

# Phase 1 Environmental Site Assessment Hollylea Road Leumeah NSW

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**Document control log**

Rev	Date	Comments	Prepared by	Reviewed by	Approved by
A	23 Oct 2018	Draft for Client Review	FJ	KW	AB
B	7 Feb 2019	Final Report	FJ	KN	MB

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## GLOSSARY OF TERMS

Term	Meaning
ACM	Asbestos Containing Materials
AOC	Areas of Concern
ASRIS	Australian Soil Resource Information System
AST	Aboveground Storage Tanks
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CLM Act	Contaminated Land Management Act 1997
COPC	Chemicals of Potential Concern
DP	Deposited Plan
EPA	Environmental Protection Authority
EPL	Environment Protection Licence
ESA	Environmental Site Assessment
ha	hectare
km	kilometre
LEP	Local Environmental Plan
m	metre
Northrop	Northrop Consulting Engineers Pty Ltd
NSW	New South Wales
OC	Organochlorine
OP	Organophosphates
PAH	Polycyclic Aromatic Hydrocarbon
POEO Act	Protection of the Environment Operations Act 1997
SEPP 55	State Environmental Planning Policy No. 55
SNC-Lavalin	SNC-Lavalin Australia Pty Ltd
SP	Strata Plan
the client parties	Michael Brown Planning Strategies
TRH	Total Recoverable Hydrocarbon
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

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## EXECUTIVE SUMMARY

SNC-Lavalin Australia Pty Ltd (SNC-Lavalin) was engaged by Northrop Consulting Engineers Pty Ltd (Northrop) to undertake a Phase 1 Environmental Site Assessment (Phase 1 ESA) for Hollylea Road, Leumeah NSW.

The subject site has a total area of approximately 3.9 hectares (ha) and is currently occupied with industrial service and industrial retail outlets (i.e. mechanical repair workshops, car body spray painting activities, trailer manufacturing workshops) which includes but not limited to vehicle sales or hire premises, hardware and building supplies, restaurants, pet care service and warehouse or distribution centres. In this report, the individual lots of the subject site are also described as distinct smaller 'sites' as per the table below.

Site	Lot Numbers	Site	Lot Numbers
1	Lot 3 and Lot 4 DP 258315	8	Lot 27 DP 611186
2	Lot 12 DP 845149	9	Lot 127 DP 575482
3	Lot 16 DP 623923	10	Lot 125 DP 575481
4	SP 70043 – Unit 1	11	Lot 9 DP 234601
5	SP 70043 – Unit 2	12	Lot 301 DP 621274
6	SP 70043 – Unit 3	13	SP 52179
7	SP 70043 – Unit 4	14	Lot 1 DP 565611

The subject site is currently zoned 'B5 Business Development' under the Campbelltown Local Environmental Plan (LEP) 2015. Northrop have proposed to rezone the subject site to 'B4 Mixed Use' with intention of developing the subject site for a mixture of retail and residential use(s). The development would compass the construction of a mixed use retail and residential building which includes a 7 or more residential levels with a ground level for retail stores/food outlets and a basement level carpark.

Under State Environmental Planning Policy No 55 (SEPP 55), Council's consent to rezoning (Clause 6) requires the applicant to prepare and submit a site contamination report.

It is understood that a site contamination report has not yet been prepared for the subject site with this Phase 1 ESA report intended to inform the rezoning application process. The contents of this report are in compliance with the Contaminated Land Management (CLM) Act 1997.

This Phase 1 ESA had the following objectives:

- > To assess the potential for past or current activities to have contaminated the site;
- > To identify Areas of Concern (AOC) and Contaminants of Potential Concern (COPC) that maybe associated with past or current activities;
- > To provide a determination of whether the subject site is suitable for rezoning to 'B4 Mixed Use' in accordance with Clause 6 of SEPP 55 or the necessity for a Phase 2 ESA to make that determination; and
- > To undertake a preliminary geotechnical investigation and a set of recommendations relevant to the proposed rezoning.

The scope of work comprised the following:

- > Desktop review of subject site and immediately surrounding areas as far as land use/s, history and environmental setting;

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- > Undertake a site inspection to document current site condition and potentially contaminating activities of the subject site and immediately surrounding areas as well as confirm the nature of topography, surface soils and drainage in the area;
- > Prepare a Phase 1 ESA report in accordance with the content requirements of the CLM Act and its associated guidelines, with note to the Guidelines for Consultants Reporting on Contaminated Sites (NSW OEH 2011); and
- > Preliminary geotechnical investigation and development of recommendations relevant to the proposed rezoning.

Based upon the subject site inspection and historical review, the following past or current activities may have contaminated the subject site:

- > Use of uncontrolled fill materials to establish site levels (Site 1 and Site 8);
- > Use of pesticides beneath and around all areas of hardstand or building perimeters (all sites);
- > Uncontrolled stockpiling and storage of wastes (Site 1, Site 8 and Site 12);
- > Operation of mechanical workshops;
  - Oil / grease spills on hardstand (Site 6, Site 7 and Site 12);
  - Oil / water separator (Site 3 and Site 6); and
  - Bulk storage of fuel and lubricants in aboveground storage tank and/or underground storage tank (former storage on Site 6 and Site 13, Site 12).
- > Fuel / lubricant dispensing and capture areas (Site 2, Site 8);
- > Wash bays and oil / water separation (Site 3, Site 8, Site 12 and Site 13);
- > Potential weathering of hazardous materials (i.e. ACM) of site structures (Site 2, Site 8, Site 10 and Site 12); and
- > Storages of paints, solvents, cleaners and lubricants (Site 6, Site 8 and Site 12-14).

Change of zoning from 'B5 Business Development' to 'B4 Mixed Use' does change the risk profile associated with the site, in terms of site contamination issues:

- > The subject site is currently zoned 'B5 Business Development' and current land use/s have been evaluated as a potential significant risk of harm to either human health or surrounding sensitive ecological receptors within a 500 metre (m) radius;
- > The unknown nature and extent of contamination levels in soils and/or groundwater makes the land unsuitable for commercial and industrial use. Further investigation is needed to delineate the nature and extent of contamination levels;
- > The permitted land uses of the proposed rezoning options are overall more sensitive in a contaminated land context (e.g. more opportunity for accessible soils as a result of residential land use and or hydrocarbon soil vapour issues as a result of the intended basement car park areas) which can potentially increase the risk profile of sensitive areas; and
- > All newly proposed land uses and or developments must be approved by Council as part of the planning approval process under the EP&A Regulations 2000.

The current land use / s of the subject site represents a potential significant risk of harm to either human health or surrounding sensitive ecological receptors within a 500 m radius. The unknown nature and extent

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of contamination levels in soils and/or groundwater means further assessment and possibly site management is required in order to confirm the land is suitable for mixed use (i.e. commercial / residential).

On that basis a determination of the suitability of the subject site in relation to its proposed rezoning to 'B4 Mixed Use' zoning cannot be made until the nature and extent of soil and groundwater contamination has been determined. This should be done through a Phase 2 ESA that has been undertaken in accordance with the CLM Act and the associated guidelines, in particular the National Environment Protection (Assessment of Site Contamination) Measure as varied 2011 and the Guidelines for Consultants Reporting on Contaminated Sites (NSW OEH 2011).

Geotechnical site investigations will be required for any development to be constructed at the subject site. The scope of investigation will be dependent upon the type of development proposed, number of storeys, depth of basement, intensity of structural loading, anticipated foundation type etc.

Typically for high rise developments with basements the scope of investigation should comprise a programme of rotary cored boreholes to depths below the proposed level of bulk excavation. Standpipes should be installed in boreholes to determine standing groundwater levels and laboratory testing should be undertaken on representative samples of soil and rock.

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# 1 INTRODUCTION

## 1.1 BACKGROUND

### 1.1.1 Site Identification

SNC-Lavalin Australia Pty Ltd (SNC-Lavalin) was engaged by Northrop Consulting Engineers Pty Ltd (Northrop) to undertake a Phase 1 Environmental Site Assessment (Phase 1 ESA) for Hollylea Road, Leumeah, New South Wales (NSW) (refer to Figure 1 for the subject site location). The site comprises of ten commercial lots and two strata plans (refer to Table 1 for site details). The subject site is bounded by Hollylea Road, Bow Bowling Creek and Plough Inn Road in Leumeah, NSW (refer to Figure 2 for deposited plans / lots and strata plans numbers).

**Table 1: Site Details**

Site	Lot Numbers	Site	Lot Numbers
1	Lot 3 and Lot 4 DP 258315	8	Lot 27 DP 611186
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6	SP 70043 – Unit 3	13	SP 52179
7	SP 70043 – Unit 4	14	Lot 1 DP 565611

The subject site has a total area of approximately 3.9 hectares (ha) and is currently occupied by industrial service and industrial retail outlets (i.e. mechanical repair workshops, car body spray painting activities, trailer manufacturing workshops), including but not limited to: vehicle sales or hire premises, hardware and building supplies, restaurants, pet care service and warehouse / distribution centres.

This Phase 1 ESA is intended to inform a proposal for rezoning of the subject site (refer to Section 1.1.2). The rezoning of the subject site is being undertaken by Northrop on behalf of Michael Brown Planning Strategies (the client parties).

### 1.1.2 Planning Context

The subject site is currently zoned 'B5 Business Development' under the Campbelltown Local Environmental Plan (LEP) 2015. Northrop have proposed to rezone the subject site to 'B4 Mixed Use', with the intention of developing the subject site for a mixture of retail and residential use(s). The development would include the construction of a minimum seven storey building. The basement level will include a car park, the ground level will include retail stores / food outlets and the remainder of the building will be for residential purposes (Department Planning and Environment 2017).

The key aspects associated with the current and proposed land uses include (refer to Table 2) the following:

- > Slight differences in terms of permitted land use activities;
- > Slight differences in terms of the nature of the permitted structures / facilities; and
- > The permitted land uses of the proposed rezoning options are overall more sensitive in a contaminated land context (e.g. more opportunity for accessible soils as a result of residential land use and or hydrocarbon soil vapour issues as a result of the intended basement car park areas) which can potentially increase the risk profile of sensitive areas.

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Table 2 below outlines the existing permitted land uses under each zoning type for Campbelltown Local Council.

**Table 2: Permitted Land Uses (Campbelltown 2015a)**

Zoning	Permitted Land Use Activities (requiring Council Consent)
B5 Business Development (Current)	Amusement centres; Backpackers' accommodation; Bulky goods premises; Car parks; Centre-based child care facilities; Community facilities; Depots; Environmental protection works; Flood mitigation works; Funeral homes; Garden centres; Hardware and building supplies; Highway service centres; Hotel or motel accommodation; Industrial retail outlets; Industrial training facilities; Landscaping material supplies; Light industries; Mortuaries; Passenger transport facilities; Places of public worship; Plant nurseries; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restaurants or cafes; Restricted premises; Roads; Rural supplies; Self-storage units; Service stations; Serviced apartments; Sex services premises; Signage; Small bars; Take away food and drink premises; Vehicle sales or hire premises; Veterinary hospitals; Warehouse or distribution centres; Wholesale supplies
B4 Mixed Use (Proposed)	Amusement centres; Boarding houses; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Function centres; Helipads; Home businesses; Home occupations; Hotel or motel accommodation; Information and education facilities; Medical centres; Mortuaries; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Serviced apartments; Shop top housing; Signage; Veterinary hospitals

### 1.1.3 Regulatory Requirements

Under State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55), Council's consent to rezone (Clause 6) requires the applicant to prepare a report specifying the findings of a preliminary investigation of the land carried out in accordance with the contaminated land planning guidelines.

It is understood that such a report has not yet been prepared for the subject site. As such, this Phase 1 ESA is intended to inform the rezoning application process. The contents of this report are in compliance with the Contaminated Land Management Act 1997 (CLM Act).

## 1.2 OBJECTIVES

The objectives of this Phase I ESA include:

- > To assess the potential for past or current activities to have contaminated the site;
- > To identify areas of concern (AOC) and contaminants of potential concern (COPC) that may have been associated with past and / or current activities;
- > To provide a determination of whether the subject site is suitable for rezoning to 'B4 Mixed Use' in accordance with Clause 6 of SEPP 55 or the necessity for a Phase 2 ESA to make that determination; and
- > To undertake a preliminary geotechnical investigation and a set of recommendations relevant to the proposed rezoning.

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### 1.3 SCOPE OF WORK

The scope of work comprised the following:

- > Desktop review of the subject site and the immediate surrounding areas including land use / s, history and environmental setting;
- > Undertake a site inspection to investigate current site conditions and potentially contaminating activities of the subject site and surrounding areas as well as confirm the nature of topography, surface soils and drainage in the area;
- > Prepare a Phase 1 ESA in accordance with the CLM Act and the associated guidelines, in particular the Guidelines for Consultants Reporting on Contaminated Sites (NSW OEH 2011); and
- > Preliminary geotechnical investigation and development of recommendations relevant to the proposed rezoning.

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## 2 SURROUNDING LAND USES AND ZONING

Surrounding land uses and zoning under the LEP currently comprise of the following (refer to Figure 3 and 4) zoning information obtained from Google Earth (Google Earth 2017) and Campbelltown Land Zoning Maps (Campbelltown 2015a and Campbelltown 2015b).

- > North:
  - Predominately light commercial facilities zoned as 'B5 – Business Development' in the immediate north to north-western region of the subject site, comprising of restaurants, accommodations services, commercial automotive parts and mechanical repair workshops located along Airs Road corridor for approximately 200 metres (m).
- > West:
  - Predominately light commercial facilities consisting mainly of restaurants, commercial stores for hardware and building supplies. These are currently zoned as 'B5 – Business Development' and are located on the other side of Hollylea Road. Campbelltown Road is located approximately 150 m west of the subject site.
- > South:
  - Bow Bowing Creek runs immediately adjacent to south-eastern boundary of the subject site. The railway tracks connecting between Leumeah and Campbelltown Train Station that run parallel along the opposite creek bank is zoned generally as 'SP2 – Infrastructure'. Predominately suburban residential housings zoned as 'R3 – Medium Density Residential' are situated approximately 300 m further south of the subject site.
- > East:
  - Car park zoned as B2 – Local Centre is situated on the opposite side of Bow Bowing Creek approximately 50 m away from the subject site. Leumeah Train Station is located immediately adjacent to the car park along the railway tracks, zoned generally as 'SP2 – Infrastructure'. Various commercial facilities comprised of pharmacy, groceries store and restaurants are located approximately 200 m east of the subject site.

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### 3 SITE HISTORY

The site history summary provided in the following sections is based upon the following:

- > Historical information available on the public record (Campbelltown City Council 2015); and
- > Historical aerial photo review (refer to
- > Table 3 and copies of historical aerial photos in Appendix A).

#### 3.1 LOCAL SITE HISTORY

In 1816, approximately 260 acres of land in the Leumeah region was owned by John Warby, one of the convict explorers transported to Sydney, NSW. Warby named his estate, 'Leumeah' after the Aboriginal phrase for 'Here I Rest'. Leumeah's township began to grow in 1887 with the construction of the railway station. However, signs of civilisations in the area was still thinly sprinkled with thick bushland and grazing land dominated the eastern slopes and southern regions of Leumeah (Campbelltown City Council 2015).

It was not until 1926 when the first major land subdivision of Leumeah was seen, with 320 acres placed on the market by John Patrick King, a family who had acquired most of the area at the time (Campbelltown City Council 2015). The estate has been subdivided into '119 allotments comprising business sites near the station, large home allotments and choice farmlets up to seven acres in area'. However, the Great Depression has deferred substantial growth in the area up until after World War II, where the subdivision was marketed again.

At the start of the 1950s, Leumeah Progress Association acquired about 12 acres of land for the development of a local park named "Orana Park". This became home ground of the Campbelltown Kangaroos Rugby League team in 1970, being modernised as Campbelltown's best sports complex. By 1987, it was home of the Western Suburbs Magpies and three years later, it was renamed Campbelltown Sportsground (Campbelltown City Council 2015). It should be noted this sport complex area is located approximately 550 m east from the subject site.

By the mid-1950s, the earliest suburban estates were developed by converting farmlets into suburban lots, near the railway line and Rudd Road. It should be noted that this area is located approximately 250 m south of the subject site. The development continued in 1959 where the village's rural backblocks were converted to a residential zoning (Campbelltown City Council 2015).

The Geographical Names Board officially endorsed Leumeah as the suburb name in 1969 and was described as "one of the most promising development areas within the city boundaries" in the media (Campbelltown City Council 2015). The early 1970s saw developers turn their eyes to the open grassy hills in the north, which had great views, spacious reserves and quality homes. This area is located 800 m east of the subject site and is currently dominated with residential housing, schools and few commercial facilities.

Much of Leumeah's growth and development has steadily increased throughout the 1900's until present. The 1970's also saw a number of new streets such as Airds Road and Hollylea Road created as part of the industrial estate. Hollylea Road used to follow the path Campbelltown Road had once taken, before it was re-routed closer to Woodbine in 1979.

#### 3.2 SUBJECT SITE HISTORY

The land that the subject site is situated on was once a large open space until the 1960's, mostly used as farm land for grazing horses and cattle. The southern area of the subject site has been used as mechanical repair workshops (Site 8, Site 12 and Site 13) since the late 1960's. Previous uses of the subject site comprised of a former service station, garages and potential underground storage tanks (USTs) as informed by the site inspection (pers. Comm. Rod Clantar, 17 September 2018) until fuel inventory was ceased in

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1980's. It was also informed that the forecourt of the mechanical workshop (Site 12) in the southern area of the subject site was built in 1960s and extended into the backcourt in 1990's.

From late 1970's, the whole corridor of the subject site became part of a small industrial estate comprising of warehouses and mechanical workshops. The warehouse (Site 10) was built between 1970's and 1980's. The hardware warehouses (Site 4) was first built in 1990, and renovated in 2003 (pers. Comm. Steve Collins 17 September 2018). It appears that Site 13 operated as a vehicle dealership in 1980s and mechanical workshops in 1982 (pers. Comm. Rod Clantar, 17 September 2018), where fuel storage tanks were present in the car yards in 1990s. The remainder of the subject site have been developed into light commercials (i.e. automotive parts, restaurants) in early 2000s (specifically Site 2 to Site 7).

The following aspects are evident from the 1950's until the current day in relation to land uses surrounding the site:

> To the North:

- In the 1950s and 1960s, the area was predominantly open pasture, used as typical farm land for grazing horses and cattle;
- It is clear that in the 1980s, there has been a surge in residential buildings as most of the open space land in north-western area is no longer visible (refer to Historical Aerial Photographs – 1984);
- Since 1990s, the north of the subject site became predominant with light commercial developments (i.e. warehouses) (refer to Historical Aerial Photographs – 1994). Up until the present day, most of the northern area has remained the same; and
- Current – light commercials and residential areas

> To the East:

- In the 1950s, the area was predominantly open pasture, used as typical farm land for grazing horses and cattle. The area comprised of the railway line that was built in 1887 on the eastern boundary of the subject site (refer to Historical Aerial Photographs – 1951);
- By the 1960s, the suburban residential land development was predominant in areas east of the subject site (refer to Historical Aerial Photographs – 1965);
- By the 1980s, few light commercial development had occurred (e.g. car parks, sports complex, local community) within 500 m to the east (refer to Historical Aerial Photographs – 1984); and
- Current – predominantly infrastructure (e.g. car parks) immediately east of the subject site with residential buildings land use further east.

> To the South:

- In the 1950's, the area was predominantly open pasture, used as typical farm land for grazing horses and cattle. The area comprised a few residential buildings of low density structures within 500 m in close proximity to railway line (refer to Historical Aerial Photographs – 1951);
- By the 1970's, the suburban residential land development was predominant in areas south-east of the subject site (refer to Historical Aerial Photographs – 1975); and
- Current – relatively unchanged suburban residential areas.

> To the West:

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- In the 1950's, the area was predominantly open pasture, used as typical farm land for grazing horses and cattle. The area comprised few residential buildings of low density structures within 500 m in close proximity to current Campbelltown Road (refer to Historical Aerial Photographs – 1951);
- By the 1960's, light commercial development had occurred immediately west of the site with rural properties with relatively dormant land use further west (refer to Historical Aerial Photographs – 1965);
- By the 1990's, a significant amount of light commercial development had occurred further west of the subject site (refer to Historical Aerial Photographs – 1994); and
- Current – Predominantly light commercials.

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**Table 3: Historical Aerial Photo Review**

Year	Key Site Features	Beyond the Site Boundary			
		North	South	East	West
1951	Predominantly vacant open land and no shed structures are visible	Predominantly an open pasture, used for grazing	Predominantly an open pasture, used for grazing. It appears that the railway line has already been present. (Confirmed as the railway line was built in 1887)	Predominantly an open pasture, used for grazing (mowing lines are visible)	Predominantly an open pasture, used for grazing
1965	Predominantly vacant open land. First shed structure is evident in the north-eastern corner of the site	Same as previous	An increase in the development of residential buildings. Buildings seems to generally be low density structure.	An increase in the development of residential buildings. Buildings seems to generally be low density structure.	Few light commercial buildings were built in the immediate west of the site
1975	Same as previous	Same as previous	Continuing development of residential buildings in the immediate south of the site, with suburban residential development predominating in the further south	Increased development of residential buildings	Same as previous
1984	An increase in the development of light commercial buildings (i.e. warehouses and mechanical workshops) in the southern section of the site	Boat storage facility is evident in the immediate north of the site. Increased development of residential buildings in the further north	Same as previous	Car park development to the immediate north-east of the site. Sports complex was also developed in the further north-east of the site	Two well-structured commercial buildings present in the immediate west of the site
1994	An increase in the development of light commercial buildings (i.e. warehouses and mechanical workshops) in the southern section and north-eastern corner of the site	Increased development of light commercial buildings and well-structured public roads	Increased residential buildings	Well-structured car parks and light commercial buildings evident	Increased development of commercial buildings in the immediate west and further west of the site

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**Table 3 (continued): Historical Aerial Photo Review**

Year	Key Site Features	Beyond the Site Boundary			
		North	South	East	West
2005	Predominantly commercial buildings (i.e. mechanical workshops, warehouses and restaurants)	Increased development of light commercial buildings and well-structured public roads	Same as previous	Same as previous	Same as previous
2017	Predominantly commercial buildings (i.e. mechanical workshops, warehouses and restaurants)	Increased development of light commercial buildings	Same as previous	Same as previous	Same as previous

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### 3.3 REGULATORY BODY RECORDS SEARCH

#### 3.3.1 NSW Environmental Protection Authority (EPA)

A search of the NSW EPA Contaminated Land Public Register for record of notices (maintained under Section 58 of the CLM Act) was undertaken on 3 September 2018. The search results are provided in Appendix B. These results infer the following in relation to the subject site and surrounding areas of Leumeah (NSW Environmental Protection Agency 2018):

- > No Orders made under Part 3 of the CLM Act;
- > No Approved voluntary management proposals under the CLM Act that have not been fully carried out and where the approval of the EPA has not been revoked; and
- > Three former notices were been issued in 1992 by the EPA under Section 35 of the Environmentally Hazardous Chemicals Act 1985 in relation to a contaminated chemical storage site located on 62 Blaxland Road, of which two notice has been revoked. In addition, it should be noted that contaminated site is located approximately 2 kilometers (km) away from the subject site on levelled elevation.

A search of the NSW EPA public register of licence, applications and notices [maintained under Section 308 of the Protection of the Environment Operations Act 1997 (POEO Act)] was undertaken on 3 September 2018. The search results are provided in Appendix C. These results infer the following in relation to the subject site and surrounding areas of the suburb of Leumeah (NSW OEH):

- > No Environmental Protection Licence (EPL) issued by the EPA;
- > No penalty notices issued by the EPA; and
- > No convictions or prosecutions under the POEO Act.

A search of the NSW EPA public register of contaminated sites notified to NSW EPA under Section 60 of the CLM Act was undertaken on 3 September 2018. Search results are provided in Appendix D. These results infer that there is one contaminated land site currently known to the NSW EPA in relation to the subject site and surrounding areas of the suburb of Leumeah (NSW Environmental Protection Agency 2018a):

- > There is one service station on 6 Rudd Road located approximately 400 m south from the subject site.

### 3.4 PREVIOUS SITE CONTAMINATION INVESTIGATION REPORTS

There are no known contamination site investigation report / s associated with the subject site.

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## 4 ENVIRONMENTAL SETTING

### 4.1 TOPOGRAPHY AND DRAINAGE

The following summary is based upon the site inspection and review of elevation data and contour map information (Google Earth 2017).

The natural topography suggests that the subject site is gently sloping towards stormwater drainage / unsealed canal immediately beyond the eastern boundary in north-west to south-east direction. The drainage reflects natural topography of the subject site towards the eastern boundary.

The subject site has the following engineering controls for drainage control and to protect surface water quality:

- > **Site 6**
  - Drainage comprises of a collection pit and oil / water separator draining to the sewerage based on Trade Waste Licence Agreements with Sydney Water (refer to Photographic Plate 25 and 28).
- > **Site 8 and 12**
  - Area of poorer drainage as suggested by the presence of unsealed surfaces near wash bay and absence of oil / water separator (refer to Photographic Plate 42).

### 4.2 GEOLOGY AND SOILS

#### 4.2.1 Geology

A review of the Wollongong - Port Hacking 1:100,000 scale map for the area, Geological Series Sheet 9029-9129 (Geological Survey of NSW, Department of Mineral Resource 1985) indicates that site is underlain by the Ashfield Shale of the Wianamatta Group of rocks. The Ashfield Shale is described as dark grey to black, sideritic claystone-siltstone which grades upwards into a fine sandstone-siltstone laminite.

Underlying the Ashfield Shale is the Mittagong Formation, this division consists of fine grained quartzose Sandstone interbedded with dark grey Siltstone and Laminite. Finally, the Hawkesbury Sandstone underlies the Mittagong Formation.

#### 4.2.2 Soils

A review of the Wollongong – Port Hacking 1:100,000 scale map of the area, Soil Landscape Series Sheet 9029-9129 (Hazelton.P and Tillie.P 2010) indicates that the site is situated on potentially Residual Soil of Blacktown or Colluvial Landscape of Hawkesbury given the scale of the site and the adjacent waterway. A description of the physical and chemical characteristics of the soil types are provided below (Chapman and Murphy 1989).

#### Residual Soil of Blacktown

- > Friable brownish-black loam: friable brownish-black loam to clay loam with moderately sub-angular blocky clusters. Colour is commonly brownish-black but can range from dark reddish-brown to dark yellowish-brown and is usually the topsoil. Rounded iron indurated fine gravel-sized shale fragments and charcoal fragments are sometimes present.
- > Hardsetting brown clay loam: hard brown clay loam to silty clay loam with massive to weakly pedals and slowly porous earthy fabric. Colour is commonly dark brown, but can range from dark reddish-brown to dark brown. Platy ironstone gravel-sized shale fragments are common.
- > Strongly pedal, mottled brown light clay: a brown light to medium clay with strongly pedal polyhedral or sub angular-blocky structure. Colour is usually brown, but may range from reddish-brown to brown.

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Red, yellow or grey mottles are commonly present and often become more numerous with depth. Fine to coarse gravel-sized shale fragments are common and widespread and often occur in stratified bands.

- > Light grey plastic mottled clay: plastic light grey silty clay to heavy clay with moderately sub-angular blocky structure. Colour is usually light grey or, less commonly, greyish yellow. Red, yellow or grey mottles are common. Strongly weathered ironstone concretions and rock fragments are common. Gravel-sized shale fragments are occasionally present.

#### Colluvial Landscape of Hawkesbury

- > Loose, coarse quartz sand: a sand to sandy loam of fine grained structure and porous sandy fabric. Colour varies from brownish-black when abundant organic matter is present, to dull yellow orange, the colour often becomes lighter with depth. Weakly weathered sandstone fragments may be present.
- > Earthy, yellowish-brown sandy clay loam: a clayey sand to sandy clay loam massive to occasionally weakly pedal structure. Common colours range from yellow orange to bright yellowish-brown to yellowish-brown. Large sub-angular pedals along with gravels, stones and ironstone-plated sandstone fragments are common.
- > Pale, strongly pedal light clay: a fine sandy clay loam to medium clay with frequent pedal structure occurrence. Structure is strongly pedal when dry and a pedal when saturated. Pedal range in size from 20 mm to 60 mm and are sub-angular blocky to angular blocky in shape. Colours are most often pale, but can vary according to site drainage characteristics. Colour ranges from bright reddish-brown in well drained areas to a light grey in poorly drained areas. Red, orange and grey mottles are often present.

#### 4.2.3 Occurrence of Acid Sulfate Soils

Australian Soil Resource Information System (ASRIS) and NSW Government Planning Portal suggest that there is an extremely low probability of occurrence of acid sulfate soils within 500 m radius of the subject site.

### 4.3 HYDRO-GEOLOGY AND BENEFICIAL GROUNDWATER USE

A perched aquifer is likely to be present within the fore mentioned soils strata, underlain with the Ashfield Shale bedrock. The depth of the water table and depth to bedrock at the site is unknown and further geotechnical investigation may be needed. Groundwater flow is likely to follow site topography, flowing in a north-westerly to south-easterly direction given the presence of the stormwater canal located to the east of the site.

There are no registered boreholes within 500 m of the subject site based upon a registered bore water search (WaterNSW 2018).

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## 5 SITE INSPECTION

A site inspection was undertaken by Andrew Botfield and Florence Jeong on 17 September 2018. The purpose of the site inspection was to confirm the environmental setting information and the current and / or former potentially contaminating activities.

The subject site comprises of an unoccupied space, restaurants, mechanical repair workshops, warehouses, beer brewing shed, dog grooming services, window tinting facilities and trailer hire / repair workshops. The buildings generally comprise of a mix of brick, timber, gyprock and potential bonded asbestos containing materials (ACM).

Key aspects noted over the course of the site inspection include the following:

- > Readily observable gross contamination (e.g. oil spills) at a limited number of site surfaces (i.e. Site 6 near the oil capture pit and historical oil stains on Site 7 and Site 12);
- > Unknown fill materials present to establish levels (i.e. Site 1 and Site 8);
- > Presence of surface expressions of USTs or ASTs (i.e. Site 8 and Site 13);
- > Readily observable waste materials and/or detritus in unoccupied space or backcourt of the site (all areas of Site 1, at the rear of the Site 8 and Site 12);
- > Readily observable oil/water separator, oil capture pit and wash bays in mechanical workshops (oil / grease trap on Site 2, former oil / water separator and wash bay on Site 3, oil / water separator and capture pit on Site 6 and Site 12, wash bay on Site 8 and Site 13);
- > Potential ACM panelling in structures (i.e. eaves, canopy and roofs) observable on the roof of Site 2, the canopy and eaves of Site 8 and the eaves and site surfaces of Site 10;
- > Limited quantities of fuels, solvents, paints and lubricants (i.e. Site 6, Site 8, Site 12-14);
- > Confirmation that surrounding land uses are as described in Section 2; and
- > Confirmation that topography and drainage are as described in Section 4.1.

A summary of the site inspection findings is presented in Table 4. Photographs from the site inspection are presented in Photographic Plate section of the report. Site plans for Site 6 and 8 presented in Figure 5 and Figure 6 of the report illustrates the locations of potential contaminating activities.

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**Table 4: Site Inspection Summary**

Site	Physical Attributes	Potential Contaminating Activities and/or Point Sources of Contamination that were Present	Key Information Gaps
<b>Site 1</b>  2A Hollylea Road, Leumeah (Lot 3/4 DP 258315)	<ul style="list-style-type: none"> <li>&gt; Unoccupied site being used as laydown areas for bricks, shipping containers, and significant amounts of solid wastes (e.g. mix of timber, steel, concrete, plastics, disused cooking/catering equipment, synthetic wools and PVC pipes) (refer to Photographic Plate 4 to 12);</li> <li>&gt; Used as storage sheds for neighbouring Outback Steakhouse restaurant;</li> <li>&gt; Limited area of hardstand in western boundary due to stockpiling of various materials;</li> <li>&gt; Timber wall and warehouse structure with fencing and stoned floor observed to be in absence of readily absorbable asbestos materials (refer to Photographic Plate 7);</li> <li>&gt; Absence of fuel / chemical storage, chemical stains/odour and electrical infrastructure;</li> <li>&gt; An areas of gravel at the southern end; and</li> <li>&gt; Topography suggests a slope from north-eastern direction towards drainage channel in the eastern boundary of the site.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Uncontrolled stockpiling of solid wastes in all areas of the site (i.e. that can potentially contaminate the site); and</li> <li>&gt; Unknown fill materials.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination of the natural soils beneath the hardstand; and</li> <li>&gt; Previous land use.</li> </ul>
<b>Site 2</b>  2A Hollylea Road, Leumeah (Lot 12 DP 845149)	<ul style="list-style-type: none"> <li>&gt; Currently used as restaurant (Outback Steakhouse), comprising brick and timber structure (refer to Photographic Plate 13);</li> <li>&gt; Building structures and materials observed to be present since 20 to 25 years ago;</li> <li>&gt; Site surface includes a sealed bitumen car park;</li> <li>&gt; Absence of bulk fuel storages, chemical stains and odour.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Oil and grease trap on the north-east corner of the site (adjacent to cool room); and</li> <li>&gt; Potential bonded ACM panelling roof (refer to Photographic Plate 13).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils and groundwater beneath the hardstand;</li> <li>&gt; The restaurant was not accessible, where limited potential contamination sources may be present;</li> </ul>

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**Table 4 (continued): Site Inspection Summary**

Site	Physical Attributes	Potential Contaminating Activities and/or Point Sources of Contamination that were Present	Key Information Gaps
<b>Site 3</b>  2 Hollylea Road, Leumeah (Lot 16 DP 623923)	<ul style="list-style-type: none"> <li>&gt; Welding equipment and repair areas, comprising packs of equipment and small quantities of contained chemicals on site (refer to Photographic Plate 15);</li> <li>&gt; Approximately 6 inches of gravel concrete hardstand in good condition (pers. Comm. David Bird, 17<sup>th</sup> September 2018), with no presence of spills and stain; and</li> <li>&gt; No signs of potential ACM, panelling in the roof, chemical stains and odour;</li> </ul>	<ul style="list-style-type: none"> <li>&gt; In the south-east, there is an oil and water separator and former wash bay on hardstand (observed to be in good condition with no signs of staining or cracks) (refer to Photographic Plate 19 to 21). Former wash bay was not utilised for ten years.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils and groundwater adjacent/beneath the oil/water separator and former wash bay.</li> </ul>
<b>Site 4</b>  Unit 1/4A Hollylea Road, Leumeah (SP 70043)	<ul style="list-style-type: none"> <li>&gt; United Tools - Warehouse</li> <li>&gt; Concrete hardstand and infrastructure are in good condition (refer to Photographic Plate 22);</li> <li>&gt; Topography suggests drainage to south and west from the front of site, and east from the back of site; and</li> <li>&gt; Absence of potential ACM.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; None apparent</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand.</li> </ul>
<b>Site 5</b>  Unit 2/4A Hollylea Road, Leumeah (SP 70043)	<ul style="list-style-type: none"> <li>&gt; Used as beer brewing sheds.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; None apparent</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Facility where potential contamination sources may be present was not accessible.</li> </ul>

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**Table 4 (continued): Site Inspection Summary**

Site	Physical Attributes	Potential Contaminating Activities and/or Point Sources of Contamination that were Present	Key Information Gaps
<b>Site 6</b>  Unit 3/4A Hollylea Road, Leumeah (SP 70043)	<ul style="list-style-type: none"> <li>&gt; Fairly recent building constructed around 2003, operating as a mechanical workshop (Len Voss Automatics);</li> <li>&gt; Good condition hardstand (free from cracks) (refer to Photographic Plate 24); and</li> <li>&gt; Gyprock panelling with absence of potential ACM.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Storage of small amounts of lubricants, oil and grease;</li> <li>&gt; Interception pit (oil capture pit) in the southern-east corner which links to an oil / water separator located at the back of the workshop (refer to Photographic Plate 25 and 28);</li> <li>&gt; Oil/water separator draining to sewerage in the basis of Trade Waste Licence Agreements with Sydney Water;</li> <li>&gt; Small oil spill present on the southern-east corner (refer to Photographic Plate 25); and</li> <li>&gt; One 300 – 400 L lubricant tanks and storage of lubricants present in the southern-east corner (refer to Photographic Plate 27).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils/groundwater near the oil/water separator and drainage pit;</li> </ul>
<b>Site 7</b>  Unit 4/4A Hollylea Road, Leumeah (SP 70043)	<ul style="list-style-type: none"> <li>&gt; Used as Campbelltown Service Centre</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Historical oil stains observed on forecourt concrete hardstand near the entrance of the site (refer to Photographic Plate 30).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Facility was not accessible, but likely to have oil capture pit that may have potential contamination; and</li> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand</li> </ul>

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**Table 4 (continued): Site Inspection Summary**

Site	Physical Attributes	Potential Contaminating Activities and/or Point Sources of Contamination that were Present	Key Information Gaps
<b>Site 8</b>  27 Hollylea Road, Leumeah (Lot 27 DP 611186) (refer to Figure 6 for site plan)	<ul style="list-style-type: none"> <li>&gt; Jarrad Autos – mechanical workshop;</li> <li>&gt; A 1.0 m thick unknown fill horizon observed to establish site levels with neighbouring SP 70043 (refer to Photographic Plate 33);</li> <li>&gt; In the north-western corner of the forecourt, there is a mix of hardstand with gravelled surfaces in poor condition.</li> <li>&gt; Two hardstand islands on the centre of the site;</li> <li>&gt; No fuel inventory since 1980s;</li> <li>&gt; Poorly maintained building materials throughout site;</li> <li>&gt; Panel workshops at the central northern area of site;</li> <li>&gt; Topography observed is relatively flat;</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Surface expressions of USTs (i.e. six fuel points) at the forecourt of site and south of canopy (west of toilets) (refer to Photographic Plate 32);</li> <li>&gt; Presumed ACM underneath tiles and cladding on service station canopy and eaves of the roof and building (refer to Photographic Plate 34);</li> <li>&gt; Remnants of former fuel pump (refer to Photographic Plate 35, 36 and 41)</li> <li>&gt; Old air conditioning units inside the storage sheds and significant numbers of fluorescent lighting (refer to Photographic Plate 37);</li> <li>&gt; Small quantity of unbanded chemical storage (refer to Photographic Plate 39, 43); and</li> <li>&gt; Wash bay oil/water separator, unsealed surfaces and storage of vehicles and mechanical part wastes (refer to Photographic Plate 42, 44 to 49, 53).</li> </ul> <p>At the rear of the property (refer to Photographic Plate 44 to 49):</p> <ul style="list-style-type: none"> <li>&gt; Storage of used chemical containers;</li> <li>&gt; Two stockpiles of approximately 40 – 50 cubic metres (m<sup>3</sup>) in southern-east corner;</li> <li>&gt; Uncontrolled dumping of used chemical drums and solid wastes were evident; and</li> <li>&gt; Vehicles and small volumes of chemicals such as coolants, spray paints and degreaser observed on east side of property.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand and tiles; and</li> <li>&gt; Unknown location and volume of USTs and ASTs.</li> </ul>

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**Table 4 (continued): Site Inspection Summary**

Site	Physical Attributes	Potential Contaminating Activities and/or Point Sources of Contamination that were Present	Key Information Gaps
<b>Site 9</b>  6 Hollylea Road, Leumeah (Lot 127 DP 575482)	<ul style="list-style-type: none"> <li>&gt; Secured storage yards for trucks; and</li> <li>&gt; Mix of hardstand materials (e.g. asphalt and concrete).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; None apparent</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand and tiles; and</li> <li>&gt; Facility was not accessible, where limited potential contamination sources may be present.</li> </ul>
<b>Site 10</b>  8 Hollylea Road, Leumeah (Lot 125 DP 575481)	<ul style="list-style-type: none"> <li>&gt; Warehouse storage unit built in 1970s or 1980s;</li> <li>&gt; Surface comprises asphalt and grass;</li> <li>&gt; The topography reflects natural contours; and</li> <li>&gt; No fill observed;</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Potential ACM on eaves and site surfaces (refer to Photographic Plate 55); and</li> <li>&gt; Observed to be former mechanics and automotive repair workshops (Len Voss Automatics) (refer to Photographic Plate 57).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand and tiles; and</li> <li>&gt; Facility was not accessible, where limited potential contamination sources may be present.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; Window film and tinting facilities; and</li> <li>&gt; No surface expressions observed for USTs or ASTs.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Potential ACM on window structures and eaves (refer to Photographic Plate 58).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand.</li> </ul>
<b>Site 11</b>  10 Hollylea Road, Leumeah (Lot 9 DP 234601)	<ul style="list-style-type: none"> <li>&gt; Open space with concrete surfaces and grassed areas.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; None apparent</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils/groundwater beneath the concrete hardstand</li> </ul>

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**Table 4 (continued): Site Inspection Summary**

Site	Physical Attributes	Potential Contaminating Activities and/or Point Sources of Contamination that were Present	Key Information Gaps
<b>Site 12</b>  10 Hollylea Road, Leumeah (Lot 301 DP 621274)	<ul style="list-style-type: none"> <li>&gt; Dog grooming service centre at the forecourt.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; None apparent (refer to Photographic Plate 64)</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand.</li> </ul>
	<ul style="list-style-type: none"> <li>&gt; Automotive mechanical workshops (Extone Automotive) at the rear of site.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Storage tanks of oil and lubricants present;</li> <li>&gt; Old tyres, mechanical parts wastes, unbanded chemical storage present on site (refer to Photographic Plate 59 to 62);</li> <li>&gt; Poor condition of concrete hardstand where historical lubricant is apparent on surface;</li> <li>&gt; HardieFlex ceiling and roof that may contain ACM (refer to Photographic Plate 63);</li> <li>&gt; Oil and water capture present but no oil/water separator; and</li> <li>&gt; Vehicle wash-down activities at the rear of the building with no oil and water capture or trade waste agreement linked to sewer.</li> </ul>	
<b>Site 13</b>  12 Hollylea Road (SP 52179)	<ul style="list-style-type: none"> <li>&gt; RENO Smash Repairs</li> <li>&gt; Concrete hardstand, absence of significant stains;</li> <li>&gt; No surface expressions of USTs or ASTs;</li> <li>&gt; Parked vehicles at the rear of the building; and</li> <li>&gt; Warehouse of car body parts.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Fuel storage tank in 1990s in car yard area;</li> <li>&gt; Solvents, hardener, paints and jet wash present at workshop area (refer to Photographic Plate 65 and 66);</li> <li>&gt; Wash bay at south east corner; and</li> <li>&gt; Storage of detergents at rear of building.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand.</li> </ul>
<b>Site 14</b>  14 Hollylea Road (Lot 1 DP 565611)	<ul style="list-style-type: none"> <li>&gt; Used for trailer hire and repairs (Move Yourself) (manufacturing and metal fabrication facilities at the rear of site (refer to Photographic Plate 67, 69);</li> <li>&gt; Topography observed is drainage to south; and</li> <li>&gt; Site surface consists of gravel, grass and asphalt.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Storage of chemicals at rear of site (refer to Photographic Plate 68).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Nature and extent of potential contamination to natural soils beneath the concrete hardstand.</li> </ul>

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## 6 CONCEPTUAL SITE MODEL

### 6.1 PAST OR CURRENT ACTIVITIES THAT MAY HAVE CONTAMINATED THE SUBJECT SITE

The following past or current activities that may have contaminated the subject site include:

- > Use of uncontrolled fill materials to establish site levels (Site 1 and Site 8);
- > Use of pesticides beneath and around all areas of hardstand or building perimeters;
- > Uncontrolled stockpiling and storage of wastes (Site 1, Site 8 and Site 12);
- > Operation of mechanical workshops;
  - Oil / grease spills on hardstand (Site 6, Site 7, Site 12);
  - Oil / water separator (Site 3, Site 6); and
  - Bulk storage of fuel and lubricants in aboveground storage tank and / or underground storage tank (former storage on Site 6 and Site 13, Site 12).
- > Fuel / lubricant dispensing and capture areas (Site 2, Site 8);
- > Wash bays and oil / water separator (Site 3, Site 8, Site 12 and Site 13);
- > Potential weathering of hazardous materials (i.e. ACM) of the site structures (Site 2, Site 8, Site 10 and Site 12); and
- > Storages of paints, solvents, cleaners and lubricants (Site 6, Site 8, Site 12 to 14).

### 6.2 AREAS OF POTENTIAL CONCERN (AOPC)

Table 5 provides a summary of areas of potential concern (AOPC) for the subject site. It is based upon the activities described in Section 6.1 that may have contaminated the subject site.

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**Table 5: Areas of Potential Concern**

Past or Current Activities that may have Contaminated the Site	Areas of Concern (AOC)	Contaminants of Potential Concern (COPC)
<ul style="list-style-type: none"> <li>&gt; Use of uncontrolled fill materials to establish site levels</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Southern-end of Site 1 in relation to fill and immediately underlying natural soils; and</li> <li>&gt; An approximate 1 m thick unknown fill horizon observed in Site 8 to establish site levels with neighbouring SP 70043 (Sites 4 to 7) (refer to Photographic Plate 33).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Asbestos;</li> <li>&gt; Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);</li> <li>&gt; Petroleum hydrocarbons (TRH, BTEX and PAH); and</li> <li>&gt; OC and OP pesticides.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; Use of pesticides beneath and around building perimeters</li> </ul>	<ul style="list-style-type: none"> <li>&gt; All areas of hardstand or buildings.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; OC and OP pesticides.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; Uncontrolled stockpiling and disposal of waste</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Whole area of Site 1 (refer to Photographic Plate 4 to 12);</li> <li>&gt; Storage of vehicles and mechanical parts wastes, empty chemical containers and drums at the rear of the property in Site 8 (refer to Photographic Plate 44 to 48 and 53); and</li> <li>&gt; Old tyres and mechanical parts waste in Site 12 (refer to Photographic Plate 59 and 60).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Asbestos;</li> <li>&gt; Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);</li> <li>&gt; Petroleum hydrocarbons (TRH, BTEX and PAH); and</li> <li>&gt; OC and OP pesticides.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; Operation of mechanical workshops including:               <ul style="list-style-type: none"> <li>- Oil spills on hardstand</li> <li>- Oil / water separator</li> <li>- Bulk storage of fuel and lubricants in the aboveground or underground storage tanks</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>&gt; Drainage collection pit (oil capture pit), small oil spillage and lubricant tanks in the southern-east corner of the site and oil / water separator in the backcourt in Site 6 (refer to Photographic Plate 25 to 28);</li> <li>&gt; Oil stains on forecourt concrete hardstand in Site 7;</li> <li>&gt; Surface expressions of USTs with the presence of six fuel points in the north-western corner of the forecourt and south of the canopy and west of the toilets in Site 8 (refer to Photographic Plate 32);</li> <li>&gt; Large oil, lubricant storage tanks and oil / water capture, apparent historical lubricant on hardstand in Site 12; and</li> <li>&gt; Former fuel storage tank in 1990s in car yard area in Site 13.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Petroleum hydrocarbons (TRH, BTEX and PAH).</li> </ul>

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**Table 5 (continued): Areas of Potential Concern**

Past or Current Activities that may have Contaminated the Site	Areas of Concern (AOC)	Contaminants of Potential Concern (COPC)
<ul style="list-style-type: none"> <li>&gt; Fuel / lubricant dispensing and capture areas</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Oil / grease trap on the northern-east corner, adjacent to the cool room in Site 2 (refer to Photographic Plate 14); and</li> <li>&gt; Artefact fuel pumps, bowsers and lines in Site 8 (refer to Photographic Plate 31, 32, 34-36 and 40-42).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Petroleum hydrocarbons (TRH, BTEX and PAH).</li> </ul>
<ul style="list-style-type: none"> <li>&gt; Wash bays and oil / water separator</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Oil / water separator and former wash bay in southern area of the Site 3 (refer to Photographic Plate 19 to 21);</li> <li>&gt; Wash bay at the rear of the property in Site 8 (refer to Photographic Plate 42);</li> <li>&gt; Vehicle wash down areas at the rear of the building in Site 12; and</li> <li>&gt; Wash bay at the southern east corner of Site 13.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Petroleum hydrocarbons (TRH, BTEX and PAH).</li> </ul>
<ul style="list-style-type: none"> <li>&gt; Potential weathering of hazardous building materials (i.e. ACM) of site structures</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Bonded ACM on the roof in Site 2 (refer to Photographic Plate 13);</li> <li>&gt; Potential ACM panelling on canopy, eaves of the roof and underneath the tiles in Site 8 (refer to Photographic Plate 34, 38);</li> <li>&gt; Potential ACM on window structures in window tinting facilities in Site 10 (refer to Photographic Plate 58); and</li> <li>&gt; HardiFlex ceiling and roof potentially containing asbestos in Site 12 (refer to Photographic Plate 63).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Asbestos.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; Storages of paints, solvents, cleaners and lubricants</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Whole area of Site 6 (refer to Photographic Plate 26);</li> <li>&gt; Coolants, spray paints and degreaser east of the property in Site 8 (refer to Photographic Plate 50);</li> <li>&gt; Unbundled chemical storage in Site 12 (refer to Photographic Plate 61);</li> <li>&gt; Solvents, hardener, paints and gun wash at the workshop area and detergents at the rear of the building in Site 13 (refer to Photographic Plate 65, 66); and</li> <li>&gt; Storage of chemicals at the back of Site 14 (refer to Photographic Plate 68).</li> </ul>	<ul style="list-style-type: none"> <li>&gt; VOCs;</li> <li>&gt; Petroleum hydrocarbons (TRH, BTEX and PAH);</li> <li>&gt; Surfactants; and</li> <li>&gt; Various biodegradable inorganic chemicals (e.g. bleach, glass cleaner, detergents etc.).</li> </ul>

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6.3      **POTENTIAL HUMAN AND ECOLOGICAL RECEPTORS AND PATHWAYS**

Table 6 provides a summary of potential human and ecological reception pathways for the subject site.

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**Table 6: Potential Human and Ecological Receptor Pathways**

Site	Areas of Concern (AOC)	Chemicals of Potential Concern (COPC)	Human Receptors	Probable Complete Receptor Pathways	Sensitive Ecological Receptors within 500 m	Probable Complete Receptor Pathways	Comments
All sites	Use of pesticides under and around building perimeters and hardstand	OC and OP pesticides	Occupants / site users	<ul style="list-style-type: none"> <li>&gt; Dermal contact</li> <li>&gt; Direct ingestion</li> <li>&gt; Inhalation</li> </ul>	Bow Bowing Creek is in the immediate eastern boundary of the site	Impacted groundwater flow to stormwater drainage	As Bow Bowing Creek is immediately next to the subject site, a significant risk of pesticides being transmitted into the waterway.
1	Fill materials and immediately underlying natural soils in the southern end	Asbestos, heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (TRH, BTEX and PAH), OC and OP pesticides	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	The fill materials are well maintained.
	Uncontrolled stockpiling / disposal of wastes					Disposal of wastes into the waterway	The Bow Bowing Creek is immediately next to the subject site.
2	Oil and grease trap on the northern-east corner of the subject site, adjacent to cool room	Petroleum hydrocarbons (TRH, BTEX and PAH)	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	No readily observable signs of oil and grease spills or leaks.
	Bonded ACM on roof	Asbestos		NIL		NIL	As the ACMs are well maintained (i.e. painted with no friable asbestos present and no fragments observed on surfaces), they do not represent a significant risk in terms of the generation of air borne fibres.

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**Table 6 (continued): Potential Human and Ecological Receptor Pathways**

Site	Areas of Concern (AOC)	Chemicals of Potential Concern (COPC)	Human Receptors	Probable Complete Receptor Pathways	Sensitive Ecological Receptors within 500 m	Probable Complete Receptor Pathways	Comments
3	Oil / water separator and former wash bay in southern area	Petroleum hydrocarbons (TRH, BTEX and PAH)	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	The wash bay has not been utilised for 10 years and shows good hardstand condition, which does not represent a significant risk of contamination currently.
6	Drainage collection pit (oil capture pit), small oil spillage and lubricant tanks in the southern-east corner of the site and oil/water separator in the backcourt	Petroleum hydrocarbons (TRH, BTEX and PAH)	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	The collection pit was located near the oil and lubricant storage. Small oil spills were observed near the pit, which increases the possibility of oil draining into the stormwater drainage. However, they have Trade Waste Agreement with Sydney Water which reduces the risk.
	Storages of paints, solvents, cleaners and lubricants	VOCs, petroleum hydrocarbons (TRH, BTEX and PAH), surfactants and various biodegradable inorganic chemicals (e.g. bleach, glass cleaner, detergents etc.)		NIL		NIL	Limited mass loadings of chemicals of concern and there were no signs of gross spillage or poorly kept storage
7	Oil stains on forecourt concrete hardstand	Petroleum hydrocarbons (TRH, BTEX and PAH)	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	Historical oil stains

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**Table 6 (continued): Potential Human and Ecological Receptor Pathways**

Site	Areas of Concern (AOC)	Chemicals of Potential Concern (COPC)	Human Receptors	Probable Complete Reception Pathways	Sensitive Ecological Receptors within 500 m	Probable Complete Reception Pathways	Comments
8	A 1.0 m thick unknown fill horizon observed to establish site levels with neighbouring SP 70043 (Site 4, 5, 6, 7)	Asbestos, heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (TRH, BTEX and PAH), OC and OP pesticides	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	The fill materials are well maintained.
	Storage of vehicles and mechanical parts wastes, empty chemical containers and drums at the rear of the property			NIL		Disposal of wastes into the waterway	The creek is immediately next to the site, having high potential of dumping into waterway.
	Surface expressions of USTs with six fuel points in the north-western corner of the forecourt and south of the canopy and west of the toilets	Petroleum hydrocarbons (TRH, BTEX and PAH)		NIL		Seepage into natural underlying soils / groundwater	Former USTs may have potential leakage into underlying soils.
	Wash bay at the rear of the property			NIL			No appropriate sewerage system equipped on site.
	Potential asbestos containing cladding on canopy, eaves of the roof	Asbestos		> Inhalation		NIL	The fibro materials are observed on the eaves of the roof, which may represent potential risks to human health.
	Coolants, spray paints and degreaser at the east of the property	VOCs, petroleum hydrocarbons (TRH, BTEX and PAH), surfactants and various biodegradable inorganic chemicals (e.g. bleach, glass cleaner, detergents etc.)		NIL		NIL	Limited mass loadings of chemicals of concern and there were no signs of gross spillage or poorly kept storage

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**Table 6 (continued): Potential Human and Ecological Receptor Pathways**

Site	Areas of Concern (AOC)	Chemicals of Potential Concern (COPC)	Human Receptors	Probable Complete Receptor Pathways	Sensitive Ecological Receptors within 500 m	Probable Complete Receptor Pathways	Comments
10	Potential ACM on window structures in window tinting facilities	Asbestos	Occupants / site users	> Inhalation	Bow Bowing Creek is in the immediate eastern boundary of the site	NIL	The ACM are observed on the window, which may represent potential risks to human health.
12	Old tyres and mechanical parts wastes	Asbestos, heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (TRH, BTEX and PAH), OC and OP pesticides	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site	Disposal of wastes into the waterway	The creek is immediately next to the site, having high potential of dumping into waterway.
	Large oil, lubricant storage tanks and oil/water capture, apparent historical lubricant on hardstand	Petroleum hydrocarbons (TRH, BTEX and PAH)		NIL		Impacted underlying soils and groundwater into waterway	Poor condition of hardstand with observable cracks may provide pathways for seepage when leaks occur.
	Vehicle wash down areas at the rear of the building			NIL		Impacted underlying soils and groundwater into waterway	Drains directly into the drain without any treatment.
	HardiFlex ceiling and roof potentially containing asbestos	Asbestos		NIL		NIL	As the ACM are well maintained, they do not represent a significant risk in terms of the generation of air borne fibres.
	Unbundled chemical storage	VOCs, petroleum hydrocarbons (TRH, BTEX and PAH), surfactants and various biodegradable inorganic chemicals (e.g. bleach, glass cleaner, detergents etc.)		> Dermal contact > Direct ingestion		Impacted underlying soils and groundwater into waterway	Signs of spillage

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**Table 6 (continued): Potential Human and Ecological Receptor Pathways**

Site	Areas of Concern (AOC)	Chemicals of Potential Concern (COPC)	Human Receptors	Probable Complete Receptor Pathways	Sensitive Ecological Receptors within 500 m	Probable Complete Receptor Pathways	Comments
13	Former fuel storage tank in 1990s in car yard area	Petroleum hydrocarbons (TRH, BTEX and PAH)	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site.	Impact the immediately underlying surface soils	The exact location of the tank is unknown but represent a potential contamination.
	Wash bay at the southern east corner			NIL		Impacted groundwater / surface water to stormwater drainage	Wash bay located near the eastern boundary (immediate to the creek), which poses a risk of drainage into the waterway
	Solvents, hardener, paints and gun wash at the workshop area and detergents at the rear of the building	VOCs, petroleum hydrocarbons (TRH, BTEX and PAH), surfactants and various biodegradable inorganic chemicals (e.g. bleach, glass cleaner, detergents etc.)		<ul style="list-style-type: none"> <li>&gt; Dermal contact</li> <li>&gt; Direct ingestion</li> <li>&gt; Inhalation</li> </ul>		Impacted groundwater / soils through seepage	Poorly kept storage of solvents and paint with observable spillage on hardstand.
14	Storage of chemicals at the back of the site	VOCs, petroleum hydrocarbons (TRH, BTEX and PAH), surfactants and various biodegradable inorganic chemicals (e.g. bleach, glass cleaner, detergents etc.)	Occupants / site users	NIL	Bow Bowing Creek is in the immediate eastern boundary of the site.	NIL	Limited mass loadings of chemicals of concern and there were no signs of gross spillage or poorly kept storage

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## 7 LAND USE IMPLICATIONS

### 7.1 CURRENT LAND USES

The current land use / s of the subject site represent a potential significant site contamination risk of harm to either human health or surrounding sensitive ecological receptors within a 500 m radius. The unknown nature and extent of contamination levels in soils and / or groundwater means further assessment and possibly site management is required in order to confirm the land is suitable for mixed use (i.e. commercial / residential).

### 7.2 CHANGE OF ZONING FROM B5 BUSINESS DEVELOPMENT TO B4 MIXED USE

Change of zoning from 'B5 Business Development' to 'B4 Mixed Use' increases the risk profile associated with the proposed basement and residential land use, in terms of site contamination issues.

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## 8 PRELIMINARY GEOTECHNICAL INVESTIGATION

It is understood that high rise developments with basements may be constructed at the subject site following rezoning. The following discussion highlights some geotechnical considerations that will be relevant to construction in the Ashfield Shale geology, as outlined in Section 4.2.

### 8.1 ROCK MASS CLASSIFICATION

Commonly encountered rock mass units within the Ashfield Shale are typically classified based on the rock classification system for Shale and Sandstone in the Sydney Region, developed by Pells et al (1998). The classification system, which was developed for foundations, is based on rock strength, defect spacing and allowable seams. The system consists of five classes of shale with Class I comprising the strongest, most competent rocks and Class V comprising the weakest, least competent rocks.

### 8.2 EXCAVATION CONDITIONS

Conventional plant such as bulldozers, hydraulic excavators and backhoes should be adequate for the excavation of any soils that may be encountered at the subject site. Similar plant may be suitable for excavating Class V Shales. Excavations in Class IV to Class I / II Shale / Sandstone may require ripping using a single type of a CAT D9 or D10 or equivalent. Dilapidation surveys should be carried out on adjacent services and structures prior to excavation. Vibration monitoring of sensitive structures may be required.

### 8.3 EXCAVATION SUPPORT FOR BASEMENTS

Excavation support methods for basements could include sheet piled walls, contiguous bored piled walls, secant bored piled walls or diaphragm walls. The actual method to be selected will depend upon the findings of geotechnical site investigations and the depth of the proposed basements.

Ground movements can occur as a result of perimeter wall installation, deflection of retention systems during bulk excavation, drilling for ground anchors, lowering of the groundwater table through seepage into excavations and stress relief of rocks following bulk excavation. Soil / structure interaction analyses should be undertaken to assess magnitudes of movement and possible impacts on adjacent properties and services based upon the support method and construction sequencing to be adopted.

### 8.4 GROUND ANCHORS AND STRUT SYSTEMS

Consideration should be given to the type of anchor and strut system that may be required to support basement excavations. External anchoring systems would avoid the internal obstructions that would occur with bracing systems. However, anchor lengths may need to be relatively long to develop the required load capacity in soils (therefore extending beneath adjacent properties and roads) or have to be inclined steeply to anchor into rock. Anchors with their bond zone in the shale bedrock will achieve significantly higher capacities and stiffness compared to soil anchors.

### 8.5 FOOTING SYSTEMS

High level strip or pad footings bearing onto the residual soils or shale rocks should be suitable for supporting surface structures at the subject site. Pad footing bearing onto the shale or sandstone rocks at the base of basement excavations should be suitable for carrying column loads for developments with basements, subject to site investigation and bearing capacity and settlement assessments.

Bored piles or continuous flight auger piles are typically used in Ashfield Shale to support heavily loaded or sensitive structures.

### 8.6 GROUNDWATER

Due to the generally fine grained nature of the Ashfield Shale and overlying residual soil, groundwater inflows into excavations are often not large. Localised inflows do occur where perched water bodies in

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more permeable ground are present. Fractured rock at the top of the weathered shale could give rise to groundwater inflows locally.

Groundwater in the shale and sandstone will typically be influenced by the openness and connectivity of the rock mass defects. Geotechnical site investigation will be necessary to assess the permeability of materials at the subject site and determine suitable groundwater control methods.

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## 9 CONCLUSIONS AND RECOMMENDATIONS

Change of zoning from 'B5 Business Development' to 'B4 Mixed Use' does change the risk profile associated with the subject site.

In terms of contamination issues at the subject site:

- > The subject site is currently zoned 'B5 Business Development' and current land use / s have been evaluated as a potential significant risk of harm to either human health or surrounding sensitive ecological receptors within a 500 m radius;
- > The unknown nature and extent of contamination levels in soils and / or groundwater makes the land unsuitable for commercial and industrial use. Further investigation is needed to delineate the nature and extent of contamination levels;
- > The permitted land uses of the proposed rezoning options are overall more sensitive in a contaminated land context (e.g. more opportunity for accessible soils as a result of residential land use and or hydrocarbon soil vapour issues as a result of the intended basement car park areas) which can potentially increase the risk profile of sensitive areas; and
- > All newly proposed land uses and / or developments must be approved by Council as part of the planning approval process under the EP&A Regulations 2000.

The current land use / s of the subject site represents a potential significant risk of harm to either human health or surrounding sensitive ecological receptors within a 500 m radius. The unknown nature and extent of contamination levels in soils and / or groundwater means further assessment and possibly site management is required in order to confirm the land is suitable for mixed use (i.e. commercial / residential).

On that basis, a determination of the suitability of the subject site in relation to its proposed rezoning to 'B4 Mixed Use' zoning cannot be made until the nature and extent of soil and groundwater contamination has been determined. This should be done through a Phase 2 ESA that has been undertaken in accordance with the CLM Act and the associated guidelines, in particular the National Environment Protection (Assessment of Site Contamination) Measure as varied 2011 and the Guidelines for Consultants Reporting on Contaminated Sites (NSW OEH 2011).

Geotechnical site investigations will be required for any development to be constructed at the subject site. The scope of investigation will be dependent upon the type of development proposed; number of storeys, depth of basement, intensity of structural loading, anticipated foundation type etc.

Typically for high rise developments with basements the scope of investigation should comprise a programme of rotary cored boreholes to depths below the proposed level of bulk excavation. Standpipes should be installed in boreholes to determine standing groundwater levels and laboratory testing should be undertaken on representative samples of soil and rock.

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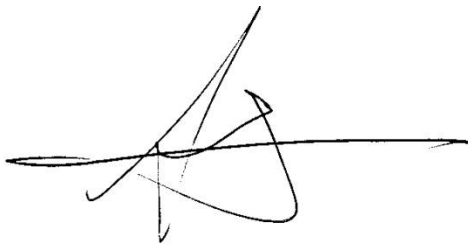
## 10 CLOSURE

This report presents the findings of a Phase 1 ESA for Hollylea Road, Leumeah NSW.

I trust that this information satisfies your requirements. If you require any further assistance, please do not hesitate to contact me by telephone on 0407 390 585 or by email at [andrew.botfield@snclavalin.com](mailto:andrew.botfield@snclavalin.com)

Yours sincerely

**SNC-LAVALIN AUSTRALIA PTY LTD**



Andrew Botfield  
PhD Environmental Engineering  
Team Leader – Geo-Environmental

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## FIGURES

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Figure 1: Subject Site Location with 500 m Radius Outlined





Figure 2: Deposit Plans / Lots and Strata Plan numbers for the Subject Site (excerpt from Six Maps)





Figure 3: Campbelltown LEP Land Zoning Map - Sheet LZN\_008

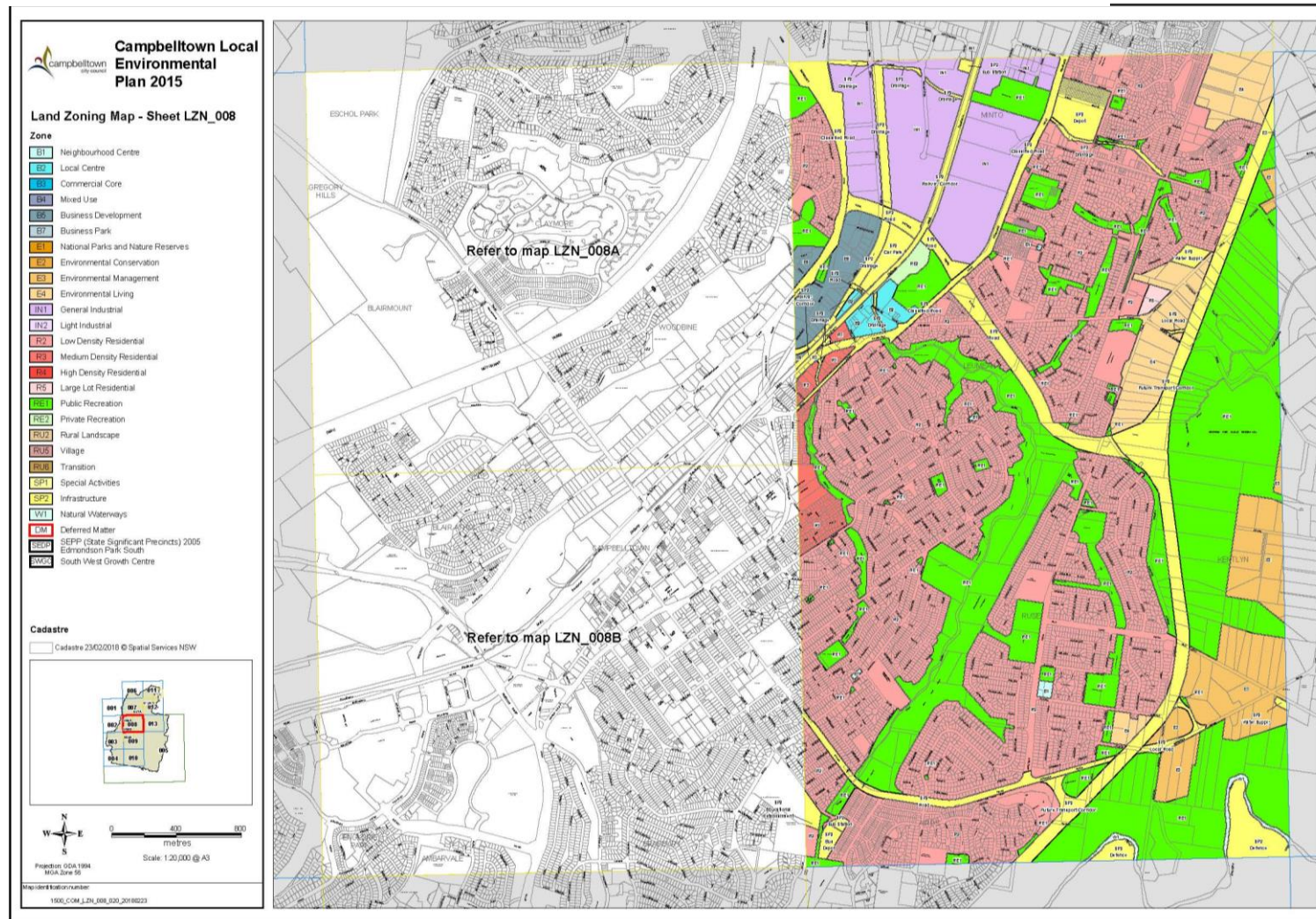


Figure 4: Campbelltown LEP Land Zoning Map - Sheet LZN\_008A

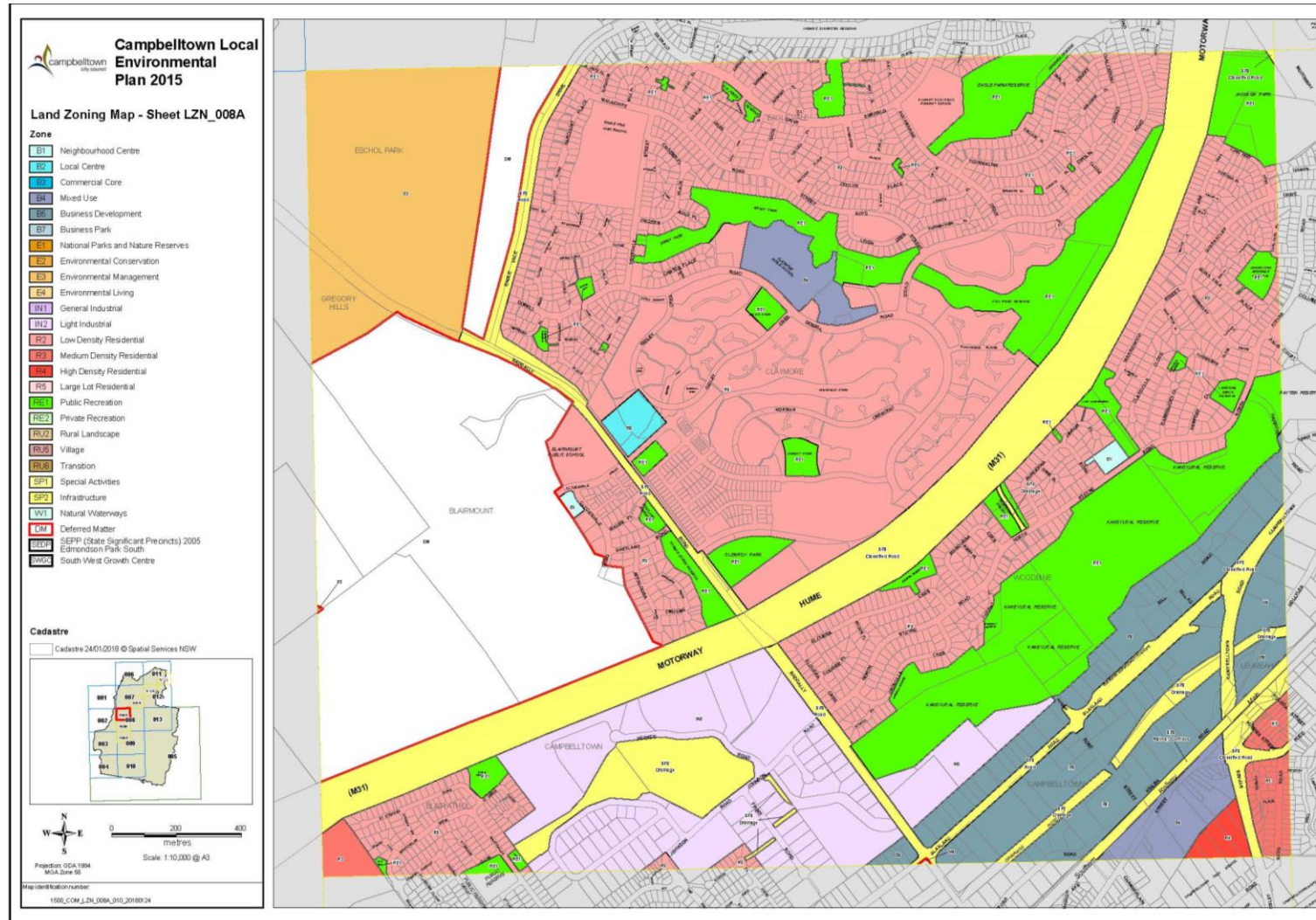




Figure 5: Site Plan of Site 6





Figure 6: Site Plan of Site 8



## PHOTOGRAPHIC PLATES

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**PHOTOGRAPHIC PLATE 1**  
Light commercial areas to the north of subject site, view from northern boundary.

**PHOTOGRAPHIC PLATE 2**  
Bow Bowling Creek to the east of subject site, view from northern boundary and  
Leumeah Train Station beyond the creek.



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#### PHOTOGRAPHIC PLATE 3

Lot 3/4 DP 258315 - Small warehouse structure on the western end of the subject site, view from eastern boundary.

#### PHOTOGRAPHIC PLATE 4

Lot 3/4 DP 258315 – Pile of general solid waste (non-putrescible) comprising of bricks, wooden pallets, plastic debris situated adjacent to site structure.



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#### PHOTOGRAPHIC PLATE 5

Lot 3/4 DP 258315 – General solid waste (non-putrescible) comprising of hot water tank, plastic and steel storage items, and other miscellaneous items adjacent to site structure.

#### PHOTOGRAPHIC PLATE 6

Lot 3/4 DP 258315 – General solid waste (non-putrescible) comprising of wood and steel sheets, plastic storage items and other miscellaneous items within site structure.



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#### PHOTOGRAPHIC PLATE 7

Lot 3/4 DP 258315 – Other miscellaneous items within site structure. Structure is timber trusses and corrugated iron sheet as roofing.

#### PHOTOGRAPHIC PLATE 8

Lot 3/4 DP 258315 – Unknown fibrous (potentially asbestos insulation) material located outside site structure.



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PHOTOGRAPHIC PLATE 9  
Lot 3/4 DP 258315 – Southern boundary

PHOTOGRAPHIC PLATE 10  
Lot 3/4 DP 258315 - General solid waste (non-putrescible) comprising of wood and  
steel beams, corrugated iron sheets and plastic hose



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PHOTOGRAPHIC PLATE 11  
Lot 3/4 DP 258315 - General solid waste (non-putrescible) comprising of PVC pipes and other miscellaneous items

PHOTOGRAPHIC PLATE 12  
Lot 3/4 DP 258315 - General solid waste (non-putrescible) comprising wooden beams.

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PHOTOGRAPHIC PLATE 13  
Lot 12 DP 845149 – Commercial use (restaurant).



PHOTOGRAPHIC PLATE 14  
Lot 12 DP 845149 – temporary waste storage, sewerage covers and wellpoints situated at rear of restaurant.

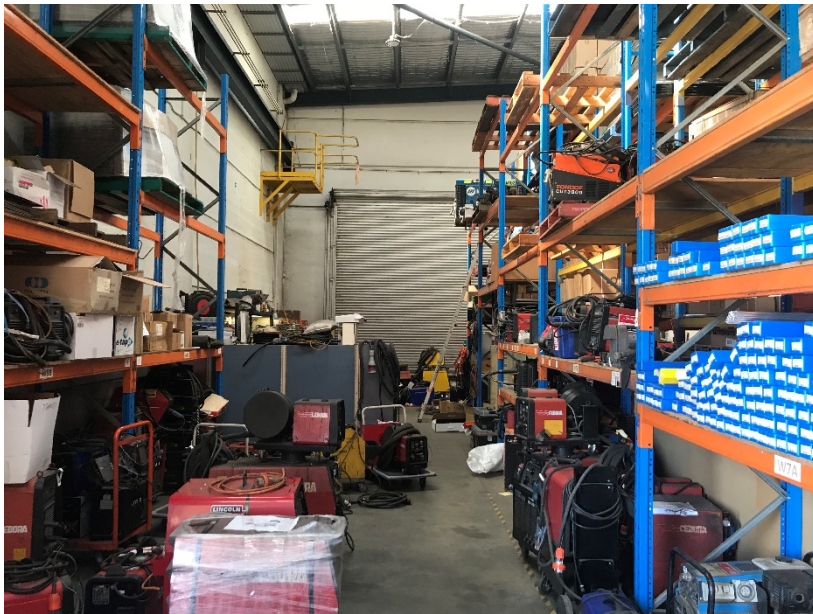
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PHOTOGRAPHIC PLATE 15  
 Lot 16 DP 623923 – Commercial land use (warehouse)

PHOTOGRAPHIC PLATE 16  
 Lot 16 DP 623923 – roofing of the warehouse comprising of steel beam and foil backed insulation.

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PHOTOGRAPHIC PLATE 17  
 Lot 16 DP 623923 – Northern end of the site facing the eastern boundary.  
 Miscellaneous items such as steel frames and sheets on concrete hardstand.

PHOTOGRAPHIC PLATE 18  
 Lot 16 DP 623923 – Gas cylinders near northern boundary fence.

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#### PHOTOGRAPHIC PLATE 19

Lot 16 DP 623923 – Storage area towards rear of site structure comprising steel frames, 2 cargo storage containers and a former wash bay basin.



#### PHOTOGRAPHIC PLATE 20

Lot 16 DP 623923 – Close up of former wash bay basin.

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PHOTOGRAPHIC PLATE 21  
Lot 16 DP 623923 – Close up view of concrete hardstand.

PHOTOGRAPHIC PLATE 22  
SP70043 (Unit 1) – interior view of warehouse.

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PHOTOGRAPHIC PLATE 23  
SP 70043 (Unit 2) – Gas tanks outside site on concrete hardstand.



PHOTOGRAPHIC PLATE 24  
SP 70043 (Unit 3) – concrete hardstand within structure.

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PHOTOGRAPHIC PLATE 25  
SP 70043 (Unit 3) – Open grated drainage and small oil spills within site structure.

PHOTOGRAPHIC PLATE 26  
SP 70043 (Unit 3) –work desktop within site structure.

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PHOTOGRAPHIC PLATE 27  
 SP 70043 (Unit 3) – Lubricant solution tank fixed interior wall of site structure.

PHOTOGRAPHIC PLATE 28  
 SP 70043 (Unit 3) – Oil water separator tank located within site.

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PHOTOGRAPHIC PLATE 29  
SP 70043 (Unit 3) – Car batteries within site structure.

PHOTOGRAPHIC PLATE 30  
SP 70043 (Unit 4) – Condition of concrete hardstand pavement on the front end of the site structure.

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PHOTOGRAPHIC PLATE 31  
Lot 27 DP 611186 – Commercial use of site (car dealership).

PHOTOGRAPHIC PLATE 32  
Lot 27 DP 611186 – Five well points in north-west of site.

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PHOTOGRAPHIC PLATE 33  
Lot 27 DP 611186 – Fill material used on neighbouring sites.

PHOTOGRAPHIC PLATE 34  
Lot 27 DP 611186 – vent pipes located against southern boundary of structure.  
Deteriorated gable paint.

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PHOTOGRAPHIC PLATE 35  
Lot 27 DP 611186 – remnants of former fuel pump.



PHOTOGRAPHIC PLATE 36  
Lot 27 DP 611186 – remnant fuel pump island and potential wellpoint

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PHOTOGRAPHIC PLATE 37  
 Lot 27 DP 611186 – Air conditioning unit within site structure and deteriorated paint wall.



PHOTOGRAPHIC PLATE 38  
 Lot 27 DP 611186 – Deteriorating painted wall and ceiling

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PHOTOGRAPHIC PLATE 39  
Lot 27 DP 611186 – Small quantity chemical storage (not banded).



PHOTOGRAPHIC PLATE 40  
Lot 27 DP 611186 – Well points.

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PHOTOGRAPHIC PLATE 41  
Lot 27 DP 611186 – Former kerosene fuel pump.

PHOTOGRAPHIC PLATE 42  
Lot 27 DP 611186 – Wash bay area in rear site building. Oil water separator.

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PHOTOGRAPHIC PLATE 43  
 Lot 27 DP 611186 – Unbundled storage of miscellaneous chemicals on wall of site structure



PHOTOGRAPHIC PLATE 44  
 Lot 27 DP 611186 – Vehicles parked on exposed ground.

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PHOTOGRAPHIC PLATE 45  
 Lot 27 DP 611186 – General solid waste (non- putrescible) and potential hazardous waste at rear of site (fuel cans, metal frames material / spare car parts and other miscellaneous items).

PHOTOGRAPHIC PLATE 46  
 Lot 27 DP 611186 – Unknown spoil/fill material.

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PHOTOGRAPHIC PLATE 47  
Lot 27 DP 611186 – Plastic detritus of various size in rear of site.

PHOTOGRAPHIC PLATE 48  
Lot 27 DP 611186 – Plastic detritus of various size in rear of site.



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PHOTOGRAPHIC PLATE 49  
 Lot 27 DP 611186 - Vehicles on hardstand

PHOTOGRAPHIC PLATE 50  
 Lot 27 DP 611186 – Small banded quantities of chemicals on site.

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PHOTOGRAPHIC PLATE 51  
Lot 27 DP 611186 – Warehouse/vehicle garage on site.

PHOTOGRAPHIC PLATE 52  
Lot 27 DP 611186 - former sales/ service area

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PHOTOGRAPHIC PLATE 53  
 Lot 27 DP 611186 – General solid waste (non-putrescible) detritus within site structure.

PHOTOGRAPHIC PLATE 54  
 Lot 127 DP 575482 – view of site to eastern boundary.

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PHOTOGRAPHIC PLATE 55  
Lot 125 DP 575481 – Site frontage

PHOTOGRAPHIC PLATE 56  
Lot 125 DP 575481 – Car parked on exposed ground adjacent site structure.

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PHOTOGRAPHIC PLATE 57  
Lot 125 DP 575481 – Site frontage

PHOTOGRAPHIC PLATE 58  
Lot 125 DP 575481 – Cut out of presumed bonded asbestos panel.

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PHOTOGRAPHIC PLATE 59  
 Lot 301 DP 621274 – Derelict chemical storage drums

PHOTOGRAPHIC PLATE 60  
 Lot 301 DP 621274 –Derelict chemical storage drums.

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PHOTOGRAPHIC PLATE 61  
Lot 301 DP 621274 – Unbundled chemical storage.

PHOTOGRAPHIC PLATE 62  
Lot 301 DP 621274 – Small contained quantities of chemicals.

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PHOTOGRAPHIC PLATE 63  
Lot 301 DP 621274 – Suspected bonded asbestos panels

PHOTOGRAPHIC PLATE 64  
Lot 301 DP 621274 – Frontage of former dog grooming salon.

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PHOTOGRAPHIC PLATE 65  
SP52179 – Small contained quantities of chemicals with spill evidence.



PHOTOGRAPHIC PLATE 66  
SP 52179 – Contained quantities of chemicals.

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PHOTOGRAPHIC PLATE 67  
Lot 1 DP 565611 – Site frontage from the entrance of the site

PHOTOGRAPHIC PLATE 68  
Lot 1 DP 565611– Contained quantities of chemicals.

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PHOTOGRAPHIC PLATE 69  
Lot 1 DP 565611 – Interior of site compound.

PHOTOGRAPHIC PLATE 70  
Lot 1 DP 565611 – Exterior rear view of site compound.



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**PHOTOGRAPHIC PLATE 71**  
Stockpiles / uncoupled land on the southern boundary of the overall subject site

**PHOTOGRAPHIC PLATE 72**  
Stockpiles / uncoupled land on the southern boundary of the overall subject site



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## APPENDIX A – HISTORICAL AERIAL PHOTOS

---





54-26

1951

CAMDEN

RUN 17

JAN 47

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12200



LANDSPHOTO



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1413  
5166

1965



NSW  
2362  
68



UAG 1025 15145

872

1975





1984

UAG 102615145

ASN  
3410  
117



SS

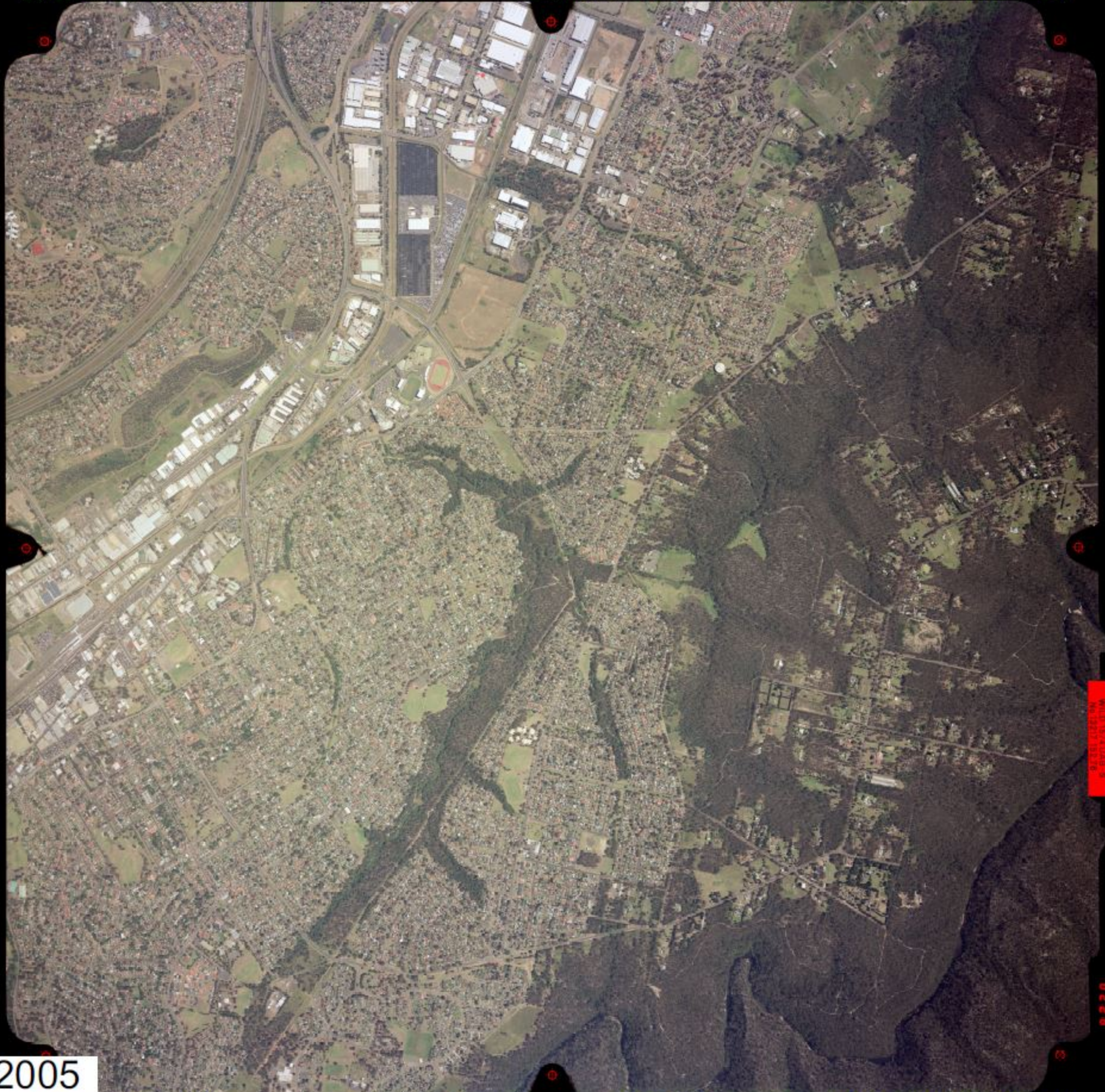
1994

WILDS/4/04B-S  
No 1317 13.78

0053



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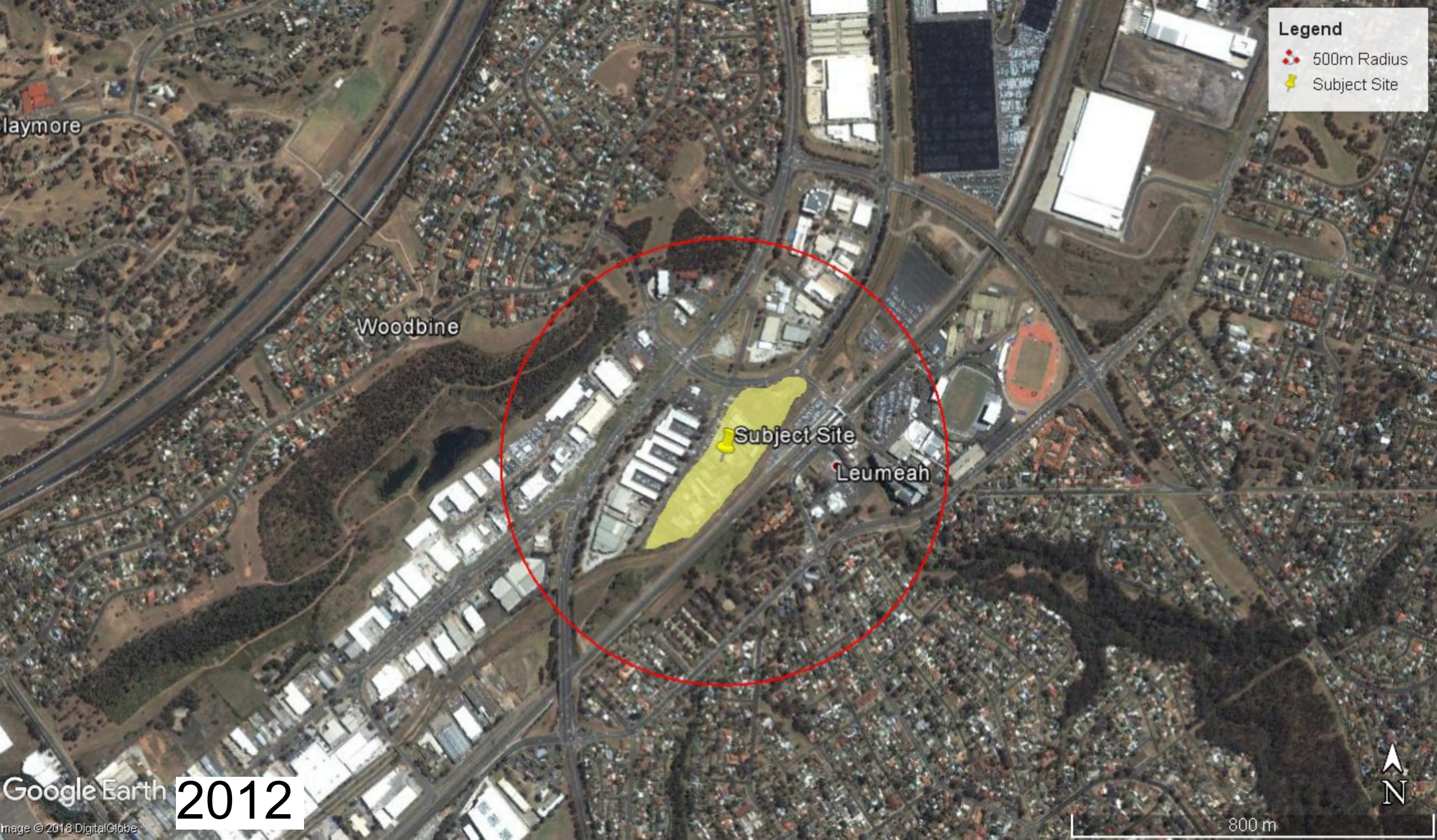
2005

FS100 1/ 550 f/4.0 FF--- EC---- SP- v/h.02306 00% dt026.9 ds006 26.6V -64mb ER00 CAM5202

WOLLONGONG  
NSW 4941

0220





**Legend**

- 500m Radius
- Subject Site

Woodbine

Subject Site

Leumeah





**Legend**

- 500m Radius
- Subject Site

Woodbine

Subject Site

Leumeah



## APPENDIX B – SECTION 58 OF CLM ACT SEARCH RESULTS

---

# Search the contaminated land record

## Search 1

To narrow your search, enter information into more than one field.

LGA

Campbelltown City Council

▼

Suburb

You may select a suburb

▼

Notice Type

You may select a notice type

▼

Name

(site, owner, occupier or notice recipient)

Date from:

Date to:

(Enter date as dd/mm/yyyy)

Search

Reset

or

## Search 2

Enter a notice number or area number.

Search

Reset

2 August 2018

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Search results

Your search for:LGA: Campbelltown City Council

Matched 3 notices relating to 1 site.

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

Suburb	Address	Site Name	Notices related to this site
CAMPBELLTOWN	62 Blaxland ROAD	<a href="#">Chemical Storage</a>	3 former

Page 1 of 1

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Site and notice details

Your search for: LGA: Campbelltown City Council    3 notices on 1 site were matched.  
[Return to list of search results](#)    [Search Again](#)    [Refine Search](#)

**Area No: 3021**

The information below was correct at the time the notices were issued.

**Site:** Chemical Storage  
**Address:** 62 Blaxland ROAD, CAMPBELLTOWN  
**LGA:** Campbelltown City Council

Lot 2 DP 526250

**Notices relating to this site (0 current and 3 former)**

(Map) where available, maps show the part of the site affected by the notice  
\* notice matched search criteria

Notice recipient	Notice type & number	Status	Date
Name Withheld	EHC Act Revocation Notice * <a href="#">334</a>	Former	Issued 17 Aug 1992
Name Withheld	Section 35 EHC Act Order * <a href="#">302</a>	Former	Issued 14 Apr 1992 Revoked 17 Aug 1992
Name Withheld	Section 35 EHC Act Order * <a href="#">286</a>	Former	Issued 12 Dec 1991 Revoked 17 Aug 1992

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## APPENDIX C – POEO ACT SEARCH

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## Search for Environment Protection licences, applications, notices, audits or pollution studies and reduction programs

Select one option

☐ Licences ☐ Applications ☐ Notices ☐ Audits ☐ Pollution studies and reduction programs ☒ All

Record number:

Suburb:

Name:

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Some functionality on this website is currently not compatible with Internet Explorer 10. If you find that functionality on this website is unresponsive, you can try running your browser in compatibility mode:

1. Open Internet Explorer 10
2. Press 'ALT' key on your keyboard to bring up the top menu. Then, go to Tools > Developer Tools.
3. This will bring up the IE developer tools menu.
4. Select IE9 or IE8 from this menu.

We apologise for any inconvenience.

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Search results

Your search for: **General Search** with the following criteria

**Suburb** - Leumeah

returned 0 result

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[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)  
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## Search results

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**Suburb - campbelltown**

returned 32 results

[Export to excel](#)

1 of 2 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date
<a href="#">21040</a>	Burton Contractors Pty Ltd	Campbelltown Road Upgrade between East Town Centre Road and New MacDonald Road, CAMPBELLTOWN, NSW 2560	POEO licence	Issued	21 Feb 2018
<a href="#">6651</a>	CAMPBELLTOWN CITY COUNCIL	CAMPBELLTOWN CITY COUNCIL, CAMPBELLTOWN, NSW 2560	POEO licence	Surrendered	08 May 2000
<a href="#">1667</a>	CAMPBELLTOWN CITY COUNCIL	THE PARKWAY, CAMPBELLTOWN, NSW 2560	POEO licence	Surrendered	21 Jun 2000
<a href="#">1009602</a>	CAMPBELLTOWN CITY COUNCIL	CAMPBELLTOWN CITY COUNCIL, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	02 Oct 2001
<a href="#">3109</a>	DULMISON PTY LTD	BADGALLY ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	Surrendered	01 May 2000
<a href="#">1341</a>	HANSON CONSTRUCTION MATERIALS PTY LTD	66 BLAXLAND ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	No longer in force	24 May 2000
<a href="#">1006343</a>	HANSON CONSTRUCTION MATERIALS PTY LTD	66 BLAXLAND ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	15 Jun 2001
<a href="#">6721</a>	HCOA OPERATIONS (AUSTRALIA) PTY LIMITED	92-96 DUMARESQ ST, CAMPBELLTOWN, NSW 2560	POEO licence	No longer in force	01 May 2000
<a href="#">1018720</a>	HCOA OPERATIONS (AUSTRALIA) PTY LIMITED	92-96 DUMARESQ ST, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	22 Oct 2002
<a href="#">1044534</a>	HCOA OPERATIONS (AUSTRALIA) PTY LIMITED	92-96 DUMARESQ ST, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	15 Feb 2005
<a href="#">5647</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	Issued	06 Jan 2000
<a href="#">1005522</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	24 May 2001
<a href="#">1016427</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	29 Jul 2002
<a href="#">1019778</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	19 Sep 2002
<a href="#">1025207</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	07 Mar 2003
<a href="#">1032889</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	02 Dec 2003
<a href="#">1034270</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	04 Feb 2004
<a href="#">1043014</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	10 Dec 2004
<a href="#">1052990</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	24 Oct 2005
<a href="#">1096555</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	03 Feb 2009

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Number	Name	Location	Type	Status	Issued date
<a href="#">1109891</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	16 Dec 2009
<a href="#">1114416</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	27 Jul 2010
<a href="#">1119461</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	15 Sep 2010
<a href="#">1129416</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	15 Jun 2011
<a href="#">1505549</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	22 May 2013
<a href="#">3085774295</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	Penalty Notice	Issued	10 Jun 2014
<a href="#">3085775166</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	Penalty Notice	Issued	28 Oct 2014
<a href="#">3085776798</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	Penalty Notice	Issued	17 Jun 2015
<a href="#">1524788</a>	SUEZ RECYCLING & RECOVERY PTY LTD	GLENLEE ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	02 May 2018
<a href="#">7457</a>	SYDNEY SOUTH WEST AREA HEALTH SERVICE	THERY ROAD, CAMPBELLTOWN, NSW 2560	POEO licence	No longer in force	31 Mar 2000
<a href="#">1027194</a>	SYDNEY SOUTH WEST AREA HEALTH SERVICE	THERY ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	09 May 2003
<a href="#">1051870</a>	SYDNEY SOUTH WEST AREA HEALTH SERVICE	THERY ROAD, CAMPBELLTOWN, NSW 2560	s.58 Licence Variation	Issued	13 Sep 2005

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Number	Name	Location	Type	Status	Issued date
<a href="#">121</a>	BORAL RESOURCES (NSW) PTY LTD	7 - 11 ESSEX STREET, MINTO, NSW 2566	POEO licence	No longer in force	22 Aug 2000
<a href="#">7128</a>	BOSCO MANUFACTURING PTY LTD	17-23 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	28 Sep 2000
<a href="#">3523</a>	CAPRAL LIMITED	57-65 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	14 Aug 2000
<a href="#">1018767</a>	CAPRAL LIMITED	57-65 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	15 Aug 2002
<a href="#">20062</a>	CARGILL MALT ASIA PACIFIC PTY LTD	11 STONNY BATTER ROAD, MINTO, NSW 2566	POEO licence	Issued	08 May 2012
<a href="#">1562824</a>	CARGILL MALT ASIA PACIFIC PTY LTD	11 STONNY BATTER ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	21 Mar 2018
<a href="#">1565024</a>	CARGILL MALT ASIA PACIFIC PTY LTD	11 STONNY BATTER ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	25 May 2018
<a href="#">20696</a>	ENVIRONMENTAL TREATMENT SOLUTIONS PTY LTD	7 Pembury Road, MINTO, NSW 2566	POEO licence	Issued	07 Apr 2016
<a href="#">4244</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	POEO licence	Issued	09 May 2000
<a href="#">1015198</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	20 Mar 2002
<a href="#">1025600</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	05 Jun 2003
<a href="#">1091553</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	30 Sep 2008
<a href="#">1503286</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	23 Jan 2012
<a href="#">1504482</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	20 Feb 2012
<a href="#">1509592</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	07 Jul 2015
<a href="#">1535890</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	23 Feb 2016
<a href="#">1539703</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	26 May 2016
<a href="#">3085780345</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	Penalty Notice	Issued	26 Sep 2016
<a href="#">1547544</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	19 Dec 2016
<a href="#">1565380</a>	FOAMCO INDUSTRIES PTY LIMITED	25-27 Pembury Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	26 Jun 2018

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<a href="#">3138</a>	FULTON HOGAN CONSTRUCTION PTY LTD	117 AIRDS ROAD, MINTO, NSW 2566	POEO licence	No longer in force	26 Jun 2000
<a href="#">1016086</a>	FULTON HOGAN CONSTRUCTION PTY LTD	117 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	12 Jun 2003
<a href="#">12593</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	POEO licence	Issued	21 Dec 2006
<a href="#">1110680</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	19 Apr 2010
<a href="#">1113795</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	03 May 2010
<a href="#">1502202</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	01 Nov 2011
<a href="#">3085763771</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	Penalty Notice	Issued	16 May 2012
<a href="#">1507557</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	08 Aug 2012
<a href="#">1517989</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	05 Dec 2013
<a href="#">1529357</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	24 Mar 2015
<a href="#">1553515</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	05 Jul 2017
<a href="#">1560173</a>	INDUSTRIAL GALVANIZERS CORPORATION PTY LTD	57-65 Airds Road, MINTO, NSW 2566	s.58 Licence Variation	Issued	14 Feb 2018
<a href="#">11796</a>	KIRK ENGINEERING SERVICES (AUST) PTY LTD	6 AIRDS ROAD, MINTO, NSW 2566	POEO licence	No longer in force	29 Jun 2005
<a href="#">1292</a>	LE-RO DIECASTERS PTY LTD	24-26 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	15 Aug 2000
<a href="#">12125</a>	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	POEO licence	Issued	08 Jun 2004
<a href="#">1054757</a>	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	22 Dec 2005
<a href="#">1074287</a>	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	15 Feb 2008
<a href="#">1119538</a>	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	29 Sep 2010
<a href="#">1518538</a>	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	29 Nov 2013
<a href="#">1565022</a>	LIPA PHARMACEUTICALS LTD	21 REAGHS FARM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	25 May 2018

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<a href="#">4615</a>	M & C PTY LTD	LOT 52 MONTORE ROAD, MINTO, NSW 2566	POEO licence	Surrendered	18 May 2000
<a href="#">20638</a>	MINTO RECYCLING PTY LTD	13 Pembury road, MINTO, NSW 2566	POEO licence	Issued	25 Nov 2015
<a href="#">3085781225</a>	MINTO RECYCLING PTY LTD	13 Pembury road, MINTO, NSW 2566	Penalty Notice	Issued	13 Jan 2017
<a href="#">3085782069</a>	MINTO RECYCLING PTY LTD	13 Pembury road, MINTO, NSW 2566	Penalty Notice	Issued	17 Apr 2017
<a href="#">3085782078</a>	MINTO RECYCLING PTY LTD	13 Pembury road, MINTO, NSW 2566	Penalty Notice	Issued	19 Apr 2017
<a href="#">20583</a>	ONESTEEL RECYCLING PTY LIMITED	56 SOMERSET ROAD, MINTO, NSW 2566	POEO licence	Pending	
<a href="#">6925</a>	OTIS ELEVATOR COMPANY PTY LTD	50 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	15 Aug 2000
<a href="#">12041</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	POEO licence	Issued	15 Jan 2004
<a href="#">1047198</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	09 May 2005
<a href="#">1056335</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	13 Apr 2006
<a href="#">1061259</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	02 Jun 2006
<a href="#">1067140</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	16 Nov 2006
<a href="#">1074285</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	28 Aug 2007
<a href="#">1109568</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	30 Aug 2010
<a href="#">1502890</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	08 Dec 2011
<a href="#">1509767</a>	REDOX PTY LTD	2 SWETTENHAM ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	21 Dec 2012
<a href="#">12824</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Issued	14 Feb 2008
<a href="#">1084431</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	21 Apr 2009
<a href="#">1104873</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	11 Aug 2009
<a href="#">1110730</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	26 May 2010

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<a href="#">1118722</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	27 Aug 2010
<a href="#">1504626</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	s.58 Licence Variation	Issued	06 Mar 2012
<a href="#">1509938</a>	TOYO TYRE & RUBBER AUSTRALIA LIMITED	137-149 AIRDS ROAD, MINTO, NSW 2566	Compliance Audit	Complete	05 Nov 2012
<a href="#">5851</a>	UNILEVER AUSTRALIA TRADING LIMITED	2 Magnum Place, MINTO, NSW 2566	POEO licence	Issued	14 Feb 2000
<a href="#">1016125</a>	UNILEVER AUSTRALIA TRADING LIMITED	2 Magnum Place, MINTO, NSW 2566	s.58 Licence Variation	Issued	07 May 2002
<a href="#">1503382</a>	UNILEVER AUSTRALIA TRADING LIMITED	2 Magnum Place, MINTO, NSW 2566	s.58 Licence Variation	Issued	23 Jan 2012
<a href="#">1529804</a>	UNILEVER AUSTRALIA TRADING LIMITED	2 Magnum Place, MINTO, NSW 2566	s.58 Licence Variation	Issued	15 Apr 2015
<a href="#">7049</a>	VOLVO TRUCK AUSTRALIA PTY LTD	91-101 AIRDS ROAD, MINTO, NSW 2566	POEO licence	Surrendered	12 Oct 2000

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## APPENDIX D – NSW EPA CONTAMINATED SITES REGISTER

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Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
CAMPBELLTOWN	Mobil Service Station	96-98 Queen STREET	Service Station	Regulation under CLM Act not required	-34.06407588	150.8170082
CAMPBELLTOWN	BP Macarthur Service Station	Cnr Blaxland ROAD and Campbelltown ROAD	Service Station	Regulation under CLM Act not required	-34.05312872	150.8234349
CAMPBELLTOWN	Former vehicle wrecking yard	38 Blaxland ROAD	Other Industry	Regulation under CLM Act not required	-34.06055735	150.8130598
LEUMEAH	Caltex Service Station	6 Rudd ROAD	Service Station	Regulation under CLM Act not required	-34.05398325	150.8299209
MINTO	Land adjacent to Former Shell depot	Airds Road and Essex STREET	Other Petroleum	Regulation under CLM Act not required	-34.02140447	150.8415134
MINTO	Shell Coles Express Service Station	73 Pembroke STREET	Service Station	Regulation under CLM Act not required	-34.02316454	150.8503118
MINTO	Former Endeavour Energy Depot	Pembroke ROAD	Other Petroleum	Regulation under CLM Act not required	-34.0408973	150.8451837
MINTO	Logistics Hub - Culverston Road, Minto	Culverston ROAD	Other Petroleum	Regulation under CLM Act not required	-34.0421711	150.833825