rain events, and therefore, unlikely to be a reliable groundwater abstraction source for industrial purposes.

Urban development on the site and urban development on land down gradient of the site, is considered likely to prevent industrial land use activities from being undertaken, which would mitigate the potential for abstraction of groundwater for industrial purposes.

The current land use scenario for the site includes a reticulated drinking water system. Urban development surrounding the site is also considered likely to include a reticulated drinking water system which would mitigate the potential for abstraction of groundwater for industrial purposes.

Based on this, Alliance considers that further assessment of industrial water as a groundwater value, is not warranted.

## 9.6 **Source, Pathway and Receptor Links**

Based on:

- The identified sources of contamination associated with the locations of where potential land contaminating activities have been undertaken at the site (areas of environmental concern or AEC);
- The identified contaminants of potential concern (COPC) associated with those land contaminating activities;
- The receptors identified for the site, based on the proposed land use scenario; and
- The exposure pathways between the identified sources and receptors that have been assessed as being potentially or actually complete,

A conceptual site model (CSM) that identifies plausible south-pathway-receptor linkages for the site, is presented **Table 9.6**.

The locations of the AEC are presented in **Figure 3**.

**Table 9.6 Source, Pathway and Receptor Links**

<b>ID</b>	<b>AEC</b>	<b>Land Contaminating Activity (Source)</b>	<b>COPC</b>	<b>Exposure Pathway</b>	<b>Receptor</b>
AEC01	Residential Dwelling Footprint	Uncontrolled filling, pesticide application, and future demolition works (~500m <sup>2</sup> and ~0.5m thick)	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, pesticides, polychlorinated biphenyl, metals, asbestos, anthropogenic materials	Dermal contact Soil Ingestion Dust inhalation Inhalation (asbestos) Aesthetics	Residents Intrusive maintenance workers
AEC02	Hardstand materials including driveway	Uncontrolled filling (~600m <sup>2</sup> and ~0.5m thick)	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, pesticides, polychlorinated biphenyl, metals, asbestos, anthropogenic materials	Dermal contact Soil Ingestion Dust inhalation Inhalation (asbestos) Aesthetics	Residents Intrusive maintenance workers
AEC03	Rear yard	Uncontrolled filling (~1,200m <sup>2</sup> and ~0.5m thick)	Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, pesticides, polychlorinated biphenyl, metals, asbestos, anthropogenic materials	Dermal contact Soil Ingestion Dust inhalation Inhalation (asbestos) Aesthetics	Residents Intrusive maintenance workers

## 10 Duty to Report Contamination

Section 1.3 of NSW EPA (2020b) states that contaminated land consultants should take reasonable steps to draw the client's attention to its potential duty to report contamination under section 60 of the Contaminated Land Management Act 1997.

Section 2 in NSW EPA (2015) includes guidance on how to address reporting obligations under section 60 of the Contaminated Land Management Act 1997, including those parties required to notify EPA as soon as practical after they become aware of contamination. Those parties include:

- Anyone whose activities have contaminated land; or
- An owner of land that has been contaminated.

Alliance understands that the client is:

- not the occupier of the land, and as a consequence, is unlikely to have undertaken activities on the site that have contaminated the land, or
- not the owner of the land that may have been contaminated

On that basis, further assessment of the duty to report in the context of the guidance provided in NSW EPA (2015) is considered not warranted.

However, if the client was to become the owner and/or occupier of the land that the site is located on, and

- the client undertakes activities on the site that contaminates the land; or
- the client is the owner of the land that may have been contaminated;

then NSW EPA (2015) includes guidance on when the client should seek further advice about site contamination and its obligations regarding the duty to report. Additional information on the client's duty to report can be found at [www.epa.nsw.gov.au](http://www.epa.nsw.gov.au).

## 11 Conclusions and Recommendations

Based on the assessment undertaken by Alliance of site history information and site walkover observations, in the context of the proposed land use scenario and objectives of this project, Alliance has made the following conclusions:

- There is potential that previous activities at the site associated with the historically importation of fill material, demolition of structures, and pesticide application within building footprints may have resulted in contamination of land at the property.
- The site is currently zoned as SP2 'Infrastructure – Educational Establishment', and is used for residential / boarding house purposes, with accessible soils access present in areas surrounding the current site structures.
- The proposed land rezoning of the site to R4 'High Density Residential' land use, when compared to the current use of the site, is likely to result in reduced opportunities for soil access and end user exposure to contamination, due to the presence of multi-level residential structures with fully and permanently paved surrounding yard space.
- Based on the contamination risks that have been identified by this investigation, and with due regard of the intended land use associated with the proposed rezoning the site, Alliance consider that any potential contamination of the site identified in this PSI is unlikely to preclude rezoning, and can be managed during the development application (DA) stage of the proposed development.
- Specific assumptions that apply to the adopted land use scenario for this investigation, are presented in **Section 9** of this report.

Based on those conclusions, Alliance makes the following recommendations:

- A Stage 2 – Detailed Site Investigation (DSI) should be undertaken for development application (DA) purposes to characterise potential contamination and associated human health risks identified in this PSI;
- Given the potential land contamination identified at the site, the DSI should be completed post-demolition of structures to assist with providing access for the characterisation of potential land contamination identified by this PSI;
- The DSI should be undertaken by a suitably experienced environmental consultant.

This report must be read in conjunction with the ***Important Information About This Report*** statements at the front of this report.

## 12 References

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NSW DEC 2005, 'Contaminated Sites: Guidelines for Assessing Former Orchards and Market Gardens', dated June 2005, ref: DEC 2005/195.

NSW DEC 2007, 'Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination' dated March 2007, ref: DEC 2007/144.

NSW DECCW 2010, 'Vapour Intrusion: Technical Practice Note', dated September 2010, ref: DECCW 2010/774.

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NSW EPA 1989, 'Chemical Control Order In Relation to Organotin Wastes' dated 11 March 1989

NSW EPA 1995, 'Contaminated Sites: Sampling Design Guidelines', dated September 1995, ref: EPA 95/59.

NSW EPA 1997, 'Polychlorinated Biphenyl Chemical Control Order' dated 20 June 1997

NSW EPA 2000, 'Environmental Guidelines: Use and Disposal of Biosolid Products' dated December 2000, ref: EPA 97/62

NSW EPA 2004, 'Chemical Control Order in Relation to Scheduled Chemical Wastes

NSW EPA 2015, 'Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997' dated September 2015, ref: EPA 2015/0164.

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NSW EPA 2020a, 'Assessment and management of hazardous ground gases' dated May 2020, ref: EPA 2019P2047

NSW EPA 2020b, 'Contaminated Land Guidelines: Consultants reporting on contaminated land' dated May 2020, ref: EPA2020P2233.

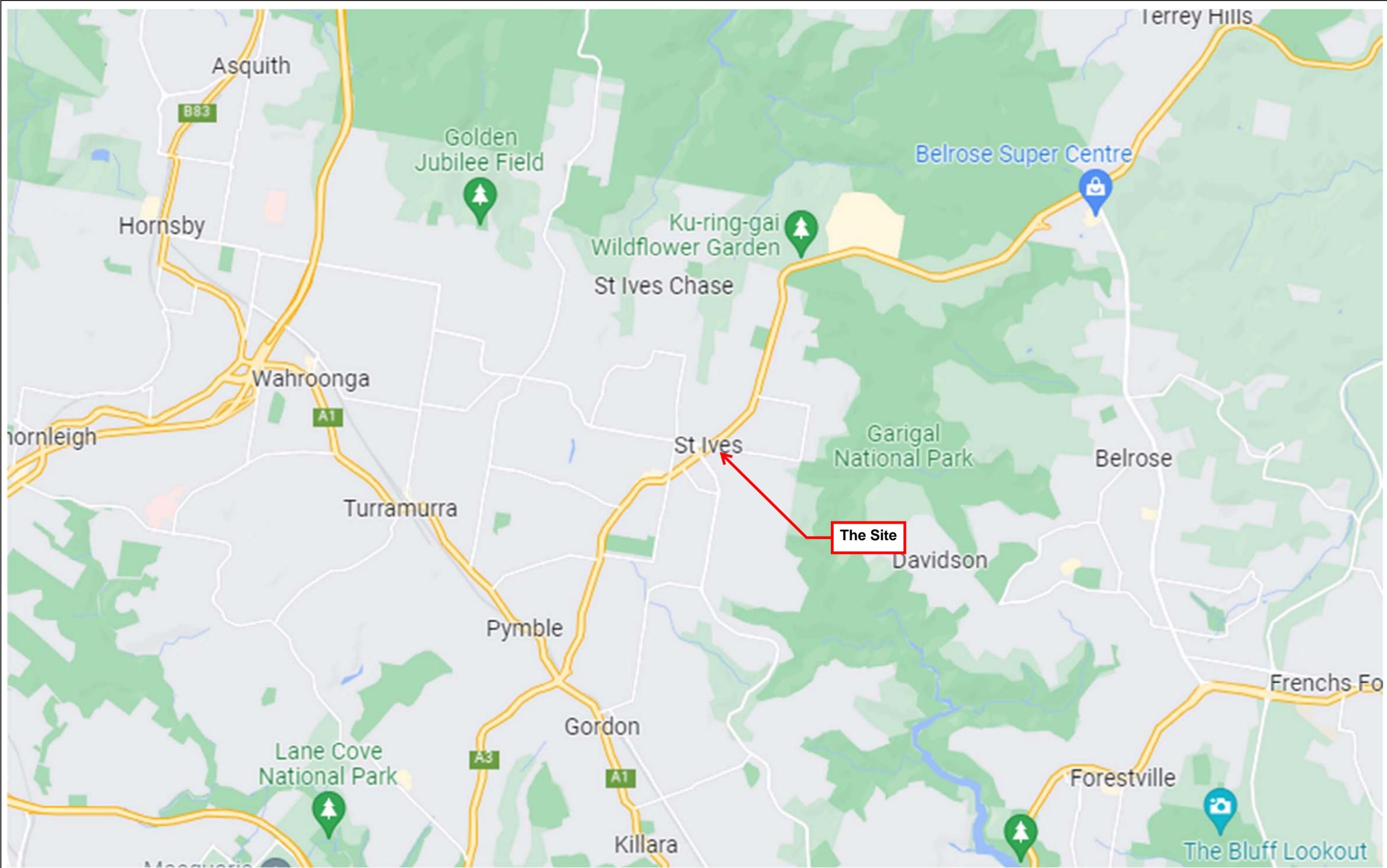
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WA DOH 2009, 'Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia', dated May 2009.

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## FIGURES



Site Locality

	Client Name:	X-Sealant c/o The Planning Hub	Figure Number:	1	
	Project Name:	Preliminary Site Investigation	Figure Date:	10 March 2022	
	Project Location:	130 Killeaton Street, St Ives NSW	Report Number:	14772-ER-1-1	



Scale: — 20 m —

Site Layout

	Client Name:	X-Sealant c/o The Planning Hub	Figure Number:	2	
	Project Name:	Preliminary Site Investigation	Figure Date:	10 March 2022	
	Project Location:	130 Killeaton Street, St Ives NSW	Report Number:	14772-ER-1-1	



Scale: 20 m

**Areas of Environmental Concern**

	Client Name:	X-Sealant c/o The Planning Hub	Figure Number:	3	
	Project Name:	Preliminary Site Investigation	Figure Date:	10 March 2022	
	Project Location:	130 Killeaton Street, St Ives NSW	Report Number:	14772-ER-1-1	

## APPENDIX A – Land Titles



**CERTIFICATE OF TITLE**  
**PROPERTY ACT, 1900, as amended.**



10058154

NEW SOUTH WALES

Application No.4373

Prior Title Vol. 330 Fol.167

Vol. 10058 Fol. 154

MA 1st Edition issued 16-7-1965



I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

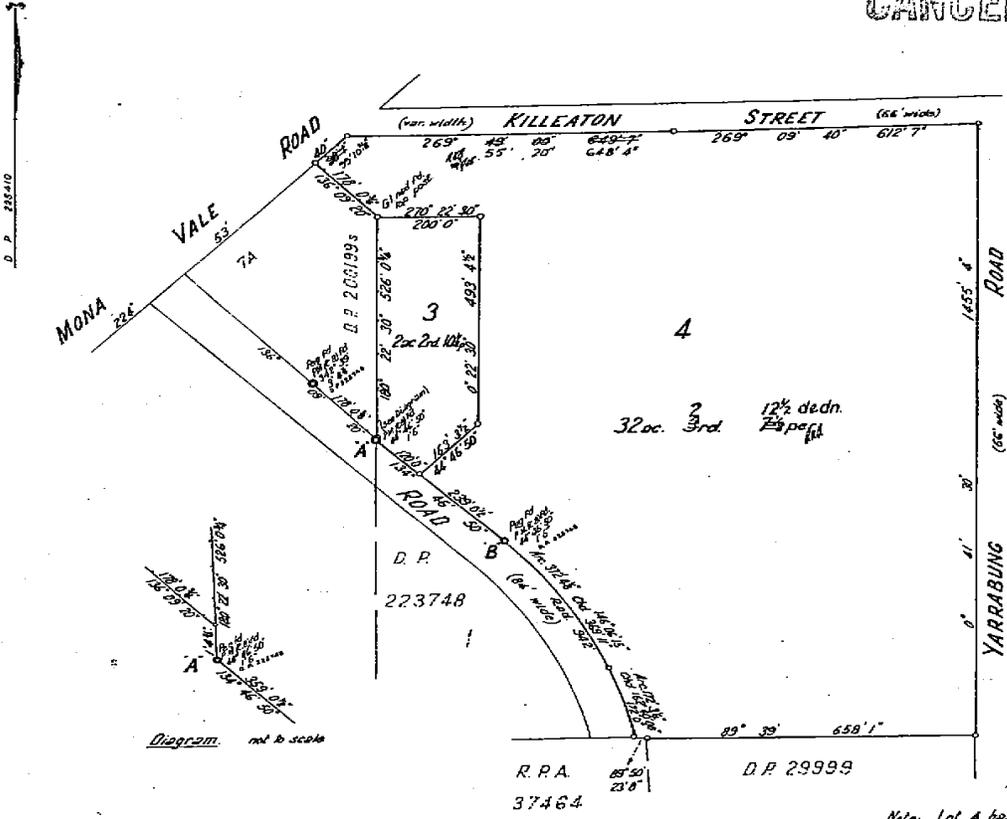
Witness *J. Charles*

*Jawatson*  
Registrar General.



PLAN SHOWING LOCATION OF LAND

**CANCELLED**



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 4 in Deposited Plan 225410 at St.Ives in the Municipality of Ku-ring-gai Parish of Gordon and County of Cumberland being part of Portion 406 granted to Michael Ansell on 19-10-1831.

FIRST SCHEDULE (continued overleaf)

TRUSTEES OF THE PASSIONIST FATHERS.

*Jawatson*  
Registrar General.

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

*Jawatson*  
Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

(Page 1) Vol. 10058 Fol. 154









10730226

NEW SOUTH WALES

# STATE OF TITLE

PROPERTY ACT, 1900, as amended.

Application No. 4373  
Prior Title Volume 10394 Folio 70

Vol. **10730** Fol. **226**



ID Edition issued 8-2-1968

10730 Fol. 226

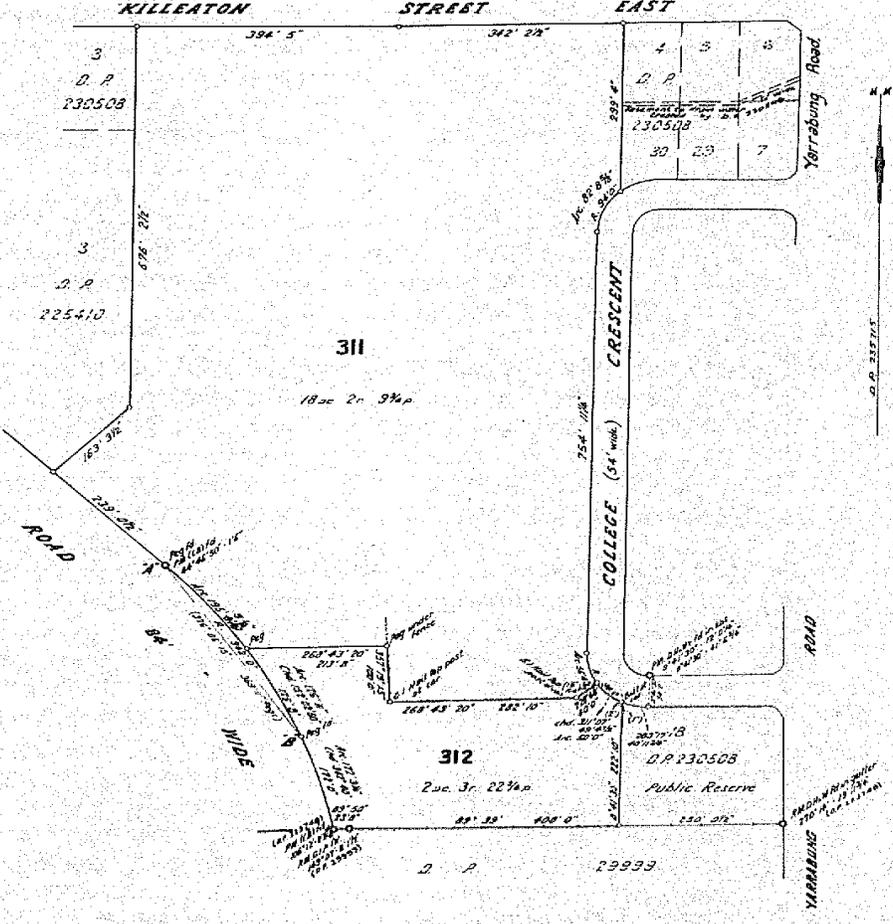
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *[Signature]*

*[Signature]*  
Registrar General.



### PLAN SHOWING LOCATION OF LAND



#### ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 311 in Deposited Plan 235715 at St. Ives in the Municipality of Ku-ring-gai Parish of Gordon and County of Cumberland being part of Portion 406 granted to Michael Ansell on 19-10-1831.

#### FIRST SCHEDULE (continued overleaf)

TRUSTEES OF THE PASSIONIST FATHERS.

#### SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Easement to drain water appurtenant to the land above described by the registration of Deposited Plan 230508 See K428424.

*[Signature]*  
Registrar General

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

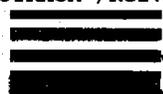
WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.





11043171

NEW SOUTH WALES



**CERTIFICATE OF TITLE**  
PROPERTY ACT, 1900, as amended.

Appln. No. 4373  
Prior Title Vol. 10730 Fol. 226

Vol. 11043 Fol. 171

Edition issued 7-5-1969



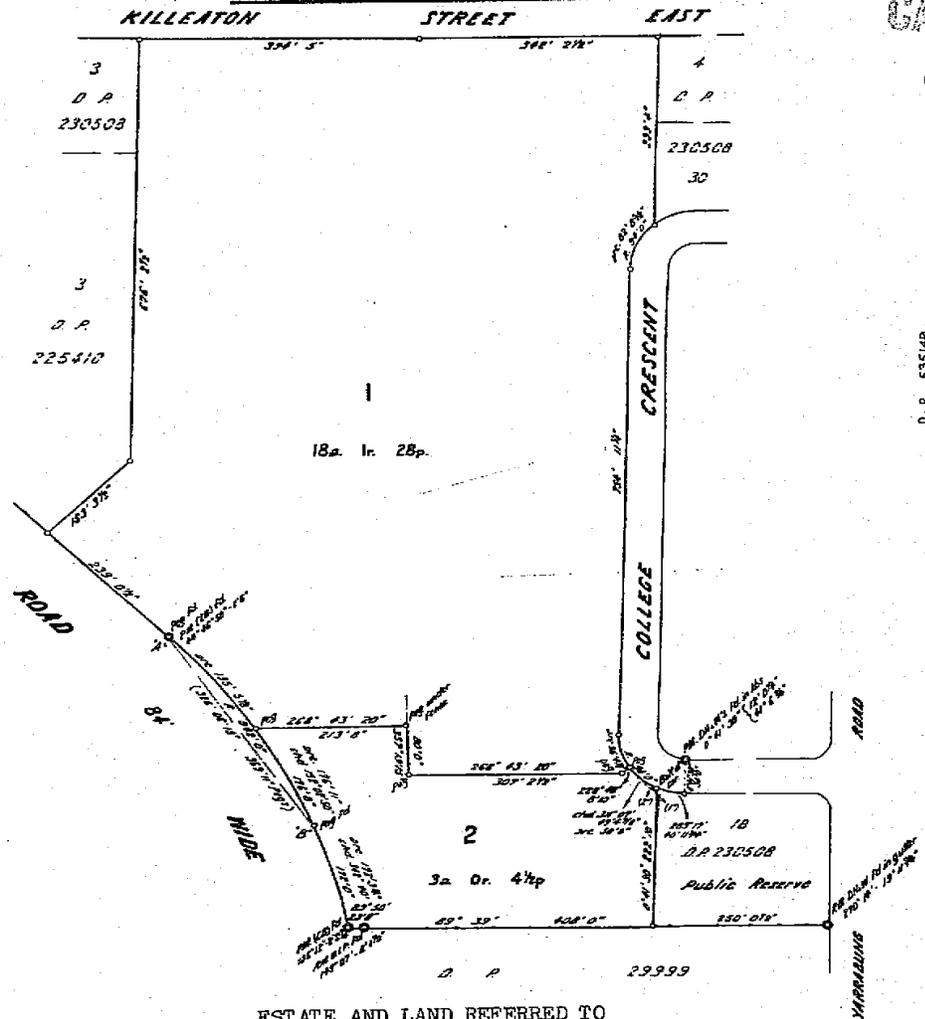
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *M. Flint*

*Jawatson*  
Registrar General.



**PLAN SHOWING LOCATION OF LAND**



**CANCELLED**

**ESTATE AND LAND REFERRED TO**

Estate in Fee Simple in Lot 1 in Deposited Plan 535149 at St. Ives in the Municipality of Ku-ring-gai, Parish of Gordon and County of Cumberland being part of Portion 406 granted to Michael Ansell on 19-10-1831.

**FIRST SCHEDULE**

TRUSTEES OF THE PASSIONIST FATHERS.

**SECOND SCHEDULE**

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Easement to drain water appurtenant to the land above described created by the registration of Deposited Plan 230508 See K428424.

*Jawatson*  
Registrar General.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

11043 Fol. 171  
(Page 1) Vol.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.





11807005

**CATE OF TITLE**

NEW SOUTH WALES

PROPERTY ACT, 1900

Appln. No. 4373

Vol. **11807** Fol. **5**

Prior Title Vol. 11043 Fol. 171

Edition issued 5-4-1972



11807 Fol. 5

(Page 1) Vol. 11807

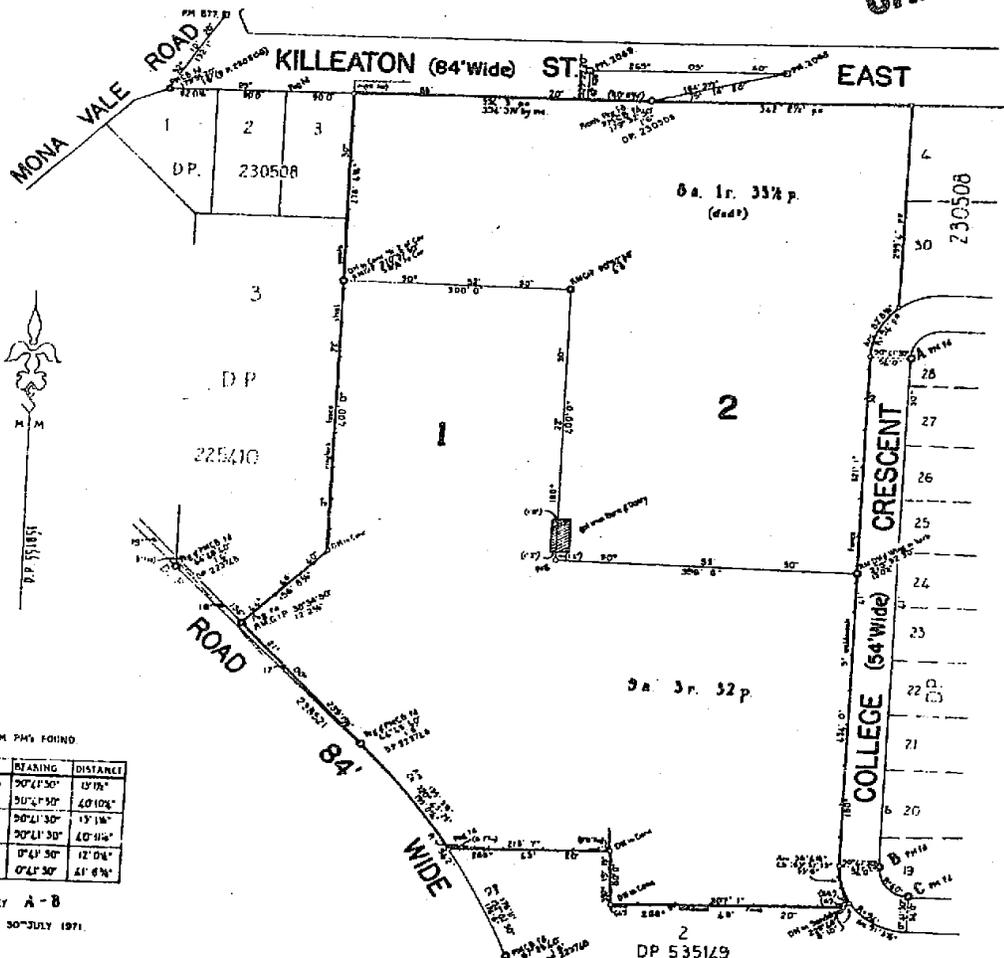
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

*Jawatson*  
 Registrar General.



PLAN SHOWING LOCATION OF LAND

**CANCELLED**



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 551851 at St.Ives in the Municipality of Ku-ring-gai Parish of Gordon and County of Cumberland being part of Portion 406 granted to Michael Ansell on 19-10-1831.

FIRST SCHEDULE

TRUSTEES OF THE PASSIONIST FATHERS.

SECOND SCHEDULE

- Reservations and conditions, if any, contained in the Crown Grant above referred to.
- Easement to drain water appurtenant to the land above described created by the registration of Deposited Plan 230508. See K428424.

*Jawatson*  
 Registrar General.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

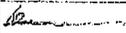
PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

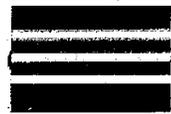
CT 11807-005-2  
 D/P 609871  
 8/3/80

Vol. 11807 Fol. 5

FIRST SCHEDULE (continued)					
REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		
whole New Certificate of Title issued for lots in Deposited Plan No. 609871 Lots 1 & 2 Vol. 14160 Fol. 101/101 respectively.					
 REGISTRAR GENERAL					
NEW CERTIFICATES OF TITLE ISSUED ON <u>D/P 609871</u> NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO SURVEY DRAFTING BRANCH					

SECOND SCHEDULE (continued)						
NATURE	INSTRUMENT		PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
	NUMBER	DATE				
	D.P. 609871		Interests created pursuant to Section 88B Conveyancing Act, 1919, by the registration of Deposited Plan 609871	3-6-1980		

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED



# CERTIFICATE OF TITLE

PROPERTY ACT, 1900



14160100

NEW SOUTH WALES

Appln. No.4373

Prior Title Vol.11807 Fol. 5



Vol. 14160 Fol. 100  
**CANCELLED**  
EDITION ISSUED  
23 6 1980

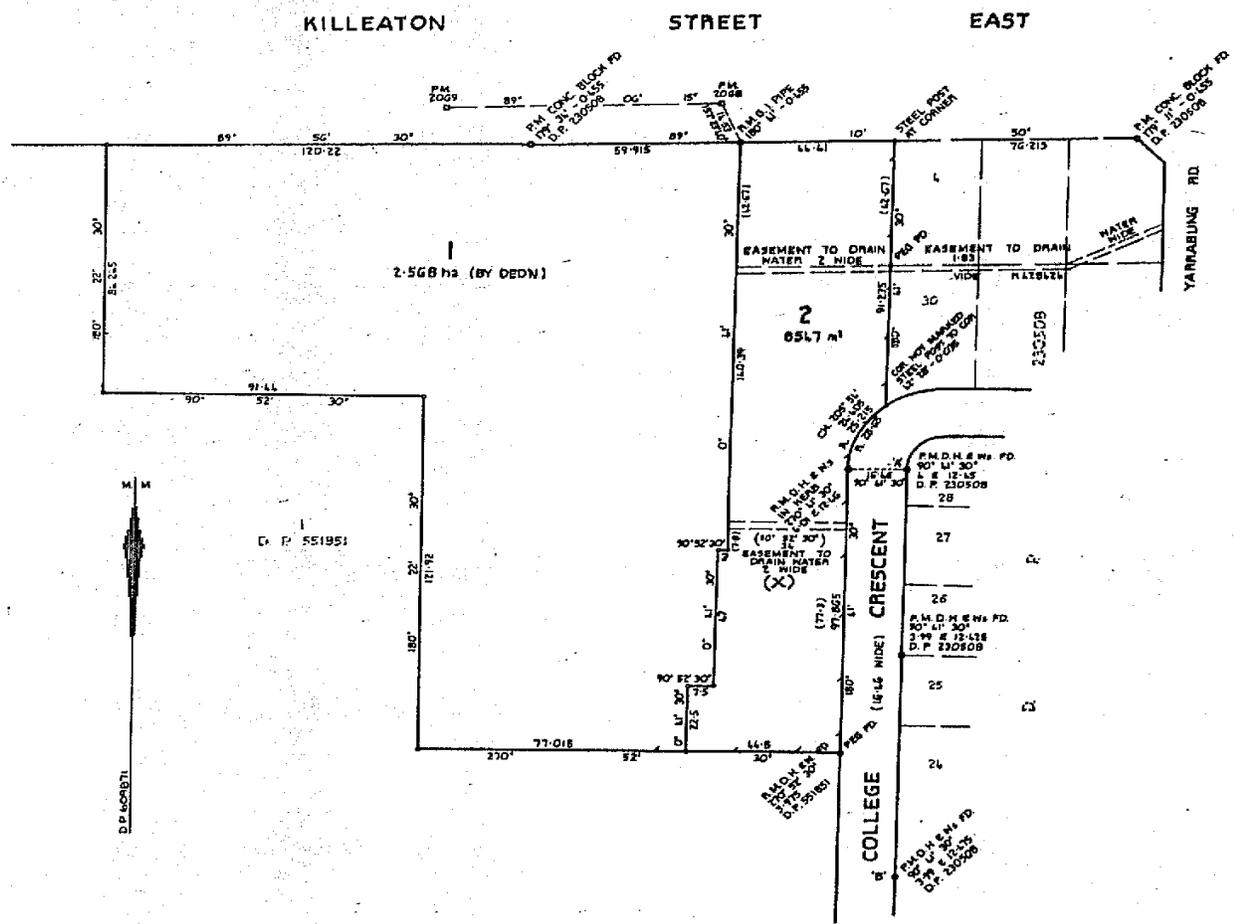
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

*[Signature]*  
Registrar General.



## PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



### ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 609871 at St.Ives in the Municipality of Ku-ring-gai Parish of Gordon and County of Cumberland being part of Portion 406 granted to Michael Ansell on 19-10-1831.

### FIRST SCHEDULE

TRUSTEES OF THE PASSIONIST FATHERS.

### SECOND SCHEDULE

- Reservations and conditions, if any, contained in the Crown Grant above referred to.
- DP230508 Easement to drain water appurtenant to the land above described affecting the land shown so burdened in Deposited Plan 609871. See K428424.
- D.P.609871 EASEMENTS TO DRAIN WATER APPURTENANT TO THE LAND ABOVE DESCRIBED

1979M7

*[Signature]*  
Reg. Gen.  
3.9.1981

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

(Page 1) Vol. 14160 Fol. 100

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.





SEARCH DATE

3/3/2022 10:27AM

FOLIO: 1/748682

First Title(s): OLD SYSTEM

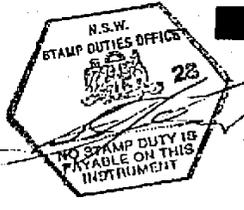
Prior Title(s): VOL 14160 FOL 100

Recorded	Number	Type of Instrument	C.T. Issue
4/9/1987	DP748682	DEPOSITED PLAN	FOLIO CREATED EDITION 1
9/10/1987	X132050	TRANSFER	EDITION 2
17/8/2010	AF699065	DEPARTMENTAL DEALING	
8/2/2021	DP1269675	WITHDRAWN - DEPOSITED PLAN	
26/4/2021	AQ711801	VARIATION OF EASEMENT	EDITION 3
10/12/2021	AR709608	TRANSFER	
10/12/2021	AR709609	MORTGAGE	EDITION 4

\*\*\* END OF SEARCH \*\*\*

RP 13  
1985

STAMP DUTY



X132050

**TRANSFER**  
REAL PROPERTY ACT, 1900

CB	P1	X	R1/1
\$ 37			

DESCRIPTION OF LAND  
Note (a)

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Identifier 1/748682.	WHOLE	St. Ives.

TRANSFEROR  
Note (b)

TRUSTEES OF THE PASSIONIST FATHERS

ESTATE  
Note (c)

(the abovename TRANSFEROR) hereby acknowledges receipt of the consideration of \$ 330,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE  
Note (d)

<u>THE TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE DIOCESE OF BROKEN BAY</u>	OFFICE USE ONLY
	S

TENANCY  
Note (e)

~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES  
Note (f)

subject to the following PRIOR ENCUMBRANCES 1. \_\_\_\_\_  
2. \_\_\_\_\_ 3. \_\_\_\_\_

DATE 29. 9. 1987.

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION  
Note (g)

Signed in my presence by the transferor who is personally known to me  
 THE COMMON SEAL of the Body Corporate called TRUSTEES OF THE )  
 PASSIONIST FATHERS was hereunto affixed in pursuance of a )  
 Resolution <sup>Signature of Witness</sup> passed at a Meeting of the said )  
 Body Corporate in the presence of the Provincial a Member of )  
 the said Body Corporate and of two other Members of the said )  
 Body Corporate all of whose signatures are hereto affixed:- )



*Chas M. Frith*  
Address and occupation of Witness

*Charles Corbett*  
PROVINCIAL MEMBER

*Octo J. Adcock*  
MEMBER

Note (g)

Signed in my presence by the transferee who is personally known to me

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Name of Witness (BLOCK LETTERS)

\_\_\_\_\_  
Address and occupation of Witness

*J. D. d'Apice*  
SOLICITOR FOR Signature of Transferee J. D. d'APICE

TO BE COMPLETED BY LODGING PARTY  
Notes (h) and (i)

LODGED BY <b>MAKINSON &amp; D'APICE</b> SOLICITORS 50 MARGARET STREET, SYDNEY DX 206 SYDNEY PH.: 290 1833 557V	LOCATION OF DOCUMENTS	
	CT	OTHER
		Herewith.
Delivery Box Number		In L.T.O. with
		Produced by
Checked <b>EAYNG</b>	Passed	REGISTERED - -19
Signed	Extra Fee	- 9OCT 1987
		Secondary Directions
		Delivery Directions
		C.T. L.P.

5437

OFFICE USE ONLY

420



FOLIO: 1/748682

SEARCH DATE	TIME	EDITION NO	DATE
3/3/2022	10:28 AM	4	10/12/2021

LAND

LOT 1 IN DEPOSITED PLAN 748682  
 AT ST IVES  
 LOCAL GOVERNMENT AREA KU-RING-GAI  
 PARISH OF GORDON COUNTY OF CUMBERLAND  
 TITLE DIAGRAM DP748682

FIRST SCHEDULE

AHG HOMEBUSH PTY LTD (T AR709608)

SECOND SCHEDULE (6 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 DP230508 EASEMENT TO DRAIN WATER APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN DP609871. SEE K428424  
 AQ711801 VARIATION OF EASEMENT DP230508 SITE VARIED AS SHOWN DESIGNATED (E1) IN DP1272388
- 3 DP261957 EASEMENT FOR DRAINAGE 1 WIDE APPURTENANT TO THE LAND WITHIN DESCRIBED AFFECTING THE PART OF LOT 1 IN DP261957 SHOWN SO BURDENED IN DP261957
- 4 DP261957 EASEMENT FOR DRAINAGE 2 WIDE APPURTENANT TO THE LAND WITHIN DESCRIBED AFFECTING THE PART OF LOT 4 IN DP261957 SHOWN SO BURDENED IN DP261957
- 5 DP609871 EASEMENT TO DRAIN WATER 2 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
- 6 AR709609 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

## **APPENDIX B – Groundwater Records**



download sites

find a site

Real Time Data - Riv...

### Daily River Reports

Daily River Reports

### Dams

favourites search

download sites

find a site

Real Time Data - Maj...

### Groundwater (Telemetered data)

favourites search

download sites

find a site

Real Time Data - Bores

### All Groundwater Site details

search download sites

find a site

search by licence

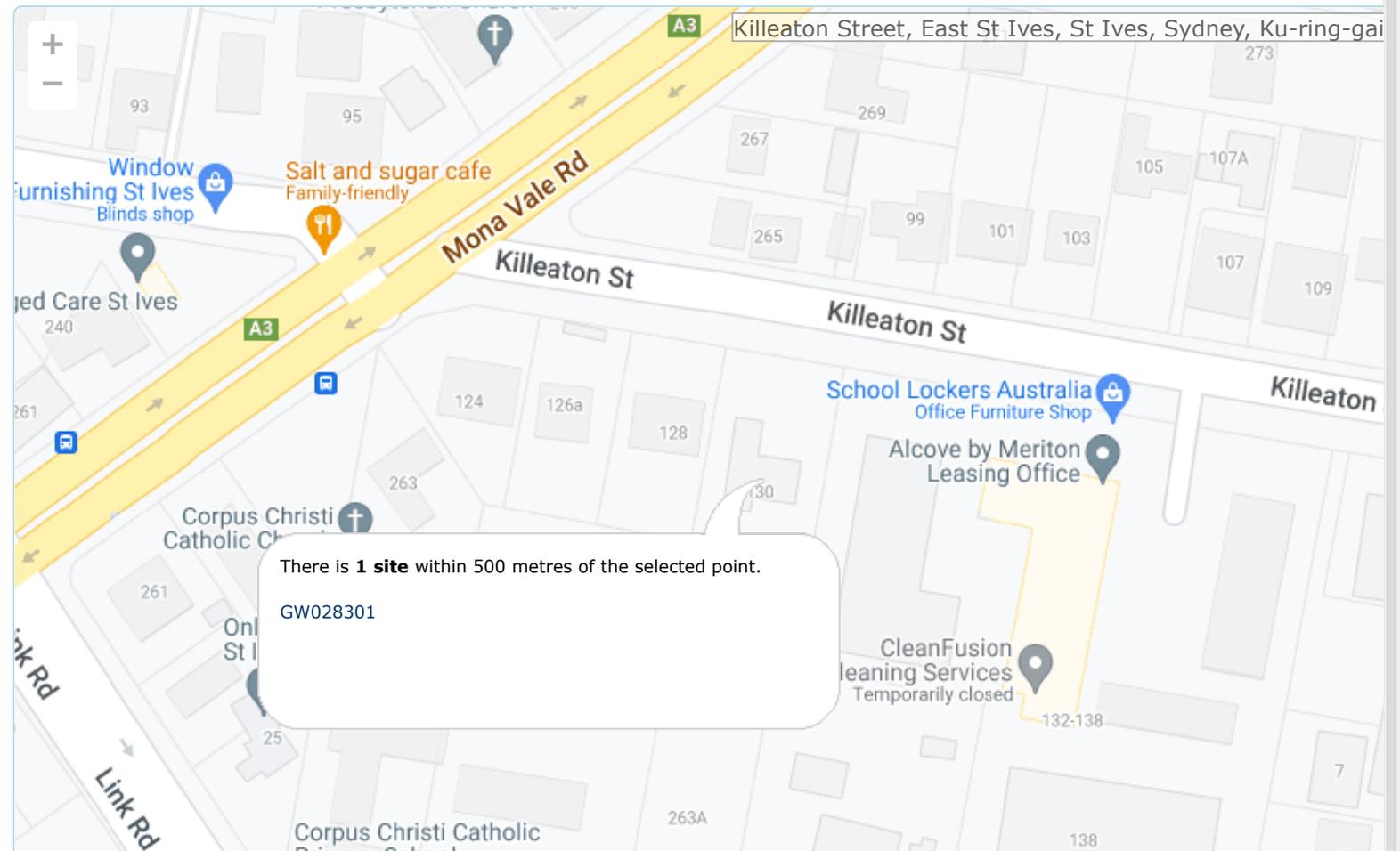
All Groundwater Site Details

## ALL GROUNDWATER MAP

bookmark this page

All data times are Eastern Standard Time

Map Info



contact WaterNSW



# WaterNSW

## Work Summary

**GW028301**

Licence: 10WA108119

Licence Status: CURRENT

Authorised Purpose(s): DOMESTIC  
Intended Purpose(s): GENERAL USE

Work Type: Bore open thru rock

Work Status:

Construct.Method: Cable Tool

Owner Type: Private

Commenced Date:

Completion Date: 01/03/1966

Final Depth: 68.50 m

Drilled Depth: 68.60 m

Contractor Name: (None)

Driller:

Assistant Driller:

Property: N/A NSW

Standing Water Level

(m):

GWMA: 603 - SYDNEY BASIN

Salinity Description: invalid code

GW Zone: -

Yield (L/s):

### Site Details

Site Chosen By:

County	Parish	Cadastre
Form A: CUMBERLAND	GORDON	89
Licensed: CUMBERLAND	GORDON	Whole Lot //

Region: 10 - Sydney South Coast

CMA Map:

River Basin: 212 - HAWKESBURY RIVER  
Area/District:

Grid Zone:

Scale:

Elevation: 0.00 m (A.H.D.)  
Elevation Source: (Unknown)

Northing: 6266760.000  
Easting: 330481.000

Latitude: 33°43'32.3"S  
Longitude: 151°10'13.2"E

GS Map: -

MGA Zone: 56

Coordinate Source: GD.,PR. MAP

### 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	1	Casing		-0.30	20.60	152			Suspended in Clamps

### 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)
51.50	54.20	2.70	(Unknown)			0.38			

### Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.91	0.91	Clay	Clay	
0.91	6.70	5.79	Clay Light Brown Yellow	Clay	
6.70	8.83	2.13	Shale Grey	Shale	
8.83	18.28	9.45	Shale Dark Brown Sticky	Shale	
18.28	25.90	7.62	Sandstone Medium	Sandstone	
25.90	31.39	5.49	Sandstone Grey	Sandstone	
31.39	32.91	1.52	Shale Grey	Shale	
32.91	38.10	5.19	Sandstone Cream Traces	Sandstone	
38.10	39.62	1.52	Sandstone Cream Soft	Sandstone	

39.62	44.19	4.57	Sandstone Hard	Sandstone	
44.19	50.29	6.10	Sandstone Grey	Sandstone	
50.29	50.90	0.61	Sandstone Soft	Sandstone	
50.90	51.81	0.91	Sandstone Grey Shale Water Supply	Sandstone	
51.81	68.58	16.77	Sandstone Grey Water Supply	Sandstone	
6.70	8.83	2.13	Clay Seams	Clay	
25.90	31.39	5.49	Shale Bands	Shale	
32.91	38.10	5.19	Shale	Shale	

## Remarks

---

19/02/1975: SITED 273 MONA VALE RD ST. IVES

**\*\*\* End of GW028301 \*\*\***

**Warning To Clients:** This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW 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 C – Bureau of Meteorology Information**

# Climate statistics for Australian locations

## Monthly climate statistics

### All years of record

#### Site information

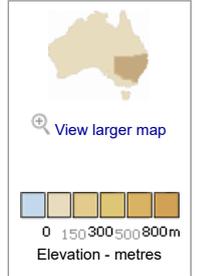
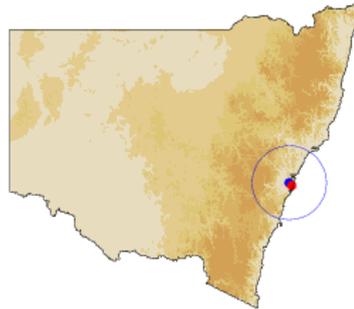
**Site name:** MACQUARIE PARK (WILLANDRA VILLAGE)  
**Site number:** 066156  
**Latitude:** 33.78 °S **Longitude:** 151.11 °E  
**Elevation:** 65 m  
**Commenced:** 1970 **Status:** Open  
**Latest available data:** 02 Mar 2022

#### Additional information

Additional site information

#### Nearest alternative sites

- 066047 PENNANT HILLS (YARRARA ROAD) (6.1km)
- 066131 RIVERVIEW OBSERVATORY (6.5km)
- 066212 SYDNEY OLYMPIC PARK AWS (ARCHERY CENTRE) (7.1km)



**View:**  Main statistics  All available | 
  **Period:** Use all years of data v | 
   **Text size:**  Normal  Large

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years
<b>Temperature</b>														
Mean maximum temperature (°C)	27.7	27.4	25.9	23.4	20.3	17.4	17.1	18.5	21.1	23.3	24.8	27.1	22.8	24 1971-1995
Mean minimum temperature (°C)	16.9	16.9	15.2	12.0	9.2	6.5	4.9	5.7	7.8	10.8	13.0	15.6	11.2	24 1971-1995
<b>Rainfall</b>														
Mean rainfall (mm)	120.0	147.5	143.9	104.5	77.9	117.7	54.8	60.1	58.4	85.9	90.9	83.9	1125.5	33 1970-2022
Decile 5 (median) rainfall (mm)	91.9	103.8	113.4	66.2	77.0	87.2	35.4	29.9	41.8	58.2	78.2	67.2	1114.3	43 1970-2022
Mean number of days of rain ≥ 1 mm	9.3	8.8	9.9	7.2	6.8	8.0	5.2	5.2	5.5	7.4	8.5	7.4	89.2	43 1970-2022
<b>Other daily elements</b>														
Mean daily sunshine (hours)														
Mean number of clear days	5.6	3.8	6.4	10.6	10.2	8.7	12.5	14.3	9.0	8.6	6.6	7.5	103.8	12 1971-1995
Mean number of cloudy days	11.3	12.7	12.9	7.8	9.9	11.1	6.3	6.3	7.4	11.8	11.5	11.2	120.2	12 1971-1995
<b>9 am conditions</b>														
Mean 9am temperature (°C)	22.4	22.0	21.3	18.4	15.0	12.1	11.3	13.0	15.8	18.5	19.6	21.9	17.6	19 1971-1995
Mean 9am relative humidity (%)														9 1982-1995
Mean 9am wind speed (km/h)	7.2	6.3	6.5	6.5	6.5	7.6	8.0	9.0	9.3	10.2	8.6	8.9	7.9	17 1971-1995
<b>3 pm conditions</b>														
Mean 3pm temperature (°C)	26.1	25.0	24.3	21.6	18.9	15.9	15.1	17.2	19.9	20.6	22.7	25.4	21.1	13 1971-1995
Mean 3pm relative humidity (%)														2 1982-1995
Mean 3pm wind speed (km/h)	15.7	14.7	12.1	11.6	9.3	10.2	10.9	12.3	15.0	14.9	15.6	18.5	13.4	12 1971-1995

red = highest value blue = lowest value

Product IDCJCM0028 Prepared at Thu 03 Mar 2022 03:47:15 AM EST

Monthly statistics are only included if there are more than 10 years of data. The number of years (provided in the 2nd last column of the table) may differ between elements if the observing program at the site changed. More detailed data for individual sites can be obtained by contacting the Bureau.

### Related Links

- This page URL: [http://www.bom.gov.au/climate/averages/tables/cw\\_066156.shtml](http://www.bom.gov.au/climate/averages/tables/cw_066156.shtml)
- About climate averages: <http://www.bom.gov.au/climate/cdo/about/about-stats.shtml>
- Bureau of Meteorology website: <http://www.bom.gov.au>

Page created: Thu 03 Mar 2022 03:47:15 AM EST

This page was created at on



## **APPENDIX D – NSW EPA Records**

[Home](#) [Public registers](#) [Contaminated land record of notices](#)

## Search results

Your search for: Suburb: ST IVES

Matched 4 notices relating to 1 site.

[Search Again](#)  
[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
ST IVES	179-181 Mona Vale ROAD	<a href="#">Shell Service Station</a>	4 former

Page 1 of 1

3 March 2022

### For business and industry ^

### For local government ^

### Contact us

131 555 (tel:131555)

Online (<https://yoursay.epa.nsw.gov.au/epa-website-feedback>)

[info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au) (<mailto:info@epa.nsw.gov.au>)

EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

[Disclaimer \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

[Privacy \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)

[Copyright \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

**in**  
(<https://au.linkedin.com/company/environment-protection-authority-epa>)  
**epa**  
([https://twitter.com/epa\\_nsw](https://twitter.com/epa_nsw))

Find us on



## **APPENDIX E – Council Records**

# PLANNING

# CERTIFICATE

818 Pacific Highway, Gordon NSW 2072

Locked Bag 1006, Gordon NSW 2072

T 02 9424 0000 F 02 9424 0001

DX 8703 Gordon TTY 02 9424 0875

E [kmc@kmc.nsw.gov.au](mailto:kmc@kmc.nsw.gov.au)

W [www.kmc.nsw.gov.au](http://www.kmc.nsw.gov.au)

ABN 86 408 856 411



UNDER SECTION 10.7 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

## PROPERTY DETAILS

**Address:** 130 Killeaton Street ST IVES NSW 2075

**Lot Description:** Lot 1 DP 748682

## CERTIFICATE DETAILS

**Certificate No:** ePC3337/21 **Certificate Date:** 27/08/2021

**Certificate Type:** Section 10.7(2) & (5)

## APPLICANT DETAILS

**REF:** 9169779

**InfoTrack**  
**DX 578**  
**SYDNEY**

## BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 10.7 of the Environmental Planning and Assessment Act.

THE FOLLOWING INFORMATION IS ISSUED UNDER SECTION 10.7(2)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

MATTERS AFFECTING THE LAND AS PRESCRIBED BY SCHEDULE 4 –  
ENVIRONMENTAL PLANNING & ASSESSMENT ACT REGULATION, 2000.

1. Names of relevant planning instruments and development control plans

(1) **Which environmental planning instruments apply to the carrying out of development on this land?**

Ku-ring-gai Local Environmental Plan 2015 as published on the NSW Legislation Website on 5 March 2015.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (State Significant Precincts) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017.

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.

State Environmental Planning Policy (Coastal Management) 2018.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

(2) **Which proposed environmental planning instruments apply to the carrying out of development on this land?** (Including planning proposals and proposed environmental planning instruments that are or have been the subject of community consultation or on public exhibition under the E. P. & A. Act).

There are no proposed environmental planning instruments that apply to this land.

(3) **Which development control plans apply to the carrying out of development on this land?**

Ku-ring-gai Development Control Plan

*SPECIAL NOTE: A development control plan adds further detail to local environmental plans and may address issues such as building design, car parking, landscaping etc. Copies of the Plans are available from Council.*

## **2. Zoning and land use under relevant local environmental plans (other than a SEPP or proposed SEPP)**

**(a) *What is the zoning of this property and the relevant environmental planning instrument?***

Aquaculture; SP2 Infrastructure - Educational Establishment under the provisions of Ku-ring-gai Local Environmental Plan 2015.

**(b) *What does not require development consent under the above environmental planning instrument?***

Nil.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan 2015.

**(c) *What does require development consent under the above environmental planning instrument?***

Educational establishment, including any development that is ordinarily incidental or ancillary to development for that purpose; Environmental protection works; Flood mitigation works; Recreation areas; Roads.

**(d) *What is prohibited under the above environmental planning instrument?***

Any development not specified in item (b) or (c).

**(e) *What is the proposed zoning of this property and the relevant proposed environmental planning instrument?***

Not applicable. There are no proposed environmental planning instruments that relate to this matter.

**(f) *What does not require development consent under the above proposed environmental planning instrument?***

Not applicable. There are no proposed environmental planning instruments that relate to this matter.

**(g) *What does require development consent under the above proposed environmental planning instrument?***

Not applicable. There are no proposed environmental planning instruments that relate to this matter.

**(h) *What is prohibited under the above proposed environmental planning instrument?***

Not applicable. There are no proposed environmental planning instruments that relate to this matter.

- (i) **Do any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land?**

There are no provisions in Ku-ring-gai Local Environmental Plan 2015 that regulate minimum dimension sizes for the erection of a dwelling house on this property.

- (j) **Does the land include or comprise critical habitat?**

No.

- (k) **Is the land in a conservation area?**

No.

**SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Planner can provide you with more information on this matter.

- (l) **Is an item of environmental heritage situated on the land?**

No.

**SPECIAL NOTE:** You are advised that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

### 3. Complying development

**The extent to which the land is land on which complying development may or may not be carried out under each of the codes for complying development because of the provisions of clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and if complying development may not be carried out on that land the reason why it may not be carried out under those clauses?**

**(Special Note:** It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to do so may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid).

#### Container Recycling Facilities Code

Complying development under the Container Recycling Facilities Code **may** be carried out on the land.

### **Commercial and Industrial Alterations Code**

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

### **Commercial and Industrial (New Buildings and Additions) Code**

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

### **Demolition Code**

Complying development under the Demolition Code **may** be carried out on the land.

### **Fire Safety Code**

Complying development under the Fire Safety Code **may** be carried out on the land.

### **General Development Code**

Complying development under the General Development Code **may** be carried out on the land.

### **Housing Code**

Complying development under the Housing Code **may** be carried out on the land.

### **Housing Alterations Code**

Complying development under the Housing Alterations Code **may** be carried out on the land.

### **Low Rise Medium Density Housing Code**

Complying development under the Low Rise Medium Density Housing Code **may** be carried out on the land.

### **Subdivision Code**

Complying development under the Subdivision Code **may** be carried out on the land.

## **4B. Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

Not applicable. This matter does not apply to land within Ku-ring-gai Local Government Area.

## 5. Mine subsidence

***Is the land proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961?***

No. Council has not been notified that the land is subject to such a proclamation.

## 6. Road widening and road realignment

***Is the land affected by any road widening or road realignment under the Roads Act, any environmental planning instrument or any resolution of council?***

No.

## 7. Council and other public authority policies on hazard risk restrictions.

***Is the land affected by a policy adopted by council, or by any other public authority required to be referred to in a planning certificate, that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, contamination, acid sulphate soils or other risk (other than flooding)?***

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

## 7A. Flood related development controls information

***Is the land or part of the land within the flood planning area and subject to flood related development controls?***

No.(Unknown)

*The flood risk of this land has not yet been mapped. Unmapped locations may also be subject to flood related development controls*

***Is the land or part of the land between the flood planning area and the probable maximum flood and subject to flood related development controls?***

No.(Unknown)

*The flood risk of this land has not yet been mapped. Unmapped locations may also be subject to flood related development controls*

*SPECIAL NOTE: Flood planning area has the same meaning as in the Floodplain Development Manual.  
Floodplain Development Manual means the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.  
Probable maximum flood has the same meaning as in the Floodplain Development Manual.*

## 8. Land reserved for acquisition

**Do any environmental planning instruments or proposed environmental planning instruments referred to in clause 1 make provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act?**

No.

## 9. Contribution plans

**Which contribution plans apply if this land is developed?**

Ku-ring-gai Contributions Plan 2010.  
Ku-ring-gai s94A Contributions Plan 2015.

*SPECIAL NOTE: A contribution plan, commonly known as a section 94 plan, outlines the financial costs Council charges if land is developed and Council believes the development will require additional services such as parks, roads etc. Copies of the contribution plans are available from Council.*

## 9A. Biodiversity certified land

**Is the land, land that is biodiversity certified land under Part 8 of the Biodiversity Conservation Act 2016?**

Council has not been notified that the land is biodiversity certified land.

*SPECIAL NOTE: Biodiversity certified land includes land certified under Part 7AA of the Threatened Species Conservation Act 1995 that is taken to be certified under Part 8 of the Biodiversity Conservation Act 2016.*

## 10. Biodiversity stewardship sites

**Is the land, land that is a biodiversity stewardship site under a biodiversity stewardship agreement under part 5 of the Biodiversity Conservation Act 2016?**

Council has not been notified that the land is biodiversity stewardship land.

*SPECIAL NOTE: Biodiversity stewardship agreements include biobanking agreements under Part 7A of the Threatened Species Conservation Act 1995 that are taken to be biodiversity stewardship agreements under Part 5 of the Biodiversity Conservation Act 2016.*

## 10A. Native vegetation clearing set asides

***Is the land, land that contains a set aside area under section 60ZC of the Local Land Services Act 2013?***

Council has not been notified that the land contains a set aside area.

## 11. Bush fire prone land

***Is the land bush fire prone land?***

No.

***SPECIAL NOTE:*** Bush fire prone land is defined in section 4 of the Environmental Planning and Assessment Act 1979 as meaning "land recorded for the time being as bushfire prone land on a bush fire prone land map for the area". The "area" is the local government area of Ku-ring-gai.

## 12. Property vegetation plans

***Is the land, land to which a property vegetation plan under Native Vegetation Act 2003 applies?***

Council has not been notified that the land is subject to an approved property vegetation plan.

## 13. Orders under Trees (Disputes between Neighbours) Act 2006

***Is the land, subject to an order under the Tree (Disputes between neighbours) Act 2006 to carry out work in relation to a tree on the land?***

Council has not been notified that the land is subject to such an order.

## 14. Directions under Part 3A

***Is the land, land subject to a direction under Part 3A Section 75P(2)(c1) of the Environmental Planning and Assessment Act 1979 No.203?***

No.

## 15. Site Compatibility certificates and conditions for seniors housing

***Is there a current site compatibility certificate (seniors housing), of which council is aware, in respect of proposed development on the land issued under clause 24 of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?***

The land is not subject to such a current site compatibility certificate (seniors housing) of which Council is aware.

## **16. Site Compatibility certificates for infrastructure, schools or TAFE establishments**

***Is there a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools and TAFE establishments), of which council is aware, in respect of proposed development on the land?***

The land is not subject to such a valid site compatibility certificate (infrastructure) of which Council is aware.

## **17. Site Compatibility certificates and conditions for affordable rental housing**

***Is there a current site compatibility certificate (affordable rental housing), of which council is aware, in respect of proposed development on the land issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?***

The land is not subject to such a current site compatibility certificate (affordable rental housing) of which Council is aware.

## **18. Paper subdivision information**

***Is the land, land subject to a development plan adopted by a relevant authority, land proposed to be subject to a consent ballot or land subject to a subdivision order?***

Not applicable.

***SPECIAL NOTE:*** Words and expressions used in this item have the same meaning as they have in Part 16C of the Environmental Planning and Assessment Regulation 2000.

## **19. Site verification certificate**

***Is there a current site verification certificate, of which council is aware, in respect of the land issued under clause 17C of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007?***

The land is not subject to a current site verification certificate of which Council is aware.

***SPECIAL NOTE:*** A site verification certificate sets out the Secretary's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land – see Division 3 of Part 4AA of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

## 20. Loose-fill asbestos insulation

***Does the land include any residential premises (within the meaning of Division 1A of Part 8 of the Home Building Act 1989) that are listed on the register that is required to be maintained under that Division?***

NSW Fair Trading has not provided Council with written confirmation that this property is listed on the Loose-Fill Asbestos Insulation Register.

***SPECIAL NOTE:*** Some residential homes located in the Ku-ring-gai Local Government Area have been identified as containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

*You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.*

For further information about the Loose-fill asbestos Public Register contact NSW Fair Trading. Tel: 13 32 20 or [www.loosefillasbestos.nsw.gov.au](http://www.loosefillasbestos.nsw.gov.au).

## 21. Affected building notices and building product rectification orders

***(1) Is there any affected building notice of which council is aware that is in force in respect of the land?***

No.

***(2) Is there any building product rectification order of which council is aware that is in force in respect of the land and has not been fully complied with?***

No.

***(3) Has any notice of intention to make a building product rectification order of which council is aware has been given in respect of the land and is outstanding?***

No.

***SPECIAL NOTE:*** The terms "affected building notice" and "building product rectification order" have the same meaning as in the Building Products (Safety) Act 2017.

**The following matters are prescribed by Section 59(2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate.**

**(a) *Is the land to which this certificate relates significantly contaminated land within the meaning of that Act?***

No.

**(b) *Is the land to which this certificate relates subject to a management order within the meaning of that Act?***

No.

**(c) *Is the land to which this certificate relates subject to an approved voluntary management proposal within the meaning of that Act?***

No.

**(d) *Is the land to which this certificate relates subject to an ongoing maintenance order within the meaning of that Act?***

No.

**(e) *Is the land of which this certificate relates subject to a site audit statement within the meaning of the Act?***

No.

**SPECIAL NOTE:** *If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Environmental Protection Authority. Tel: 131 555 or email [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au).*

## THE FOLLOWING INFORMATION IS ISSUED UNDER SECTION 10.7(5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

### ***Land Slip or Subsidence:***

Council records do not have sufficient information to indicate land slip or subsidence is likely to restrict development on this land. However, some lots in Ku-ring-gai Local Government Area contain filling and/or road batters which may be subject to settlement and require special consideration in the design of foundations.

---

### ***Flooding:***

Some properties in the Ku-ring-gai Local Government area contain or adjoin natural drainage paths, pipelines, watercourses and depressions. During major rainfall or blockage of the drainage system surface water may affect the site or restrict future development.

***SPECIAL NOTE:*** *The Department of Planning and Environment and the Department of Commerce have not indicated any private property which may be affected by flooding of major rivers or creeks in the Ku-ring-gai Local Government Area.*

---

### ***Loose-fill asbestos insulation:***

Some residential homes located in the Ku-ring-gai Local Government Area have been identified as containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

*For further information about the Loose-fill asbestos Public Register please contact NSW Fair Trading. Tel: 13 32 20 or [www.loosefillasbestos.nsw.gov.au](http://www.loosefillasbestos.nsw.gov.au).*

---

### ***Contamination:***

Council records do not have sufficient information relating to any previous uses of this land to confirm that the land has not been used for a purpose which would be likely to have contaminated the land. Parties should make their own enquiries as to whether the land may be contaminated.

---

### ***Threatened species, populations and ecological communities:***

This land may contain threatened species, populations and ecological communities listed under the *Biodiversity Conservation Act 2016 (NSW)* and or the *Environment Protection Biodiversity Conservation Act 1999 (Commonwealth)*. For more information contact NSW Office of Environment and Heritage Tel: 131 555 or the Australian Government Department of Environment and Energy Tel: 1800 803 772.

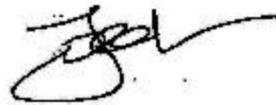
This land may contain one or more of the following endangered or critically endangered ecological communities listed under Schedule 2 of the *Biodiversity Conservation Act 2016*

(NSW):

Blue Gum High Forest in the Sydney Basin Bioregion,  
Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East  
Corner Bioregions,  
Coastal Upland Swamp in the Sydney Basin Bioregion,  
Duffys Forest Ecological Community in the Sydney Basin Bioregion,  
Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and  
South East Corner Bioregions,  
Sydney Turpentine Ironbark Forest.

For more information contact NSW Department of Environment & Heritage. Tel:131 555 or email  
[info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au) <<mailto:info@environment.nsw.gov.au>>

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**John McKee**  
General Manager



# Loose-fill asbestos insulation register

Listen ([https://app-oc.readspeaker.com/cgi-bin/rsent?customerid=7371&lang=en\\_au&readid=page-content&url=https://www.fairtrading.nsw.gov.au/loose-fill-asbestos-insulation-register](https://app-oc.readspeaker.com/cgi-bin/rsent?customerid=7371&lang=en_au&readid=page-content&url=https://www.fairtrading.nsw.gov.au/loose-fill-asbestos-insulation-register))

## Look up the premises address

Please enter exact address information (including street type) of the address you wish to search (Note, the search fields are not case sensitive).

If a match is found, the premises has been identified as containing loose-fill asbestos insulation.

Results will only appear if an exact match of an address is found.

(The fields marked with \* are required.)

**No Match Found** - A search match was not found in the Loose-fill Asbestos Insulation Register

Address searched: 130 killeaton Street St Ives

**This information is correct at the time of the search**

<b>Unit</b>	<input type="text"/>
<b>Street number*</b>	<input type="text"/>
<b>Street name*</b>	<input type="text"/>
<b>Street type*</b>	<input type="text" value="Alley"/>
<b>Suburb*</b>	<input type="text"/>
<b>Postcode</b>	<input type="text"/>

Submit