GEOENVIRONMENTAL
PRELIMINARY SITE INVESTIGATION
FOR A PROPOSED DEVELOPMENT AT

26 MERCEDES ROAD,
INGLEBURN

CAMPBELLTOWN CITY COUNCIL LOCAL GOVERNMENT AREA

Job number: 2318

Anderson Environmental Pty Ltd
Suite 19, 103 George Street, Parramatta 2150
Phone 1300 302 507, 0413 040394
Email: jason@andersonenvironmental.com.au
www.andenviro.com.au
ABN 87 164 830 728

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1	18/07/2019	Jason Anderson
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Approved by		**Date**
Jason Anderson (Director)		22/07/2019

Executive Summary

Introduction

Anderson Environmental was engaged to conduct a Preliminary Site Investigation (PSI) at 26 Mercedes Road in Campbelltown City Council Local Government Area (LGA). Throughout this report this is referred to as the subject site.

The site represents a larger residential allotment with a home and a large back paddock area which has been used in the past to store some building materials as the owner was a builder.

This assessment has been developed based on the *Contaminated Land Management Act 1997* (CLM Act), *The National Environment Protection (Assessment of Site Contamination) Measure 2013* (the "NEPM") and Australian Standards (including AS4482). The report has been prepared in accordance with the NSW Office of Environment and Heritage (OEH) Guidelines for Consultants Reporting on Contaminated Sites, 2011. State Environmental Planning Policy 55 – Remediation of Land (SEPP 55) has also been used as a guideline in this assessment along with the NSW EPA Guidelines for Consultants Reporting on Contaminated Sites, November 1997.

This report does not constitute a Site Audit Report as defined in the Guidelines for NSW Site Auditor Scheme (NSW Environment Protection Authority, 1998).

Methodology

Assessment of the subject site consisted of two phases, a desktop study and a site inspection.

The desktop study considered a variety of sources to reconstruct the subject site history and the likelihood of current or past land contaminating material storage, activities or events which could impact on the subject site. Resources typically utilised in a PSI may comprise the following:

- Historical aerial photography to identify any visual evidence of land contamination materials or practices on the subject site or surrounds. These are sourced from publicly available resources such as the SIXMaps service and the Google Earth historical imagery function. Historical imagery from 1947 onwards can also be obtained for a fee from the NSW Land and Property Information (LPI) service for some areas;
- Council records. A formal General Information Public Access (GIPA) request is the most frequently used method to access Council records. This form requests documents such as previous Development Applications (DAs), register of business(es), formal complaints or any other document identifying or alluding to previous land use practices or events which could have land contamination potential;
- Section 149(2) planning certificate. This certificate provides the zoning of the property, its relevant state, regional and local planning controls and other property issues such as land contamination and road widening easements;
- Workcover Stored Chemical Information Database (SCID) and microfiche records search for the subject site;
- NSW Environmental Protection Authority (EPA) Contaminated Land Search Tool. This provides details and address(es) of all registered contaminated sites in NSW;

- NSW Department of Water (DW) borehole database; and
- NSW Land and Property Information (LPI) History of Title Transaction Search. This provides a record of land transactions for the subject site.

Not all of these sources are utilised in all PSI assessments, due to availability of some resources for a particular site or if sufficient information is obtained from a subset of these sources.

The site inspection was carried out on the 26th of June 2019 by one Anderson Environmental staff member. This visit consisted of a walk-through inspection of the entire subject site documenting any items/indicators of potential land contamination concern (leaking chemical drums, fill piles of unknown origin, bare earth patches and stressed vegetation, oil slicks on hard surfaces or water, asbestos fragments etc etc.). This assessment also undertook two boreholes to 1 metre in depth to determine if the soil profile appeared natural.

The site inspection also included discussions with the landowner as to the history of the site.

Results

Analysis of aerial imagery and Council records indicated the subject site has been developed since at least 1990 (owner pers comm). This was when the original home was built.

The site inspection documented no items of significance in relation to potential contamination on the lot.

Interviews with the owner indicated that the back area of the property had never been used to store chemicals or fuel and that her now deceased husband stored some of his building materials and trailer in the back yard area. Inspection revealed standard pieces of timber and some stacked bricks etc but no fibre cement sheeting etc. Two soil boreholes to 1 metre indicated what appeared to be a natural soil profile. It appears that the soil is a natural soil profile.

Conclusion and recommendations

Based on the results of this assessment a Detailed Site Investigation (DSI) is not deemed to be required. Whilst there has been some storage of building materials at the rear of the site inspection revealed that these are unlikely to contain materials which could be potentially contaminating.

Table of Contents

1. Introduction

1.1 Background

Anderson Environmental was engaged to conduct a Preliminary Site Investigation (PSI) at 26 Mercedes Road in Campbelltown City Council Local Government Area (LGA). Throughout this report this is referred to as the subject site.

The site represents a larger residential allotment with a home and a large back paddock area which has been used in the past to store some building materials as the owner was a builder.

This assessment has been developed based on The *Contaminated Land Management Act 1997* (CLM Act 1997), The National Environment Protection (Assessment of Site Contamination) Measure 2013 (the "NEPM") and Australian Standards (including AS4482). The report has been prepared in accordance with the NSW Office of Environment and Heritage (OEH) Guidelines for Consultants Reporting on Contaminated Sites, 2011. SEPP 55 has also been used as a guideline in this assessment along with the NSW EPA Guidelines for Consultants Reporting on Contaminated Sites, November 1997.

This report does not constitute a Site Audit Report as defined in the Guidelines for NSW Site Auditor Scheme (NSW Environmental Protection Authority, 1998).

1.2 Aim and Scope of a PSI

The aim of the investigation is to identify any potential modes of land contamination; on or off site for the purpose assessing the need for a Detailed Site Investigation (DSI).

This assessment comprises two parts, a desktop study and a physical site inspection. The desktop study considers a variety of available secondary resources including government databases and historical aerial imagery. A site inspection is conducted to identify potential (past and present) land contaminating issues, materials or processes present on the subject site. It consists of a walkthrough inspection of the entire subject site.

Based on these data a determination is then made as to whether the subject site contains (or contained) potential land contamination items, materials or practices and, based on these results whether a DSI is required.

1.3 Subject site - identification, description, history, immediate and surrounding land uses

The subject site is shown in **Figure 1.1** below.
Note: All figures in this report are to be considered indicative. Distances specified are to be assessed on the ground by qualified surveyors prior to the conduction of any works.

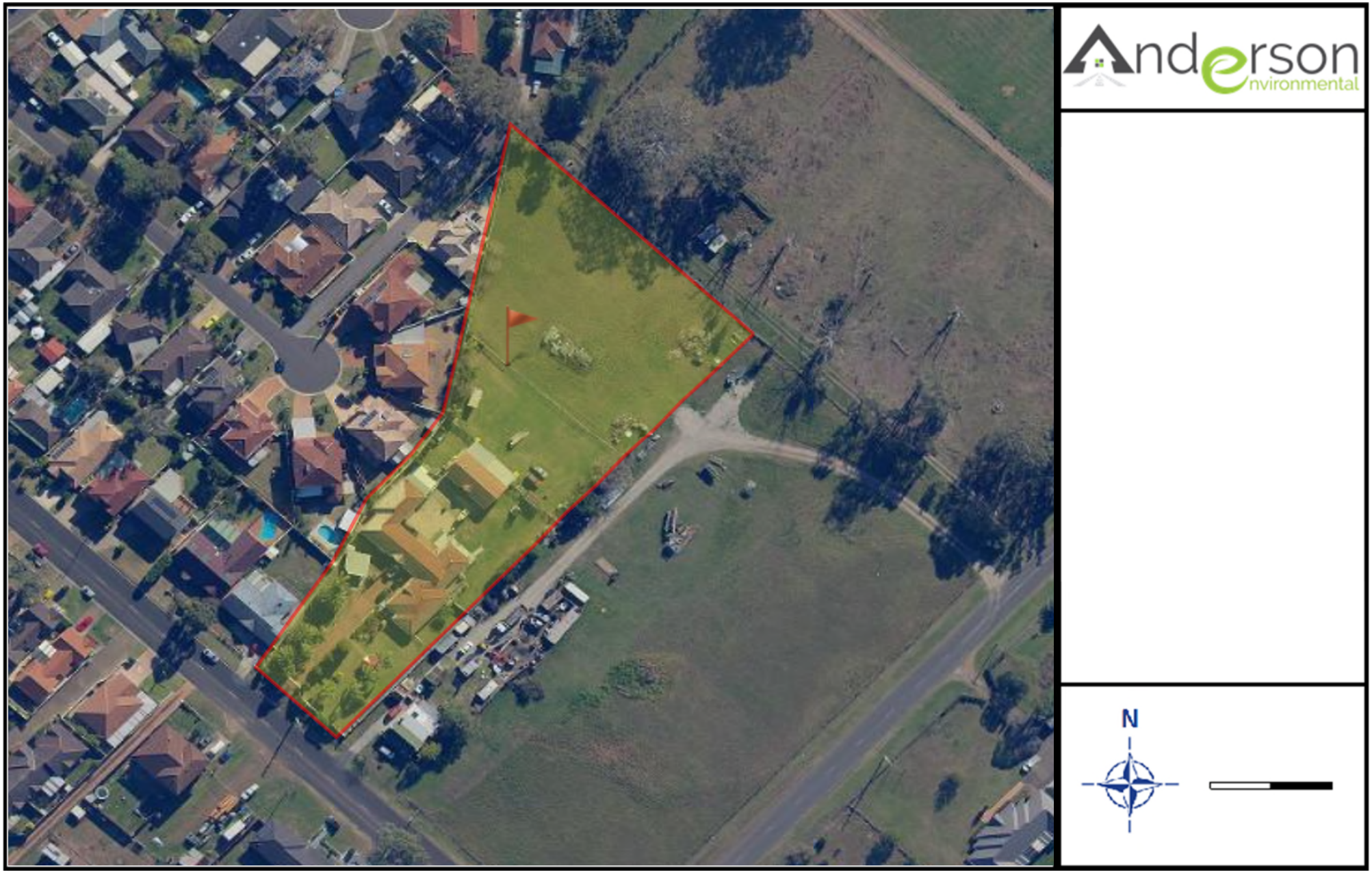

Figure 1.1: Map of the subject site showing local context

The subject site is approximately 0.8ha in total size. It contains an existing dwelling and shed at the back. The back portion of the allotment to the north, approximately half is undeveloped and is mown land other than some stored timber and other building materials.

Table 1.1 below details a reconstructed history for the site. Some of these records are the report writer's interpretation of the available sources and should be considered as an indicative guide only.

Table 1.1: Reconstructed site history

Time period	Notes	Source
1990	Development Application lodged. Considered Contamination as part of the assessment application. Land was Vacant before that time.	Council Records
2006-Present	Unchanged	Google Earth historical imagery tool

The surrounding lands are used mainly for residential land however the land to the north-east through east and then south-east are vacant.

1.4 Hydrology

The subject site contains no significant surface hydrological features such as ponds, dams, creeks or drainage lines. A search of the Australian Groundwater Explorer yielded no bores particularly close to the property and the ones available were not informative in relation to any potential contamination.

2. Methodology

2.1 Background Research

Prior to the conduction of the site assessment a variety of sources were consulted to establish site history, identify the potential for and likelihood of land contaminating events, materials or practices and potential contaminants of concern. Sources consulted during a PSI can include:

- Historical aerial photography to identify any visual evidence of land contamination materials or practices on the subject site or surrounds. These are sourced from publicly available resources such as the SIXMaps service and the Google Earth historical imagery function. Historical imagery from 1947 onwards can also be obtained for a fee from the NSW Land and Property Information (LPI) service for some sites;
- Council records. A formal General Information Public Access (GIPA) request is the most frequently used method to access Council records. This form requests documents such as previous Development Applications (DAs), register of business(es), formal complaints or any other document identifying or alluding to previous land use practices or events which could have land contamination potential;
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- NSW Land and Property Information (LPI) History of Title Transaction Search. This provides a record of land transactions for the subject site.

Not all of these sources are utilised in all PSIs, due to availability of particular resources for a site or if sufficient information is obtained from a subset of these sources.

Site history can support the determination of contamination if evidence is found that the land was once occupied or in close proximity to practices that can result in contamination. Such land use activities are; agricultural practices, crops and livestock care; industrial practices, petrol stations and abattoirs, illegal dumping and onsite material storage.

2.2 Site Assessment

The assessment of the subject site was carried out on the 26th of June 2019 by Jason Anderson B.App.Sc.

The subject site was assessed on foot to determine any obvious signs of potential contamination based on landscape features, disturbance, and infrastructure. Evidence was then collected using photos or samples extracted, to determine whether further assessment in the form of a DSI would be required.

2.3 Risk Assessment

Risks were assessed according to the following criteria (**Table 2.1**).

Table 2.1: Risk assessment criteria

Negligible	The presence of the identified source does not give rise to the potential to cause significant harm
Low	Possible harm could arise to a designated receptor from an identified source though this is likely to be mild
Moderate	Possible harm could arise to a specific receptor, but it is unlikely that such harm would be significant
High	A designated receptor is likely to experience potentially significant harm from an identified source without remedial action
Very high	There is a high probability that severe harm could arise to a designated receptor from an identified source without appropriate remedial action

3. Results

3.1 Site assessment field observations

Analysis of aerial imagery and Council records indicated the subject site has been developed since at least 1990 (owner pers comm). The site inspection documented no items of significance in relation to potential contamination on the lot.

Interviews with the owner indicated that the back area of the property had never been used to store chemicals or fuel and that her now deceased husband stored some of his building materials and trailer in the back yard area. Inspection revealed standard pieces of timber and some stacked bricks etc but no fibre cement sheeting etc. Two soil boreholes to 1 metre indicated what appeared to be a natural soil profile. These boreholes revealed soils typical of the local area as previously sampled over the years by this consultant.

Table 3.1 below details the site assessment in the context of typical sources of land contamination concern.

Table 3.1: Signs of potential contamination check list for the subject site

Land Contamination Signs	Presence of contamination and location	Description and condition
Signs of stressed vegetation	Not observed	Mown Lawns
Property conditions or previous activities undertaken which could potentially cause contamination	None likely, some building materials previously stored but not a major risk	Some timber present neatly piled up but no signs of potential contaminating materials
The presence of surface or subsurface storage tanks, drums and other containers	None documented on the subject site.	None present
Onsite waste water systems	Not present	N/A
Electrical equipment that may contain PCB	None present	None present
Building materials that may contain asbestos	Unlikely to be present due to the age of the building	No suspected ACM observed within structure
Disturbed, coloured or stained soil	Not observed	N/A
Bare soil patches	None present	None present
Unusual odour	Not detected	N/A
Current uses of the site and surrounding land	Mown grass	Mown grass
Quality of surface water	No surface waters observed	N/A
Sheens on water surfaces	Not observed	N/A
Site topography and surface water drainage	Not observed	Level

Land Contamination Signs	Presence of contamination and location	Description and condition
Presence or absence of bonded asbestos-containing materials (bonded ACM) on the ground surface	Not observed	N/A
Presence of pits, ponds and lagoons	None present	N/A
Underground structures that may be associated with sub-surface contamination	None present	None present
Condition of materials storage and handling facilities and any solid or liquid waste disposal areas	None present	Building materials typical of normal materials with no suspected contamination present
Any evidence of on-site spillage of dangerous goods and/or off-site migration	None present	Not significant

3.2 Aerial imagery assessment

Imagery data was procured from the following sources:

- Google Earth historical imagery tool for the years of 2006 - present.

Discussion with the owner indicated that the site was cleared when purchased and that the house was built in 1991.

3.3 GIPA request, Campbelltown City Council

Documents were provided to the consultant of council records by Bravura Planning who recently ordered the GIPA searches for the property. They were informative of the history of the development of the site however revealed no known contamination. These can be provided upon request.

3.4 History of title transaction search

A history of title transaction search was not considered necessary as part of this PSI.

3.5 Section 149(2) planning certificate

A planning certificate under Section 149(2) of the Environmental Planning and Assessment Act 1979 (EPA Act) was requested from the proponent as part of this PSI. At the time of publication, this document had not been provided. If provided it will be included in subsequent reports or revisions to this report.

3.6 WorkCover NSW records

A 'Site Search for Schedule 11 Hazardous Chemicals on Premises' was not requested from NSW Workcover for this PSI.

Due to the small size of the subject site and the information obtained from other sources used this PSI it was not considered necessary.

3.7 NSW Environmental Protection Authority (EPA) contaminated land registry search

A search of the Contaminated Land Register did not reveal any records.

3.8 Anecdotal interview process

The current landowner was interviewed and indicated that there were no activities undertaken on the property which could have led to contamination.

4. Conclusions and recommendations

4.1 Conclusion

This PSI determined that there were no potential land contaminating materials, events or practices which could pose a significant land contamination risk to the subject site, number 26 Mercedes Road, Ingleburn, Campbelltown City Council at the time of the assessment. The site inspection revealed some stored building materials and some palm frond garden waste however these were inspected visually from around the piles and there were no indications of any potentially contaminating materials present.

5. References

AS4482.1 Guide to investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds (2005)

Australian and New Zealand Guideline for the Assessment and Management of Contaminated Sites, published by Australian and New Zealand Environment and Conservation Council (ANZECC) and the National Health and Medical Research Council (NHMRC), January 1992

Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment and Conservation Council and Agriculture Resource Management Council of Australia and New Zealand

Contaminated Land Management Act 1997

Environmental Guidelines for Assessment, Classification and Management of Liquid and Non-Liquid Wastes, NSW EPA, 1999

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Contaminated Land Management Act 2013

NSW Environment Protection Agency (NSW EPA) Service Station Guidelines December 1994

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NSW Department of Environment and Conservation (DEC), Guidelines for Assessing Former Orchards and Market Gardens, June 2005

NSW Department of Mineral Resources (1983). Geological Survey of NSW: Geological Series Sheet 9130. NSW Department of Mineral Resources (now NSW Resources and Energy), 11/323 Castlereagh St, Sydney NSW 2000

NSW EPA Contaminated Land Records Database

NSW Environmental Protection Authority 2014. Waste Classification Guidelines Part 1: Classifying Waste. NSW EPA

NSW Land and Property Information - http://www.lpi.nsw.gov.au/

NSW Office of Environment and Heritage (2016). eSPADE, NSW Soil and Landscape Information. Office of Environment and Heritage. Level 14, 59-61 Goulburn Street, NSW 2000

Paper 4, 2000 (ANZECC, 2000) Guideline for the Assessment and Management of Groundwater Contamination, NSW Department of Environment and Conservation, 2007 (now DECC)

Site Investigations for Urban Salinity by the Department of Land and Water Conservation (2002)

State Environmental Planning Policy 55 – Remediation of Land

6. Appendix 1: Disclaimer and Limitation of Liability

The use of this report is for the client only and is based on an assessment of the site at the point in time of assessment. The material in this report reflects the judgement of Anderson Environmental Pty Ltd in light of background information and site conditions at the time of assessment and we take no responsibility for any database inaccuracies or other inaccuracies in background and or other information. The report is not to be reproduced or released to any other party, in whole or in part, without the express written consent of Anderson Environmental Pty Ltd. This report is Copyright protected and is not to be reproduced in part or whole or used by a third party without the express written permission of Anderson Environmental Pty Ltd. If you are not the client who commissioned this report or a local government authority for which approval is being sought as part of the formal DA process and are in possession of this report you are in breach of the law and we reserve the right to recover damages from any individuals, companies or other parties as a result of such breaches. Any use, which a third party makes of this report, or any reliance or discussions based on it, is the responsibility of such Third Parties and as outlined above is in breach of the law. Anderson Environmental and its staff accepts no responsibility for damages, if any, suffered by any third party because of decisions made or actions taken based on this report and reserves the right to recover damages from the third party from breaches as outlined above.

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7. Appendix 2: Definitions and Acronyms

ABC - Ambient background concentration
ACM - Asbestos-containing-material
AEC - Area of Environmental Concern
AEC – Area of Environmental concern
AF - Asbestos fines
ASS – Acid Sulphate soil
AST- Aboveground storage tank
Background – Is the natural ambient concentrations of substances in the general site area.
Bonded ACM – Bonded asbestos-containing materials
BTEX - benzene, toluene, ethyl benzene, total xylenes (monocyclic aromatic hydrocarbons)
C_{10}–C_{14} - Medium hydrocarbon chain groups
C_{10}–C_{36} - Medium and heavy hydrocarbon chain groups
C_{15}–C_{28} - Heavy hydrocarbon chain groups
C_{29}–C_{36} - Heavy hydrocarbon chain groups
C_{6}–C_{9} - Light hydrocarbon chain groups
CMP - Contaminant Management Plan
COC – Chain of custody
DQI – Data Quality Indicator
DQO – Data Quality Objective
EIL - Ecological investigation levels, which are the parameter thresholds for based on an environmental context.
EPA – Environmental Protection Authority
ESA - Environmental site assessment
Fill material - sand gravel clay ash and general building rubbish
HAZMAT – Hazardous Materials
HIL - Health investigation levels, which are the parameter thresholds based on a human health context.
HIL A Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centers, preschools and primary schools
HIL B Residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats
HIL C Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate
HIL D Commercial/industrial such as shops, offices, factories and industrial sites.
m BGL - Metres below ground level
m BTOC - Metres below top of casing
OCP - Organochlorine pesticides
OPP - Organophosphate pesticides
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyls
SAQP- Sampling and analysis quality Plan
SMF - Synthetic Material Fibres
SWL - Standing water level
TDS – Total Dissolved Solids
TPH - Total petroleum hydrocarbons
TRH - Total recoverable hydrocarbons
UPSS - Underground Petroleum Storage System
UST - Underground storage tank

VOC – Volatile Organic Compounds

8. Appendix 3: Site photographs

Photograph A3.1: Pile of accumulated building materials

Photograph A3.2: Stored Trailer and Vehicle at back of hours