Stage 1 Soil Supplemented Preliminary Environmental Site Assessment

151 Tallawong Road

Rouse Hill NSW 2155

Lot 42 DP 30186

Prepared for

ARCInnovationz Pty Ltd
c/o CGC Urban Planning
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Revision R00

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R01	20th March 2014	**151 Tallawong Road, Rouse Hill - Stage 1 Report**	**Simon Spyrdz** Deputy Sydney Regional Manger	_____

EXECUTIVE SUMMARY

DLA Environmental (DLA) was commissioned by Ms Christine Gough of CGC Urban Planning on behalf of ARCInnovationz to prepare a Soil Supplemented Stage 1 - Preliminary Environmental Site Assessment on the property identified as Lot 42, 151 Tallawong Road, Rouse Hill, NSW, 2155 (the Site). The land is proposed to be zoned RU4 Primary Production Small Lots under the Draft Blacktown Local Environmental Plan 2013 and has an area of approximately 20,030m^2 (2ha).

The area behind the residential building contained an above ground water tank, vegetable garden and two (2) storage sheds – one locked metal shed and the other a roofless, dilapidated old brick building. A septic tank also appeared to be present between the primary residence and the roofless building. The roofless building contained a number of chemical containers and garden materials, with some sections of floorboards missing, exposing the soil beneath. The former piggery at the rear of the Site had been demolished, with the concrete flooring and some low walls of the former building still present.

This Soil Supplemented Stage 1 Preliminary Environmental Site Assessment chemically evaluated the concentration of soil contaminants and conducted a visual and historical investigation of the potential environmental impacts on the Site in accordance with SEPP 55 and NEPM 2013 guidelines.

The WorkCover Dangerous Goods search and other aspects of the desktop study found that the Site is not encumbered by any contaminated land notices and does not have a registered history of storing any dangerous goods on-site that have the potential to contaminate or detrimentally affect the Site. A search of the New South Wales Natural Resources Atlas indicated no evidence of salinity hazards or dryland salinity indicators within the Site boundaries or land surrounding the Site. The Site is located in an area described as 'low salinity potential' in the DIPNR Salinity Potential in Western Sydney 2002 Map.

A review of the historical aerial photos indicates that some light agricultural activities are likely to have occurred on-site, in addition to the piggery building present at the western end of the property from the 1960s til the 1980s. The Site appears to have been used as a rural residential property since the 1980s.

Brown silty loam topsoils overlaying natural light brown/red clays at an average depth of 300mm predominated. Six (6) primary soil samples were taken from six (6) locations across the Site. Samples were collected from locations identified during the historical review of the Site to be most likely impacted by potentially contaminating activities. These included the

former farming and greenhouse areas, the former piggery, beneath the primary residence and dilapidated former storage shed and from fill material adjacent to the metal shed.

Concentrations of vTRH, BTEX, OC/OP pesticides and PAH were not detected above the LOR in any of the samples, and therefore comply with the adopted site acceptance criteria. All eight (8) heavy metals analysed indicate no exceedances of the criteria were recorded and complied with relevant NEPM Guidelines. The one detection of F3 fraction hydrocarbons at sample location S1 complies with the SAC. Hydrocarbons in the F3 fraction range are non-volatile and therefore not of concern for vapour intrusion and are below the criteria for human health exposure.

Analysis confirmed asbestos-containing material fragments are present on the ground surface beneath the main residence, in the centre of the former piggery and by the southern boundary of the footprint of the former piggery. Furthermore, analysis revealed the soil sample collected from beneath the main residence contains asbestos fibres. Both areas will require remedial activities. Following removal, a Clearance Certificate should be provided in accordance with the *How to Safely Remove Asbestos* Code of Practice (Safe Work Australia, 2011).

The conclusion of this Stage 1 Environmental Site Assessment Report is that there is a low risk of chemical contamination and **the Site can be made suitable for its intended land use** consistent with the definition of Column A – *Residential with Garden / Accessible Soil* land use provided by the National Environment Protection Council (NEPC) in Table 1A(1) of the NEPM 2013 Guidelines **following the issuing of an Asbestos Clearance Certificate.** If the land use is changed in the future the Site Assessment should be reviewed to ensure compliance with suitable soil investigation levels for appropriate end land use zoning

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1.0 INTRODUCTION

1.1 General

DLA Environmental (DLA) was commissioned by Ms Christine Gough of CGC Urban Planning on behalf of ARCInnovationz to prepare a Soil Supplemented Stage 1 - Preliminary Environmental Site Assessment on the property identified as Lot 42, 151 Tallawong Road, Rouse Hill, NSW, 2155 (the Site).

Refer to **Figure 1** - *Site Location*.

This assessment was conducted in accordance to State Environmental Planning Policy (SEPP) 55 - *Remediation of Land* and the NSW Environment Protection Authority's *Guidelines for Consultants Reporting on Contaminated Sites* as part of due diligence associated with a proposed subdivision of the property to determine if any previous land uses have contaminated the Site.

1.2 Objectives of the Assessment

The NSW Environment Protection Authority (EPA) indicates that a Preliminary Site Environmental Investigation should:

- Identify all past and potentially contaminating activities;
- Identify potential contamination types;
- Discuss the site condition;
- Provide a preliminary assessment of site contamination; and
- Assess the need for further investigations.

The proposed investigation program and this report was designed to be suitable for due diligence purposes so the document can be incorporated in sales contracts, for redevelopment purposes, or the ongoing management of the Site. It is suitable for review by the EPA, Department of Natural Resources (DNR) and Blacktown City Council. In particular the document meets the requirements of SEPP55 (Environmental Planning & Assessment Act, 1979).

The Stage 1 Preliminary Environmental Site Assessment has the same status as *a Preliminary Investigation* in terms of that definition provided within SEPP55 relating to the planning aspects of contamination assessments.

1.3 Data Quality Objectives

The National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) and Australian Standard (AS) 4482.1-2005 recommend that data quality objectives (DQOs) be implemented during the investigation of potentially contaminated sites. The DQO process described in AS 4482.1-2005 *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil Part 1: Non-Volatile and Semi-Volatile Compounds* outlines six (6) distinct steps to outline the project goals, decisions, constraints and an assessment of the project uncertainties and how to address these when they arise. They define the quality and quantity of data needed to support decisions relating to the environmental condition of a site. They also outline the defining criteria that a data collection design should satisfy, including when, where, if and how many samples to be collected.

The DQO's for the investigations were to:

State the Problem.

Determine, from a contamination point of view, if the land is suitable to be developed for Residential with Garden / Accessible Soil land use in accordance with the requirements of *State Environmental Planning Policy No. 55* and the *Environmental Planning and Assessment Act. 1979*. This includes researching previous site investigations, historical searches (titles, landuse of site and adjacent sites, and aerial photographs), identification of chemicals of concern, media they inhabit and possible migration pathways (to and from the site), potential exposures to human and/or environmental receptors, and concerns with the potential clean up and desired future landuse of the property.

- Investigations into the site need to determine if contamination has the potential to be present from previous land use activities or off-site sources that could present an unacceptable risk to human health or the environment and prevent the Site being suitable for the intended land use.

Identify the Decision.

The decisions to be made on the contamination and the new environmental data required include considering relevant contamination sources to the Site from a desktop study of the site history and potential contamination sources supplemented by a small number of soil samples.

Identify Inputs to Decision.

This step requires the identification of the factors that may, or may not have influenced the Site to make it unsuitable for the intended land use. Inputs include:

- Determine the lateral extents of the site under investigation;
- Undertake appropriate searches of the site to determine any recorded history of detrimental effects on the Site; and
- Undertaking a review of historical aerial photographs to identify previous land use activities on site.

Define the Study Boundaries.

Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision. To identify the boundaries (both spatial and temporal) of the investigation and to identify any restrictions that may hinder the assessment process. This includes on and off site inspections and discussions with informed individuals.

Refer to **2.0** – Site Description, **Figure 2** - Site Layout.

Develop a Decision Rule.

To define the parameter(s) of interest, specify the action level and provide a logical basis for choosing additional actions.

Specify Limits on Decision Errors.

Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data. Incorrect decisions are caused by using data that is not representative of site conditions because of sampling or

analytical error. Supplementary sampling was undertaken as part of the Stage I Desktop Study.

1.4 Statutory Framework

The environmental planning statutes in New South Wales, which most likely apply are:

- Contaminated Land Management Act 1997;
- Protection of the Environment Operations Act 1997;
- Dangerous Goods Act 1975;
- Waste Minimisation and Management Act 1995;
- Environmental Planning and Assessment Act 1979, and
- Local Government Act 1993.

In addition, regulations and planning instruments made under these Acts may also apply.

The *Protection of the Environment Operations Act* (POEO), 1997 commenced operation on 1st July 1999 and has repealed the following Acts:

- The Clean Waters Act 1970;
- The Clean Air Act 1961;
- The Noise Control Act 1975;
- The Environmental Offences and Penalties Act 1989, and
- The Pollution Control Act 1970.

The Act also incorporates the major regulatory provisions of *the Waste Minimisation and Management Act* 1995.

The repealed Acts are incorporated into the POEO Act. Thus, regulations made under the repealed Acts are now regulations under the POEO Act or until otherwise amended and

licences issued under the repealed Acts are deemed to be licences under the POEO Act. The POEO Act provides a common licence to cover emissions to all environmental media. The Act lists certain "scheduled activities" which have to be licensed.

The *Contaminated Land Management Act*, 1997 specifies the legal requirements for the registration, investigation and remediation of contaminated land, and for the registration and accreditation of site auditors. It repeals the requirements of the *Environmentally Hazardous Chemicals Act*, 1985 in relation to audits and the accreditation of site auditors.

The *Environmental Planning and Assessment Act*, 1989 gives local authorities the power to regulate development within their areas of responsibility and to impose specific consent conditions, which cover environmental issues. In addition, the *Local Government Act* 1993 requires approval from Council for certain works/activities to be obtained. This Stage 1 Preliminary Environmental Site Assessment was conducted in accordance with SEPP55 to support a development application for the re-development of the property (Site).

1.5 Scope of Work

The investigation and assessment was conducted using the following methods:

- Search and review of records and site plans available locally and from State Regulatory Authorities, including WorkCover, Department of Lands and OEH;
- Review of historical aerial photographs available from the Land Information Centre;
- Reviewing all environmental conditions of the Site including the geology and hydrogeology;
- Undertaking a preliminary soil assessment on the site; and
- Providing a comprehensive overview of the Sites past and current land uses and potential contamination issues.

The assessment and report has been conducted in accordance with the following:

- The National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) (NEPM), National Environment Protection Council;

- NSW OEH Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, August 2011; and
- NSW EPA Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, second edition 2006.

2.0 SITE DESCRIPTION

2.1 Site Identification

The Site is located approximately forty (40) kilometres north-west of the Sydney CBD at 151 Tallawong Road, Rouse Hill, NSW (Lot 42 DP 30186) in a semi-rural area within Blacktown City Council Local Government Area. The Site is currently occupied by a rural residential property and has an area of approximately 20,030m^2 (2ha).

The Site contains a single story main residence, a dilapidated, roofless old building behind the main residence and a metal shed. The remnants of a demolished former piggery is located at the western rear of the Site. A dam, shared with the neighbouring property to the north, is located in the centre of the Site. The majority of the property is grassed, former paddock areas.

Refer to **Figure 1** – Site Location and **Figure 2** – Site Layout with Sample Locations.

2.2 Proposed Future Land use

The Site is proposed to be developed into a primary school. This development scenario is consistent with the definition of Column A – *Residential with Garden / Accessible Soil* land use provided by the National Environment Protection Council (NEPC) in Table 1A(1) of the NEPM 2013 Guidelines. The Site Criteria has been adopted as it is the most sensitive criteria and applicable to the proposed future land use.

2.3 Environmental Setting

2.3.1 Boundaries and Surrounding Land Use

Property boundaries consist of Tallawong Road to the east with similar rural residential properties to the north, south and west. The surrounding land use is predominantly rural residential. The southern and western boundaries of the Site are marked by post wire metal fencing. There is currently no clear or marked boundary with the neighbouring property to the north at 161 Tallawong Road, as the property has the same owner.

2.3.2 Site Topography and Hydrology

The Site is relatively flat, sloping gently from south to north. Surface water drainage is expected to follow the natural contours toward the dam located in the centre of the Site, which also represents the lowest point on Site. Dam overflow is expected to drain westward to First Pond Creek, approximately 700m west of the Site.

A search of the NSW OEH groundwater works database indicated there are thirty-seven 37 (37) registered bores within 1km of the Site. Information is only available for three (3) of these bores, with details summarised in **Table 2a** below.

Table 2a: Regional Groundwater Data Summary

Well ID	Direction and distance from Site (m)	Purpose	Depth (m)	Standing Water Level (m)	Salinity (µS/cm)
GW108452	NE - 500m	Domestic	60	12	2010
GW107940	NE - 900m	Domestic	240	-	-
GW0548878	S - 950m	Domestic	99.5	-	-

Groundwater beneath the Site is not expected to be of very high quality due to moderate salinity, typical of Wianamatta group shale aquifers. The hydraulic conductivity of the Wianamatta Group of rocks is expected to be extremely low, in the order of $5E^{-8}$ m/day to $5E^{-6}$ m/day.

Refer to **Appendix D** – Groundwater Bore Works Search

2.3.3 Site Geology and Soils

The Soil Landscape Map of Penrith (Soil Landscape Series Sheet 9030, Scale 1:100,000, 1989), prepared by the Department of Land and Water Conservation of NSW, indicates that the majority of the landscape at the Site is likely to be belonging to the Blacktown landscape area. The Blacktown landscape is described as gently undulating rises on Wianamatta Group shales. The local relief, up to 30m, broad rounded crests and ridges with gently inclining slopes.

The soils are generally shallow to moderately deep (<100cm) hardsetting mottled texture contrasting soils, red and brown podzolic soils on crests grading to yellow podzolic soils on

lower slopes and in drainage lines. The limitations include moderately reactive highly plastic subsoil, low soil fertility and poor soil drainage.

2.4.4 Acid Sulphate Soils

Acid Sulphate Soil is the common name given to sediment and soil containing iron sulphides (principally containing iron pyrite or iron disulfide). The exposure of pyrite in these soils to oxygen by drainage or excavation leads to the generation of sulphuric acid. Acidic leachate can dissolve clay and release toxic concentrations of aluminium, iron or other metals into water bodies. Drainage waters from areas of acid sulphate soils will affect water quality and can lead to death or disease of aquatic organisms.

A search of the NSW Natural Resources Atlas does not identify Acid Sulphate Soils to be present within the Site Boundaries or land surrounding the Site.

2.3.5 Soil Salinity and Aggressivity

The New South Wales Natural Resources Atlas indicated no evidence of salinity hazards or dryland salinity indicators within the Site boundaries or land surrounding the Site. The Site is located in an area described as ‘moderate salinity potential’ in the DIPNR Salinity Potential in Western Sydney 2002 Map.

Overall, the likelihood of aggressive corrosion is mild and the area is not likely to be impacted by salinity.

2.3.6 Site Meteorology

The Department of Meteorology NSW, gives the average annual rainfall for the Blacktown area at 921.5mm, with an annual daytime temperature range of 17.4° - 29.9° C, and an annual average temperature of 24°C.

2.4 Development Controls

2.4.1 Blacktown City Council Section 149 Certificate

A Planning Certificate was obtained from Blacktown Council under Section 149 of the Environmental Planning and Assessment Act, 1979 for Lot 42 DP30186, 151 Tallawong Road, Rouse Hill, NSW, stating:

- The land is currently zoned 1(a) General Rural under the Blacktown Local Environmental Plan 1988 and proposed to be zoned RU4 Primary Production Small Lots under the Draft Blacktown Local Environmental Plan 2013;
- The land is affected by the Blacktown Development Control Plan (DCP) 2006;
- No matters apply to this property under the Contaminated Land Management Act, 1997;
- The land has been identified on Council's Bush Fire Prone Land Map as being 'clear of any bush fire prone land';
- The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995;
- The land has not been proclaimed to be within a mine subsidence district; and,
- There are no mainstream or backwater flood-related development controls that apply to this land.

Refer to **Appendix B** – Section 149 Planning Certificates.

2.4.2 WorkCover Dangerous Goods License

A Workcover NSW search regarding the sites identified as Lot 42 DP30186, 151 Tallawong Road, Rouse Hill, NSW, within their Stored Chemical Information Database (SCID), indicated that no Dangerous Goods Licenses have been held for the premises.

Refer to **Appendix E** – Dangerous Goods Search,

2.4.3 Contaminated Land Record Search

A search was conducted of all records pertaining to section 58 of the Contaminated Land Management Act 1997 and revealed that the Site at 151 Tallawong Road, Rouse Hill, is not encumbered by any notices from the NSW OEH with regard to contaminated land. No properties in the vicinity of the Site were encumbered by any notices.

2.5 Site History

2.5.1 Aerial Photograph Review

Aerial photographs for Lot 42 DP30186 at 151 Tallawong Road, Rouse Hill from 1947 to 2005, available from the NSW Lands Department, were reviewed by DLA with relevant observations being summarised below.

Aerial Photograph	Description
Jan 1947	The Site is an open grassed paddock and undeveloped.
Oct 1955	No significant visible change since 1947.
Aug 1965	Two (2) buildings are present in the eastern portion of the Site. An above ground storage tank is located adjacent to the larger building. The dam is present. A rectangular building is located at the western end of the Site, which is understood to be used as a piggery. The majority of the Site has been cleared and appears to be used for farming purposes. Large trees are scattered across the Site.
Jul 1978	The existing residential building and the shed located immediately to the west of the residential building are present. The piggery building is present with two (2) effluent dams located immediately to the north of the building on what is now the neighbouring property. The western portion of the Site is cleared, with a shed located at the north-eastern corner.
Aug 1986	The second shed behind the primary residence is present. Otherwise no significant visible change since 1978.
Oct 1994	The eastern section of the piggery building has been demolished and the two (2) effluent dams backfilled. The shed located in the centre of the Site has been demolished. A small greenhouse is present to the south of the existing building.
Dec 2005	The area to the east of the residential building appears to be being used for farming purposes. A section of the greenhouse appears to have been demolished. Otherwise, no significant visible change to the Site since 1994.

Mar 2009	The greenhouse appears to have been demolished. Otherwise, no significant visible change to the Site since 2005.

2.5.2 Historical Title Search

Lands Department records indicate that the properties have been in private ownership from 1901 until present.

Table 2b - Historical Title Summary for Lot 42 in DP 30186

Date	Site Owner	Land Use/Occupation
1901	Edwin Rouse	Esquire
1948	Nina Terry	Married Woman
1956	Roderick, Edwin and Gerald Terry	Farmers
1960	Roderick, Edwin and Gerald Terry	Farmers
1961	Roderick, Edwin and Gerald Terry	Farmers
1971	Gerhard and Erika Moller	Not Specified
1988	Gerhard and Erika Moller	Not Specified
1990	Barbara Moller	Not Specified

Refer to **Appendix C** – Historical Title Search

2.5.3 Site History Summary

The Site history indicates that the property appears to have been owned by the current site owner since 1971. The Site has been used as a rural residential property, with some light agricultural activities, including farming and a small greenhouse, appear likely to have been formerly present. A former piggery is likely to have operated between the 1960s and 1990s, with two (2) effluent dams on what is today the neighbouring property to the north now backfilled. An above ground storage tank was also present adjacent to the primary residence. Some contamination, related to farming/piggery operations may be present. Potential for contamination at the Site from on-site activities is considered to be low.

3.0 SITE INVESTIGATION PLAN

3.1 Field Investigation Procedure

The field investigation with supplementary soil sampling at the Tallawong Road Site was undertaken on the 3rd March 2014 and comprised of the following:

- Inspect Site and conduct a review of Site history and aerial photographs to identify appropriate sampling locations prior to the commencement of work;
- A judgemental sampling strategy to target areas of potential contamination;
- Conducting sampling in accordance with the NSW EPA Sampling Design Guidelines and National Environmental Protection (Assessment of Site Contamination) Measure 2013 (No.1); and
- Collection of six (6) targeted soil samples across the Site.

Refer to **Figure 3** – Site Layout with Sample Locations

3.1.1 Soil Collection

Samples were obtained by using a decontaminated trowel from surface soils. The soil was placed into a non-preserved glass container with a Teflon lined threaded cap to be transported to the laboratory.

Soil samples for chemical analyses were collected in accordance with the NSW EPA Samples Guidelines 1994, NEPM 2013 and AS4482.1-2005.

All samples were collected by DLA Environmental who are specifically trained in hazardous waste field investigation techniques and health and safety procedures. All techniques used are specified in DLA's Environmental Field Manual for Contaminated Sites, which are based on methods specified by the United States Environment Protection Agency (US EPA) and The National Environmental Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1).

3.1.2 Analytical Strategy

Samples were analysed for a range of contaminant indicators that may be associated with past and present land uses. Soil samples were analysed by Envirolab Services Pty Ltd of Chatswood for the following parameters:

Inorganic

- Heavy metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), and zinc (Zn), in all six (6) samples analysed; and
- Asbestos

Organic

- Semi-volatile Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons (BTEX);
- Volatile TRH (vTRH);
- Organochlorine Pesticides (OCP);
- Organophosphorus Pesticides (OPP);
- Polycyclic Aromatic Hydrocarbons (PAHs); and,
- Polychlorinated Biphenyls (PCBs).

All samples were analysed for all potential contaminants to allow confident assessment of all representative areas of the Site.

Results of contaminant concentrations were assessed with reference to the relevant Health Investigation Levels (HILs), prior to reporting and making recommendations.

Refer to **Appendix A** – NATA Certified Analytical Results.

3.2 Soil Criteria

3.2.1 Rationale for the Selection of Assessment Criteria

The criteria selected have been chosen in accordance with current Australian and NSW EPA guidelines. Australian guidelines have been used in preference to international guidelines where available. These criteria are the most current and widely accepted guidelines in use at present in Australia, and have generally been developed using a risk-based approach. Therefore, the general selected guidelines provide a satisfactory framework for the site assessment.

3.2.2 Soil Criteria

The site assessment criteria for assessing the Site were derived from the following publications:

- Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) Table 1A(1) Column A – Residential with Garden / Accessible soil;
- NSW EPA Guidelines for the NSW Site Auditor Scheme, second edition 2006; and,
- CRC CARE Technical Report no. 10 – Health Screening Levels for petroleum hydrocarbons in soil and groundwater. Part 1: Technical development document.

Refer to **Tables 3a, 3b** and **3c** below for adopted site criteria.

Table 3a – Site Criteria – Residential A: Garden / Accessible Soils

Analytes	Thresholds (mg/kg dry wt)
Heavy Metals	
Arsenic	100
Cadmium	20
Chromium (VI)	100
Copper	6,000
Lead	300
Mercury	40
Nickel	400
Zinc	7,400
Polycyclic Aromatic Hydrocarbons (PAHs)	
BaP TEQ	3
Total PAHs	300
Organochlorine Pesticides	
DDT + DDE + DDD	240
Aldrin and Dieldrin	6
Chlordane	50
Other Organics	
PCBs	1
Asbestos	
All Asbestos	No visible asbestos at surface
Bonded ACM ^	0.01%
FA* and AF* (friable asbestos)	0.001%

^ **Bonded ACM (bonded Asbestos) -** asbestos-containing-material which is in sound condition and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). Bonded ACM refers to, in this instance, material that cannot pass a 7 mm x 7 mm sieve.

* **Fibrous Asbestos -** friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This material is in a degraded condition such that it can be broken or crumbled by hand pressure.

Asbestos Fines - AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

Table 3b – Site TRH Vapour Intrusion Criteria – Residential A: Garden / Accessible Soil

	TRH Criteria for Residential Properties in sandy soils (mg/kg)			
	0m to <1m	1m to <2m	2m to <4m	>4m
Toluene	160	220	310	540
Ethylbenzene	55	NL	NL	NL
Xylene (total)	40	60	95	170
Naphthalene	3	NL	NL	NL
Benzene	0.5	0.5	0.5	0.5
F1 – C_6-C_{10}	45	70	110	200
F2 – C_{10}-C_{16}	110	240	440	NL
#F3 – C_{16}-C_{34}	--	--	--	--
#F4 – C_{34}-C_{40}	--	--	--	--

No vapour criteria has been provided due to the non-volatile nature of the hydrocarbons and are "therefore not of concern for vapour intrusion"

(Schedule B1, Section 2.4.6 Petroleum hydrocarbon compounds and fraction, NEPM 2013) NL – Not Limiting

Note: Site soils were identified as clayey, however sand criteria has been provided as it is the most sensitive criteria available for the assessment of sites.

Table 3c – Soil Health Screening Levels for Direct Contact – HSL- A: Residential (Low Density)

Chemical	Threshold (mg/kg)
Toluene	14,000
Ethylbenzene	4,500
Xylenes	12,000
Naphthalene	1,400
Benzene	100
C_6 – C_{10}	4,400
>C_{10} – C_{16}	3,300
>$C1_6$ – C_{34}	4,500
>C_{34} – C_{40}	6,300

3.2.3 Limitations of the Assessment Criteria

All criteria have limitations. Not all chemical analytes are covered by each set of guidelines, requiring some criteria to be sourced from elsewhere. Only criteria relevant to Australia have been used in the interpretation of analytical data on the Site.

4.0 RESULTS

4.1 Field observations

Six (6) soil samples were taken from six (6) separate locations across the Site. The surface material across the Site was predominantly dark brown loamy topsoil, which was underlain by light brown to red clay subsoil. A small amount of visually clean fill was observed around the base of the metal shed behind the main residence, with the material sampled as part of the assessment.

The area behind the residential building contained an above ground water tank, vegetable garden and two (2) storage sheds – one locked metal shed and the other a roofless, dilapidated old brick building. A septic tank also appeared to be present between the primary residence and the roofless building. The roofless building contained a number of chemical containers and garden materials, with some sections of floorboards missing, exposing the soil beneath. The former piggery at the rear of the Site had been demolished, with the concrete flooring and some low walls of the former building still present.

No obvious pollutants or oily sheen was visible in the water contained in the dam in the centre of the Site.

4.1.1 Asbestos

A number of fragments of ACM were observed on the surface beneath the main residence. A number of large corrugated sheets and broken fragments of ACM were also noted in the centre of the former piggery and on the surface by the southern boundary of the piggery footprint.

4.1.2 Dangerous Goods

Dangerous Goods in any quantity must be stored safely and in compliance with the requirements of the Dangerous Goods Act 1975 and Its Regulations. The assessment confirmed the WorkCover NSW search indicating that no Dangerous Goods are present on the Site.

4.1.3 Heritage / Archaeological Items

No Heritage or archaeological significance was noted either from the historical review or Site inspection.

4.1.4 Off-Site Observations

While the dam in the centre of the northern boundary of the Site is shared with the neighbouring property, there were no obvious current activities in the immediate surroundings of the Site which may potentially cause contamination.

4.1 Laboratory Results

All soils are analysed against the site criteria: NEPM 2013, Table 1A(1) Column A *Residential with Garden / Accessible Soil.* The sampling regime involved the collection of representative surface samples and subsurface samples where possible. A total of six (6) soil samples were submitted to EnviroLab Pty Ltd and four (4) to Australia Safer Environment and Technologies Pty Ltd for laboratory analysis. A summary of the laboratory results are outlined below.

Refer to **Appendix A** – NATA Certified Analytical Data.

4.2.1 Soil Analysis

Volatile Total Recoverable Hydrocabons (vTRH), BTEX and Naphthalene

Three (3) samples were analysed for Volatile Total Recoverable Hydrocarbons (vTRH), Benzene, Toluene, Ethylbenzene, Xylene (BTEX) and Naphthalene. There were no concentrations of vTRH, BTEX or Naphthalene recorded above the laboratory Limit of Reporting (LOR) and hence none above the assessment criteria.

Total Recoverable Hydrocarbons (TRH)

Three (3) samples were analysed for TRH compounds and compared against the adopted Vapour Intrusion Criteria for sand (the most sensitive) in the NEPM (1999) Amended 2013 guidelines. One (1) sample (S6_0.2) detected a concentration of 130mg/kg for the F3 fraction range (TRH>C_{16}-C_{34}), which complies with the relevant SAC. No other detections were recorded.

Polycyclic Aromatic Hydrocarbons (PAH)

All six (6) samples were analysed for Polycyclic Aromatic Hydrocarbons (PAHs). There was no concentrations of PAH recorded above the LOR and hence none above the HIL.

Pesticides and Polychlorinated Biphenyls (PCBs)

Five (5) samples collected from the top 400mm of the Site were analysed for Organochlorine (OC) pesticides, Organophosphorus (OP) pesticides and PCBs. No OC or OP pesticides were detected above the laboratory LOR in any of the samples analysed.
A trace concentration of the PCB Arochlor 1254 was recorded in one (1) of the samples analysed (S1_0.2), however the detected concentration was below the relevant SAC.

Heavy Metals

All six (6) soil samples were submitted for analysis of all eight (8) heavy metals as recommended by the NSW OEH. No sample concentration of any tested metal exceeded the HILs of the NEPM 2013, Table 1A(1) Column A – *Residential with Garden / Accessible Soil*. Results are outlined in **Table 4a** below.

Table 4a – Heavy Metals Summary (mg/kg)

Parameter	***Acid Extractable Metals***							
	As	**Cd**	**Cr**	**Cu**	**Pb**	**Hg**	**Ni**	**Zn**
Average (n= 6)	7.5	0.1	13.1	21	41.7	N/A	6.1	107.7
Standard Deviation	2.8	N/A	1.7	10.7	41.5	N/A	2.0	97.7
Minimum (mg/Kg)	nd	nd	10.1	11.3	11.8	nd	3.2	26.3
Maximum (mg/Kg)	9.2	0.6	14.7	39.1	127.6	nd	7.2	264.9
Number HIL Exceedances	0	0	0	0	0	0	0	0
Criteria (mg/Kg)	**100**	**20**	**100**	**6,000**	**300**	**40**	**400**	**7,400**

nd = non detect, N/A = Not Applicable (insufficient data to generate a statistical value)

Asbestos

Suspected ACM fragments were observed and collected for analysis from the surface beneath the main residence and in the centre and by the southern boundary of the footprint of the former piggery. Analysis confirmed the presence of both Chrysotile and Amosite asbestos in the fragments collected from both locations.

Two (2) soil samples, one (1) collected from beneath the main residence and one (1) by the southern boundary of the footprint of the former piggery, were submitted for analysis of asbestos fibres/fibrous asbestos (AF/FA). Chrysotile asbestos was detected in the sample collected from beneath the main residence.

5.0 DISCUSSION AND CONCLUSION

This Soil Supplemented Stage 1 Preliminary Environmental Site Assessment chemically evaluated the concentration of soil contaminants and conducted a visual and historical investigation of the potential environmental impacts on the Site in accordance with SEPP 55 and NEPM 2013 guidelines. Six (6) primary soil samples were taken from six (6) targeted locations across the Site identified as Lot 42 in DP30186 at 151 Tallawong Road, Rouse Hill, NSW 2155. Results of quality-control sample indicate the assessment satisfies the requirements of relevant guidelines and standards including AS 4482.1-2005.

The WorkCover Dangerous Goods search and other aspects of the desktop study found that the Site is not encumbered by any contaminated land notices and does not have a registered history of storing any dangerous goods on-site that have the potential to contaminate and therefore detrimentally affect the Site. A search of the New South Wales Natural Resources Atlas indicated no evidence of salinity hazards or dryland salinity indicators within the Site boundaries or land surrounding the Site. The Site is located in an area described as 'moderate salinity potential' in the DIPNR Salinity Potential in Western Sydney 2002 Map.

A review of the historical aerial photos indicates that some light agricultural activities are likely to have occurred on-site, in addition to a piggery building present at the western end of the property from the 1960s til the 1980s. The Site appears to have been used as a rural residential property since the 1980s.

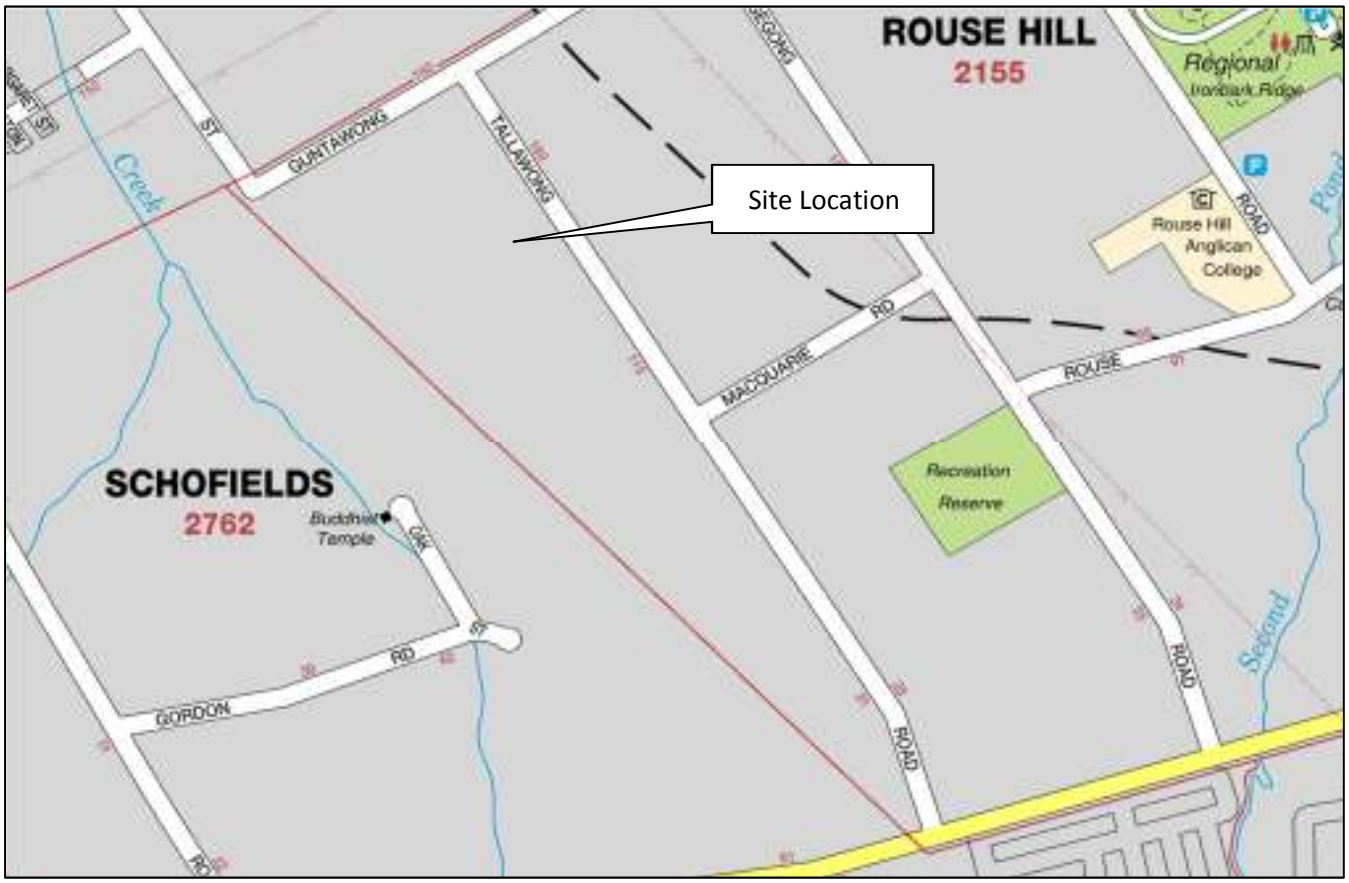
Brown silty loam topsoils overlaying natural light brown/red clays at an average depth of 300mm predominated. Samples were collected from locations identified during the historical review of the Site to be most likely impacted by potentially contaminating activities. These included the former farming and greenhouse areas, the former piggery, beneath the primary residence and dilapidated former storage shed and from fill material adjacent to the metal shed.

Concentrations of vTRH, BTEX, OC/OP pesticides and PAH were not detected above the LOR in any of the samples, and therefore comply with the adopted site acceptance criteria. All eight (8) heavy metals analysed indicate no exceedances of the criteria were recorded and complied with relevant NEPM Guidelines. A single detection of F3 fraction hydrocarbons at sample location S1, beneath the dilapidated roofless building, complied with the SAC. Hydrocarbons in the F3 fraction range are non-volatile and therefore not of concern for vapour intrusion and the reported concentration was below the criteria for human health exposure.

Analysis confirmed ACM fragments are present on the surface beneath the main residence, on the surface in the centre of the former piggery and by the southern boundary of the footprint of the former piggery. Furthermore, the soil sample collected from beneath the main residence was reported to contain asbestos fibres. Both areas will require remedial activities. Following removal, a Clearance Certificate should be provided in accordance with the *How to Safely Remove Asbestos* Code of Practice (Safe Work Australia, 2011).

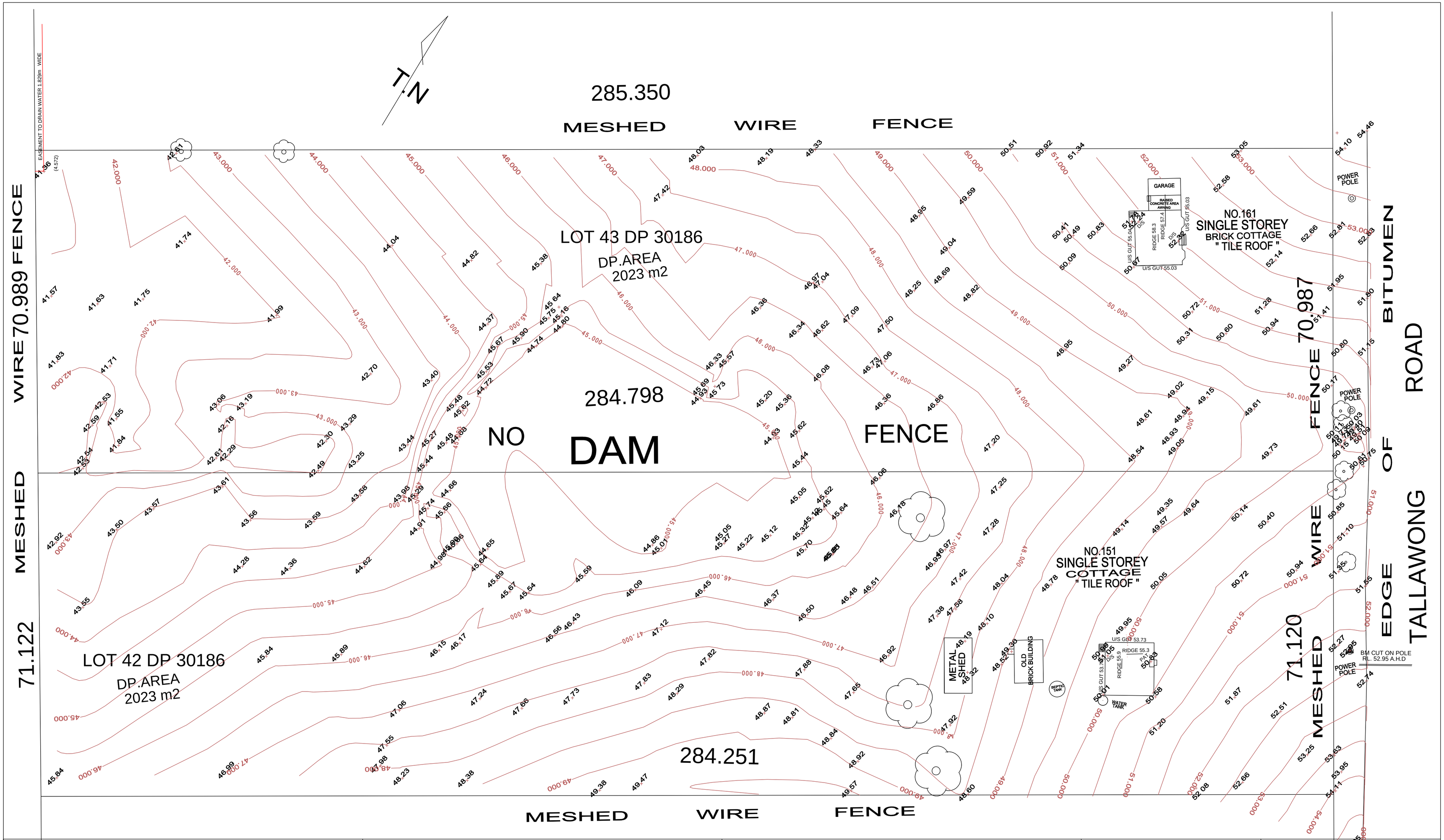
The conclusion of this Stage 1 Environmental Site Assessment Report is that there is a low risk of chemical contamination on-site and **the Site can be made suitable for its intended land use** consistent with the definition of Column A – *Residential with Garden / Accessible Soil* land use provided by the National Environment Protection Council (NEPC) in Table 1A(1) of the NEPM 2013 Guidelines **following the issuing of an Asbestos Clearance Certificate.** If the land use is changed in the future the Site Assessment should be reviewed to ensure compliance with suitable soil investigation levels for appropriate end land use zoning.

Figure 1
Site Location



DLA environmental Unit 2b/30 Leighton Place Hornsby, NSW 2077	**DESIGNED:** DLA	SITE LOCATION	
	COMPILED: JC	**CLIENT:** ARCInnovationz	**DRAWING:** 27/02/2014
	PROJ. No. DL3280	**LOCATION:** Lot 42 DP 30186 151 Tallawong Road Rouse Hill	**FIGURE:** 1

Figure 2
Detailed Site Survey



WARNING.

1. Plan compiled from information at land title office as regards dimensions and these are subject to final survey.
2. All details and features shown hereon have been plotted in relation to the occupations (fences and/or wall, etc.) These occupations have not yet accurately located in relation to the boundaries.
3. The details and features and contours are shown to scale plot accuracy only, copying may distort the scale
4. Services structures shown hereon are those that were visible at the time of survey and have been located by field survey. Further services may be present prior to any construction or excavation on site the relevant authorities should be contacted for possible location of further underground services and detailed of all services

DETAIL SURVEY

151-161 TALLAWONG ROAD

ROUSE HILL

LOT 42 DP 30186
LOT 43 DP 30186

ORIGIN OF A.H.D IS PM 57625 RL.59.61 A.H.D
A TOPOGRAPHICAL SURVEY IS NOT A SURVEY AS DEFINED BY THE SURVEYING ACT 2002

CEDAR SURVEYING SERVICES

LAND AND ENGINEERING SURVEYING

DANNY KHALAF
B. GEOMATIC ENGINEERING (U.N.S.W)

postal address.
26 ISABEL STREET.
BELMORE NSW 2192

PH (02) 9703-4800
FAX (02) 9703-4800
MOBILE. 0410 435 762
Email : dannykhalaf@optusnet.com.au

REDUCTION RATIO : 1:400A1			DATE : 13/11/2013
CONTOUR INTERVAL : 0.5m			
DRAWING : CCAD5/DATA/2828(2)			JOB NO : 3828(2)
DATUM : A.H.D	SURVEYED BY : DK DATE 07/11/2013	DRAWN BY : DK DATE 12/11/2013	ABN 19403440563
SHEET : 1 OF 1			

Figure 3
Site Layout with Sampling Locations

151 Tallawong Road,
Rouse Hill, NSW

Figure modified from www.nearmaps.com.au
22.9.2013 air photo

Legend

Site Boundary

Sampling Locations

Scale

0 10 20 30 40 50

(meters)

N

DLA environmental

Unit 2b/30 Leighton Place
Hornsby, NSW 2077

Newcastle Office
Phone (02) 4949 3800
Fax (02) 4949 3811

Sydney Office
Phone (02) 9476 1765
Fax (02) 9476 1557

Title: Site Layout			
Client: ARCInnovationz	Job No: DL3280	Figure No: 2	Date: 24/02/2014
	Scale: As Shown	Sheet: 1 of 1	Revision: R00

Appendix A
NATA Certified Analytical Results

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 106037

Client:
David Lane Associates
2B, 30 Leighton Pl
Hornsby
NSW 2077

Attention: Josh Crawford

Sample log in details:

Your Reference:	**DL3280, Tallawong Rd**		
No. of samples:	7 Soils		
Date samples received / completed instructions received	05/03/14	/	05/03/14

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	11/03/14	/	11/03/14
Date of Preliminary Report:	Not issued		

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil				
Our Reference:	UNITS	106037-1	106037-4	106037-7
Your Reference	----------	S1	S3	S6
Depth	----------	0.2	0.1	0.2
Date Sampled		03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil
Date extracted	-	06/03/2014	06/03/2014	06/03/2014
Date analysed	-	08/03/2014	08/03/2014	08/03/2014
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	78	80	79

svTRH (C10-C40) in Soil				
Our Reference:	UNITS	106037-1	106037-4	106037-7
Your Reference	----------	S1	S3	S6
Depth	----------	0.2	0.1	0.2
Date Sampled		03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil
Date extracted	-	06/03/2014	06/03/2014	06/03/2014
Date analysed	-	06/03/2014	06/03/2014	06/03/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	130
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100
Surrogate o-Terphenyl	%	102	99	98

PAHs in Soil						
Our Reference:	UNITS	106037-1	106037-2	106037-3	106037-4	106037-5
Your Reference	----------	S1	S2	S2A	S3	S4
Depth	----------	0.2	0.2	0.2	0.1	0.1
Date Sampled		03/03/2014	03/03/2014	03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	6/03/2014	6/03/2014	6/03/2014	6/03/2014	6/03/2014
Date analysed	-	7/03/2014	7/03/2014	7/03/2014	7/03/2014	7/03/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	92	97	103	100	95

PAHs in Soil			
Our Reference:	UNITS	106037-6	106037-7
Your Reference	----------	S5	S6
Depth	----------	0.2	0.2
Date Sampled		03/03/2014	03/03/2014
Type of sample		Soil	Soil
Date extracted	-	6/03/2014	6/03/2014
Date analysed	-	7/03/2014	7/03/2014
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	105	100

Organochlorine Pesticides in soil						
Our Reference:	UNITS	106037-1	106037-2	106037-3	106037-4	106037-5
Your Reference	----------	S1	S2	S2A	S3	S4
Depth	----------	0.2	0.2	0.2	0.1	0.1
Date Sampled		03/03/2014	03/03/2014	03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/03/2014	06/03/2014	06/03/2014	06/03/2014	06/03/2014
Date analysed	-	08/03/2014	08/03/2014	08/03/2014	08/03/2014	08/03/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	103	97	101	98	94

Organochlorine Pesticides in soil		
Our Reference:	UNITS	106037-6
Your Reference	----------	S5
Depth	----------	0.2
Date Sampled		03/03/2014
Type of sample		Soil
Date extracted	-	06/03/2014
Date analysed	-	08/03/2014
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	100

Organophosphorus Pesticides						
Our Reference:	UNITS	106037-1	106037-2	106037-3	106037-4	106037-5
Your Reference	----------	S1	S2	S2A	S3	S4
Depth	----------	0.2	0.2	0.2	0.1	0.1
Date Sampled		03/03/2014	03/03/2014	03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/03/2014	06/03/2014	06/03/2014	06/03/2014	06/03/2014
Date analysed	-	08/03/2014	08/03/2014	08/03/2014	08/03/2014	08/03/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	103	97	101	98	94

Organophosphorus Pesticides		
Our Reference:	UNITS	106037-6
Your Reference	----------	S5
Depth	----------	0.2
Date Sampled		03/03/2014
Type of sample		Soil
Date extracted	-	06/03/2014
Date analysed	-	08/03/2014
Diazinon	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Ethion	mg/kg	<0.1
Surrogate TCMX	%	100

PCBs in Soil						
Our Reference:	UNITS	106037-1	106037-2	106037-3	106037-4	106037-5
Your Reference	----------	S1	S2	S2A	S3	S4
Depth	----------	0.2	0.2	0.2	0.1	0.1
Date Sampled		03/03/2014	03/03/2014	03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/03/2014	06/03/2014	06/03/2014	06/03/2014	06/03/2014
Date analysed	-	08/03/2014	08/03/2014	08/03/2014	08/03/2014	08/03/2014
Arochlor 1016	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.2	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	103	97	101	98	94

PCBs in Soil		
Our Reference:	UNITS	106037-6
Your Reference	----------	S5
Depth	----------	0.2
Date Sampled		03/03/2014
Type of sample		Soil
Date extracted	-	06/03/2014
Date analysed	-	08/03/2014
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	100

Acid Extractable metals in soil						
Our Reference:	UNITS	106037-1	106037-2	106037-3	106037-4	106037-5
Your Reference	----------	S1	S2	S2A	S3	S4
Depth	----------	0.2	0.2	0.2	0.1	0.1
Date Sampled		03/03/2014	03/03/2014	03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	06/03/2014	06/03/2014	06/03/2014	06/03/2014	06/03/2014
Date analysed	-	06/03/2014	06/03/2014	06/03/2014	06/03/2014	06/03/2014
Arsenic	mg/kg	9	9	8	9	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	11	10	14	14
Copper	mg/kg	16	15	15	39	16
Lead	mg/kg	28	13	12	42	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	3	7	6
Zinc	mg/kg	37	26	26	200	68

Acid Extractable metals in soil			
Our Reference:	UNITS	106037-6	106037-7
Your Reference	----------	S5	S6
Depth	----------	0.2	0.2
Date Sampled		03/03/2014	03/03/2014
Type of sample		Soil	Soil
Date digested	-	06/03/2014	06/03/2014
Date analysed	-	06/03/2014	06/03/2014
Arsenic	mg/kg	9	<4
Cadmium	mg/kg	<0.4	0.6
Chromium	mg/kg	14	11
Copper	mg/kg	11	29
Lead	mg/kg	18	130
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	9	7
Zinc	mg/kg	55	260

Moisture						
Our Reference:	UNITS	106037-1	106037-2	106037-3	106037-4	106037-5
Your Reference	----------	S1	S2	S2A	S3	S4
Depth	----------	0.2	0.2	0.2	0.1	0.1
Date Sampled		03/03/2014	03/03/2014	03/03/2014	03/03/2014	03/03/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	6/03/2014	6/03/2014	6/03/2014	6/03/2014	6/03/2014
Date analysed	-	7/03/2014	7/03/2014	7/03/2014	7/03/2014	7/03/2014
Moisture	%	21	18	19	14	18

Moisture			
Our Reference:	UNITS	106037-6	106037-7
Your Reference	----------	S5	S6
Depth	----------	0.2	0.2
Date Sampled		03/03/2014	03/03/2014
Type of sample		Soil	Soil
Date prepared	-	6/03/2014	6/03/2014
Date analysed	-	7/03/2014	7/03/2014
Moisture	%	16	12

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-5	06/03/2014
Date analysed	-			08/03/2014	106037-1	08/03/2014 || 08/03/2014	LCS-5	08/03/2014
TRHC$_6$ - C$_9$	mg/kg	25	Org-016	<25	106037-1	<25 || <25	LCS-5	88%
TRHC$_6$ - C$_{10}$	mg/kg	25	Org-016	<25	106037-1	<25 || <25	LCS-5	88%
Benzene	mg/kg	0.2	Org-016	<0.2	106037-1	<0.2 || <0.2	LCS-5	82%
Toluene	mg/kg	0.5	Org-016	<0.5	106037-1	<0.5 || <0.5	LCS-5	86%
Ethylbenzene	mg/kg	1	Org-016	<1	106037-1	<1 || <1	LCS-5	89%
m+p-xylene	mg/kg	2	Org-016	<2	106037-1	<2 || <2	LCS-5	92%
o-Xylene	mg/kg	1	Org-016	<1	106037-1	<1 || <1	LCS-5	93%
naphthalene	mg/kg	1	Org-014	<1	106037-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	86	106037-1	78 || 81 || RPD: 4	LCS-5	85%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-3	06/03/2014
Date analysed	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-3	06/03/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	50	Org-003	<50	106037-1	<50 || <50	LCS-3	120%
TRHC$_{15}$ - C$_{28}$	mg/kg	100	Org-003	<100	106037-1	<100 || <100	LCS-3	104%
TRHC$_{29}$ - C$_{36}$	mg/kg	100	Org-003	<100	106037-1	<100 || <100	LCS-3	95%
TRH>C$_{10}$-C$_{16}$	mg/kg	50	Org-003	<50	106037-1	<50 || <50	LCS-3	120%
TRH>C$_{16}$-C$_{34}$	mg/kg	100	Org-003	<100	106037-1	<100 || <100	LCS-3	104%
TRH>C$_{34}$-C$_{40}$	mg/kg	100	Org-003	<100	106037-1	<100 || <100	LCS-3	95%
Surrogate o-Terphenyl	%		Org-003	94	106037-1	102 || 97 || RPD: 5	LCS-3	91%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			06/03/2014	106037-1	6/03/2014 || 6/03/2014	LCS-3	06/03/2014
Date analysed	-			07/03/2014	106037-1	7/03/2014 || 7/03/2014	LCS-3	07/03/2014
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	LCS-3	94%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	LCS-3	95%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	LCS-3	95%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	LCS-3	88%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	LCS-3	93%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	LCS-3	87%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	106037-1	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	106037-1	<0.05 || <0.05	LCS-3	100%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	101	106037-1	92 || 98 || RPD: 6	LCS-3	104%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-3	06/03/2014
Date analysed	-			08/03/2014	106037-1	08/03/2014 || 08/03/2014	LCS-3	08/03/2014
HCB	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	94%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	74%
Heptachlor	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	68%
delta-BHC	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	96%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	110%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	83%
Dieldrin	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	81%
Endrin	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	72%
pp-DDD	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	89%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	LCS-3	90%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	93	106037-1	103 || 98 || RPD: 5	LCS-3	93%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-3	06/03/2014
Date analysed	-			08/03/2014	106037-1	08/03/2014 || 08/03/2014	LCS-3	08/03/2014
Diazinon	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	LCS-3	107%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	LCS-3	99%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	106037-1	<0.1 || <0.1	LCS-3	99%
Surrogate TCMX	%		Org-008	93	106037-1	103 || 98 || RPD: 5	LCS-3	93%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-3	06/03/2014
Date analysed	-			08/03/2014	106037-1	08/03/2014 || 08/03/2014	LCS-3	08/03/2014
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	106037-1	<0.2 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	106037-1	<0.2 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	106037-1	<0.2 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	106037-1	<0.2 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	106037-1	<0.2 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	106037-1	0.4 || 0.3 || RPD: 29	LCS-3	103%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	106037-1	<0.2 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	93	106037-1	103 || 98 || RPD: 5	LCS-3	81%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date digested	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-14	06/03/2014
Date analysed	-			06/03/2014	106037-1	06/03/2014 || 06/03/2014	LCS-14	06/03/2014
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	106037-1	9 || 9 || RPD: 0	LCS-14	95%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	106037-1	<0.4 || <0.4	LCS-14	101%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	106037-1	15 || 13 || RPD: 14	LCS-14	101%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	106037-1	16 || 15 || RPD: 6	LCS-14	97%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	106037-1	28 || 25 || RPD: 11	LCS-14	97%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	106037-1	<0.1 || <0.1	LCS-14	83%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	106037-1	5 || 5 || RPD: 0	LCS-14	100%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	106037-1	37 || 39 || RPD: 5	LCS-14	99%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	08/03/2014
TRH C_6 - C_9	mg/kg	[NT]	[NT]	106037-4	75%
TRH C_6 - C_{10}	mg/kg	[NT]	[NT]	106037-4	75%
Benzene	mg/kg	[NT]	[NT]	106037-4	71%
Toluene	mg/kg	[NT]	[NT]	106037-4	74%
Ethylbenzene	mg/kg	[NT]	[NT]	106037-4	76%
m+p-xylene	mg/kg	[NT]	[NT]	106037-4	78%
o-Xylene	mg/kg	[NT]	[NT]	106037-4	79%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	106037-4	78%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	06/03/2014
TRH C_{10} - C_{14}	mg/kg	[NT]	[NT]	106037-4	120%
TRH C_{15} - C_{28}	mg/kg	[NT]	[NT]	106037-4	105%
TRH C_{29} - C_{36}	mg/kg	[NT]	[NT]	106037-4	96%
TRH >C_{10}-C_{16}	mg/kg	[NT]	[NT]	106037-4	120%
TRH >C_{16}-C_{34}	mg/kg	[NT]	[NT]	106037-4	105%
TRH >C_{34}-C_{40}	mg/kg	[NT]	[NT]	106037-4	96%
Surrogate o-Terphenyl	%	[NT]	[NT]	106037-4	92%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	07/03/2014
Naphthalene	mg/kg	[NT]	[NT]	106037-4	96%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	106037-4	96%
Phenanthrene	mg/kg	[NT]	[NT]	106037-4	96%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	106037-4	89%
Pyrene	mg/kg	[NT]	[NT]	106037-4	94%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	106037-4	88%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	106037-4	102%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	106037-4	101%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	08/03/2014
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	106037-4	103%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	106037-4	82%
Heptachlor	mg/kg	[NT]	[NT]	106037-4	77%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	106037-4	106%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	106037-4	121%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	106037-4	93%
Dieldrin	mg/kg	[NT]	[NT]	106037-4	91%
Endrin	mg/kg	[NT]	[NT]	106037-4	81%
pp-DDD	mg/kg	[NT]	[NT]	106037-4	101%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	106037-4	100%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	106037-4	97%
QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	08/03/2014
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	106037-4	99%
Fenitrothion	mg/kg	[NT]	[NT]	106037-4	86%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	106037-4	88%
Surrogate TCMX	%	[NT]	[NT]	106037-4	95%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	08/03/2014
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	106037-4	98%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	106037-4	83%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	106037-4	06/03/2014
Date analysed	-	[NT]	[NT]	106037-4	06/03/2014
Arsenic	mg/kg	[NT]	[NT]	106037-4	92%
Cadmium	mg/kg	[NT]	[NT]	106037-4	92%
Chromium	mg/kg	[NT]	[NT]	106037-4	94%
Copper	mg/kg	[NT]	[NT]	106037-4	98%
Lead	mg/kg	[NT]	[NT]	106037-4	102%
Mercury	mg/kg	[NT]	[NT]	106037-4	75%
Nickel	mg/kg	[NT]	[NT]	106037-4	88%
Zinc	mg/kg	[NT]	[NT]	106037-4	#

Report Comments:

PCB'S (IN SOIL) PQL has been raised due to interference from analytes (other than those being tested) in the sample/s.

METALS_S: # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET37754/ 40934 / 1 - 4
Your ref: DL3280 - Tallawong Road
NATA Accreditation No: 14484

11 March 2014

DLA Environmental
2B/30 Leighton Street
Hornsby NSW 2077

Attn: Mr David Lane

Dear David

Asbestos Identification
This report presents the results of four samples, forwarded by DLA Environmental on 6 March 2014, for analysis for asbestos.

1.Introduction: Four samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET37754 / 40934 / 1. S3.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, synthetic mineral fibres, other fibres^, plant matter, fragments of plaster, cement and paint flakes.
Chrysotile^ asbestos detected.

Sample No. 2. ASET37754 / 40934 / 2. S4.
Approx dimensions 7.5 cm x 7.5 cm x 4.6 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 3. ASET37754 / 40934 / 3. S4 - Asb tile.
Approx dimensions 7.5 cm x 5.0 cm x 0.6 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 4. ASET37754 / 40934 / 4. House.
Approx dimensions 15.0 cm x 8.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory

WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

Appendix B
Section 149 Certificate

Blacktown City Council

PLANNING CERTIFICATE UNDER SECTION 149

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Certificate No.: 14-1379
Date: 4 MAR 2014
Page: 1 of 10
Enquiries: s149 Clerk
Applicants Ref.: 668286 - D LA-ROUSE HILL

Applicant JENNERS TITLE SEARCHING CO
DX 779
SYDNEY

Property LOT 42 DP 30186

151 TALLAWONG ROAD,

Suburb ROUSE HILL Parish of Gidley

NOTE: **The land the subject of this Certificate is known to be located in the suburb of Rouse Hill. For all correspondence and property transactions this suburb name is to be used.**

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO SECTION 149(2) OF THE *ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (EP&A Act 1979)*

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

The abovementioned land is affected by the following environmental planning instrument and proposed environmental planning instrument/s (where applicable) which have been the subject of community consultation or on public exhibition under the Act.

Blacktown Local Environmental Plan 1988 **(Refer to Attachment A)**

Blacktown Local Environmental Plan 1988 specifies the purposes for which development may be carried out or are prohibited.

Draft Blacktown Local Environmental Plan 2013 **(Refer to Attachment B)**

Blacktown City Council has a draft City-wide Local Environmental Plan, known as Draft Blacktown Local Environmental Plan (BLEP) 2013, which will eventually replace the existing BLEP 1988. Draft BLEP 2013 has been prepared in accordance with the NSW State Government's Standard Instrument (Local Environmental Plans) Order 2006.

Draft BLEP 2013 specifies the purposes for which development may be carried out (either with or without the need for development consent) or which are prohibited in the zone proposed to apply to the land.

Under the exhibited version of Draft BLEP 2013 it was proposed to zone the land:

RU4 - PRIMARY PRODUCTION SMALL LOTS

At its Extraordinary Meeting of 9 December 2013, Council resolved to adopt Draft BLEP 2013 subject to amendments, and to forward the amended plan to the NSW Government to be made law. Under the adopted version of Draft BLEP 2013, it is proposed to zone the land:

RU4 - PRIMARY PRODUCTION SMALL LOTS

1.2 Development Control Plans

The land is affected by Blacktown Development Control Plan (DCP) 2006.

This DCP provides general guidance for the development of land within the City of Blacktown.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

State Environmental Planning Policy No. 1 - Development Standards

The policy requires that variations to development standards must meet the objectives of local plans and controls. It makes development standards more flexible. It allows councils to approve a development proposal that does not comply with a set standard where this can be shown to be unreasonable or unnecessary.

State Environmental Planning Policy No. 4 - Development Without Consent and Miscellaneous Complying Development

This policy permits minor development and activities on land without a development application or through alternative assessment. This policy should be read in conjunction with Councils controls for Exempt and Complying Development.

State Environmental Planning Policy - Housing For Seniors Or People With a Disability 2004

State Environmental Planning Policy No. 5 - Housing for Older People and People with a Disability has been repealed by a new State Environmental Planning Policy (SEPP) - Seniors Living 2004, which was renamed to SEPP (Housing for Seniors or People with a Disability) 2004 effective from 12 October 2007. The new SEPP sets out standards and design requirements for self-care housing, "serviced" self-care housing, vertical villages, residential care facilities and hostels. The Policy recognises that demand for these forms of housing will grow over the next 10 - 15 years. It encourages the development of high quality accommodation for our ageing population and for people who have disabilities - housing that is in keeping with the local neighbourhood.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

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

This policy protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

State Environmental Planning Policy No. 30 - Intensive Agriculture

This policy requires development consent for cattle feedlots having a capacity of 50 or more cattle or piggeries having a capacity of 200 or more pigs. The policy sets out information and public notification requirements to ensure there are effective planning control over this export-driven rural industry. The policy does not alter if, and where, such development is permitted, or the functions of the consent authority.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy No. 62 - Sustainable Aquaculture

This policy encourages the sustainable expansion of the industry in NSW. The policy implements the regional strategies already developed by creating a simple approach to identity and categorise aquaculture development on the basis of its potential environmental impact. The SEPP also identifies aquaculture development as a designated development only where there are potential environmental risks.

State Environmental Planning Policy No. 64 - Advertising and Signage

This policy aims to ensure that outdoor advertising is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of high quality design and finish. The SEPP was amended in August 2007 to permit and regulate outdoor advertising in transport corridors (e.g. freeways, tollways and rail corridors). The amended SEPP also aims to ensure that public benefits may be derived from advertising along and adjacent to transport corridors.

State Environmental Planning Policy - Affordable Rental Housing 2009

This policy establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people.

State Environmental Planning Policy - Exempt and Complying Development Codes

This policy streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

State Environmental Planning Policy - Major Development 2005

The SEPP facilitates the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant sites for the benefit of the State. Schedule 3 of the SEPP identifies State significant sites and provides planning provisions for those sites. Note: This SEPP was formerly known as State Environmental Planning Policy (Major Projects) 2005.

State Environmental Planning Policy - Sydney Region Growth Centres 2006

This policy provides for the co-ordinated release of land for residential, employment and other urban development in the North West and South West Growth Centres of the Sydney Region (in conjunction with the Environmental Planning and Assessment Regulation relating to precinct planning). The policy identifies certain land as being within a residential, employment, environmental, recreation or infrastructure zone.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan No. 9 - Extractive Industry Sydney Region

This plan aims to protect the viability of extractive resources in the Sydney Metropolitan Area by ensuring consideration is given to the impact of encroaching development.

Sydney Regional Environmental Plan No. 19 - Rouse Hill Development Area

Regional Environmental Plan No. 19 - Rouse Hill Development Area covers about 9,400 hectares in the north-west sector, north of Blacktown. The plan co-ordinates planning and decision-making for long term growth, identifying land that is suitable for urban purposes and providing for the orderly and economic development of an area within the North West Sector.

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

(a) Pursuant to Blacktown Local Environmental Plan (LEP) 1988 the land is zoned:

1(a) - GENERAL RURAL

(b) Extracts from Blacktown Local Environmental Plan 1988 which specify the purposes for which development may be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

Should you require further information about the permissibility of development and related development standards it is recommended that you consult a full copy of Blacktown Local Environmental Plan 1988. It should be noted that the Environmental Planning & Assessment Act 1979, as amended, changes the way in which Blacktown Local Environmental Plan 1988 and other State Government issued environmental planning instruments should be interpreted. Pursuant to the amended Environmental Planning & Assessment Act 1979 Council's development consent is now required for all development regardless of its zoning/s, other than "exempt development" and "complying development", as defined in Blacktown Local Environmental Plan 1988.

(c) Extracts from Blacktown Local Environmental Plan 1988 which specify the purpose for which development may not be carried out within the zone/s applying to the land the subject of this Certificate are at Attachment A.

(d) An extract of the planning instrument at Attachment A provides details of the purposes for which development is prohibited within the zone applying to the land.

(e) Blacktown Local Environmental Plan 1988 does not nominate minimum land dimensions for the erection of a dwelling-house. It is noted however that Blacktown Development Control Plan 2006 stipulates minimum areas for subdivision, integrated housing, dual occupancies and the like.

The minimum area upon which a dwelling house may be erected is 4000 square metres.

(f) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.

(g) The land is not within a conservation area.

(h) This land does not contain an item of environmental heritage under the protection of Blacktown Local Environmental Plan 1988.

3. COMPLYING DEVELOPMENT

Complying Development under the *General Housing Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Rural Housing Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Housing Alterations Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Development Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *General Commercial and Industrial Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Subdivisions Code* of the Codes SEPP may be carried out on the land.

Complying Development under the *Demolition Code* of the Codes SEPP may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clauses 1.17A and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979*.

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.

6. ROAD WIDENING AND ROAD REALIGNMENT

Blacktown Local Environmental Plan 1988 and Blacktown Development Control Plan 2006 nominate preferred road patterns throughout the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or environmental planning instrument.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

Clauses 17, 17A and 18 of Blacktown Local Environmental Plan 1988 provide for the acquisition of certain land zoned 5(a), 5(b), 5(c), 6(a) or 6(c) by a public authority.

Draft Blacktown Local Environmental Plan 2013 makes provision for land included on the Land Reservation Acquisition Map to be acquired by a public authority.

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

9A. BIODIVERSITY CERTIFIED LAND

The land is biodiversity certified within the meaning of the Threatened Species Conservation Act 1995.

10. BIOBANKING AGREEMENTS

Council has not been notified of the existence of a biodiversity agreement under the Threatened Species Conservation Act 1995.

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

clear of any bush fire prone land

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

(a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.

(b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.

(c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.

(d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.

(e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO SECTION 149(5) OF THE *ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (EP&A Act 1979)*

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communitites. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Appendix C
Historical Title Search

Title Tree
Lot 42 DP 30186

Folio Identifier 42/30186

Certificate of Title Volume 8155 Folio 12

Certificate of Title Volume 7988 Folio 37

Certificate of Title Volume 1381 Folio 133

****

Summary of Proprietor(s)
Lot 42 DP 30186

Year	Proprietor
	(Lot 42 DP 30186)
1990 – todate	Barbara Erika Mollmer
1988 – 1990	Gerhard Richard Mollmer Erika Mollmer
	(Lot 42 DP 30186 – Area 5 Acres – CTVol 8155 Fol 12)
1971 – 1988	Gerhard Richard Mollmer Erika Mollmer
1961 – 1971	Roderick Buchanan Rouse Terry, farmer Edwin Terence Terry, farmer Gerald George Terry, farmer
	(Lots 26 to 47 & Lots 49 to 70 DP 30186 – CTVol 7988 Fol 37)
1960 – 1961	Roderick Buchanan Rouse Terry, farmer Edwin Terence Terry, farmer Gerald George Terry, farmer
	(Portions 9 & 72 Parish Gidley – Area 629 Acres 3 Roods 4 Perches – CTVol 1381 Fol 133)
1956 – 1960	Roderick Buchanan Rouse Terry, farmer Edwin Terence Terry, farmer Gerald George Terry, farmer
1948 – 1956	Nina Beatrice Terry, married woman
1901 – 1948	Edwin Stephen Rouse, esquire

*****

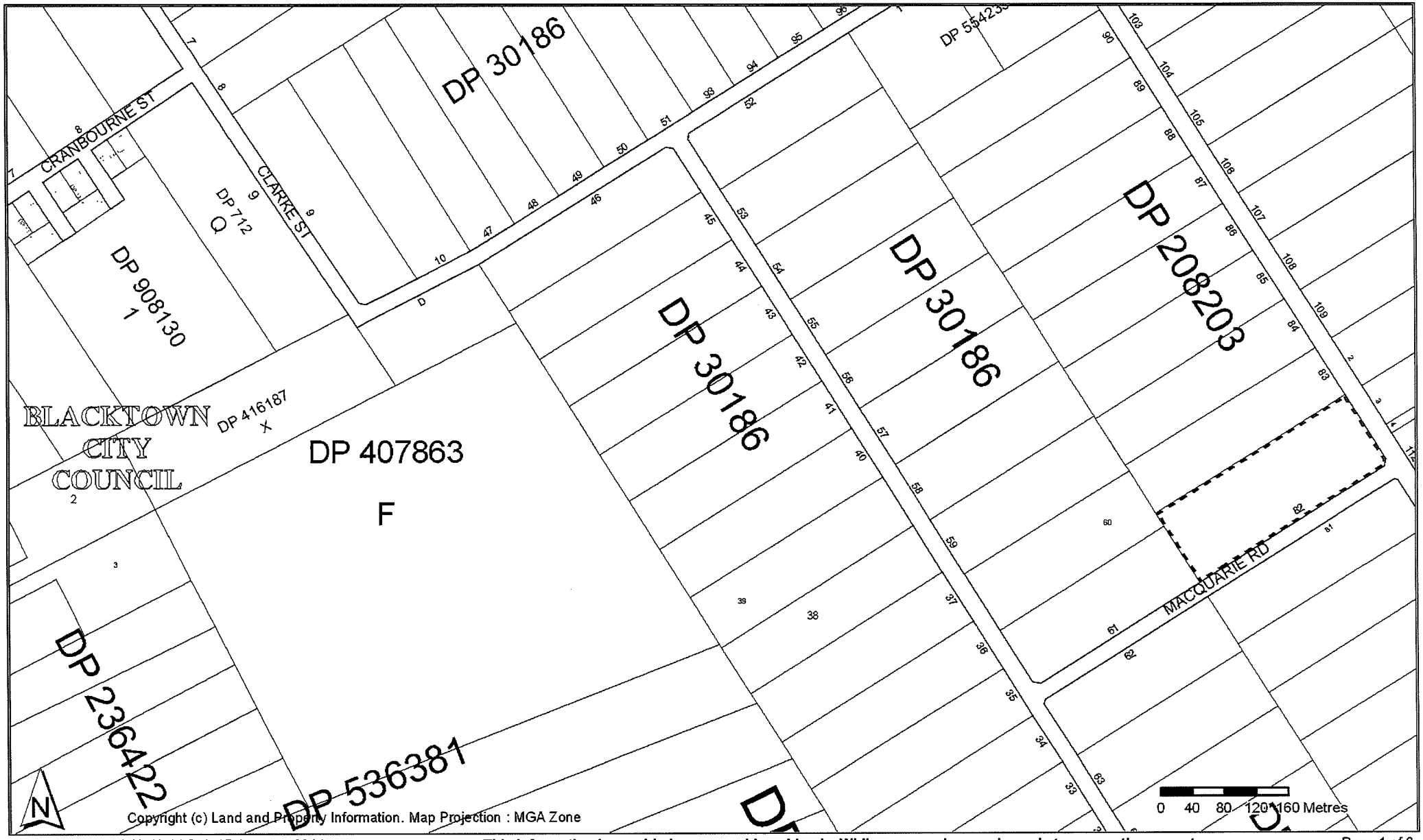
Land & Property Information

Cadastral Records Enquiry Report

Ref : Coffey - Rouse Hill

Requested Parcel : Lot 42 DP 30186 **Identified Parcel :** Lot 42 DP 30186

Locality : ROUSE HILL **LGA :** BLACKTOWN **Parish :** GIDLEY **County :** CUMBERLAND



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This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

Advance Legal Searchers Pty Ltd Phone: 02 9754 1590

LPI On-Line

Advance Legal Searchers Pty Ltd hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act.

Information provided through Tri-Search an approved LPI*NSW* Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 42/30186

SEARCH DATE	TIME	EDITION NO	DATE
15/1/2014	12:29 PM	1	7/5/1990

LAND

LOT 42 IN DEPOSITED PLAN 30186
LOCAL GOVERNMENT AREA BLACKTOWN
PARISH OF GIDLEY COUNTY OF CUMBERLAND
TITLE DIAGRAM DP30186

FIRST SCHEDULE

BARBARA ERIKA MOLLMER (T Y959455)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 F901549 RIGHT OF CARRIAGEWAY APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE LAND SHOWN SO BURDENED IN VOL 6736 FOL 171
3 M411318 COVENANT

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.
UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

HP 13 STAMP DUTY [redacted]

OFFICE USE ONLY

RECD -3 MAY 1990 1.25 p.m.

Y959455

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 1990/91 S4 NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

TRANSFER

REAL PROPERTY ACT, 1900

T CB 1 of 1 X $ 44 R

	Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
DESCRIPTION OF LAND Note (a)	VOLUME 8155 FOLIO 12 NOW BEING ~~whole~~ OF LAND COMPRISED IN FOLIO 42/30186	WHOLE	SCHOFIELDS

TRANSFEROR Note (b): GERHARD RICHARD MOLLMER AND ~~BARBARA~~ ERIKA MOLLMER

ESTATE Note (c): (the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ NIL and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d): BARBARA ERIKA MOLLMER

OFFICE USE ONLY: S

TENANCY Note (e): ~~as joint tenants/tenants in common~~

PRIOR ENCUMBRANCES Note (f): subject to the following PRIOR ENCUMBRANCES 1. .... 2. .... 3. ....

DATE

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

EXECUTION Note (g)

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

.... Signature of Witness

ALAN FREEMAN Name of Witness (BLOCK LETTERS)

LAW CLERK 29 RAILWAY RD QUAKERS HILL Address and occupation of Witness

Erica Mollmer

Gerhard Mollmer

.... Signature of Transferor

Note (g)

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

.... Signature of Witness

.... Name of Witness (BLOCK LETTERS)

.... Address and occupation of Witness

(A.L.W.)

.... Signature of Transferee

SOLICITOR FOR

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

639

LODGED BY Low & Associates

Ref:
Delivery Box Number 1048N

LOCATION OF DOCUMENTS		
CT	OTHER	
		Herewith.
		In L.T.O. with
		Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED - 19
EB		
Signed	Extra Fee	-7 MAY 1990

Secondary Directions		
Delivery Directions	CT	1048N

Advance Legal Searchers Pty Ltd Phone: 02 9754 1590

LPI On-Line

Advance Legal Searchers Pty Ltd hereby certifies that the information contained in this document has been provided electronically by the Registrar General.

Information provided through Tri-Search an approved LPI*NSW* Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
15/1/2014 12:42PM

FOLIO: 42/30186

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 8155 FOL 12

Recorded	Number	Type of Instrument	C.T. Issue
29/11/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/5/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
7/5/1990	Y959455	TRANSFER	EDITION 1

*** END OF SEARCH ***

Req:R398072 /Doc:DP 0030186 P /Rev:16-Aug-1999 /Sts:OK.OK /Prt:06-Feb-2012 16:36 /Pgs:ALL /Seq:1 of 4
Ref:ALS /Src:T

CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 30186

FEET	INCHES	METRES
1	6	0.457
1	6 1/8	0.460
2	10	0.864
3	-	0.914
6	-	1.829
7	9 3/4	2.381
8	7	2.616
9	4 3/4	2.864
11	7	3.531
14	7 1/2	4.458
15	-	4.572
20	-	6.096
28	2 5/8	8.601
28	3 3/8	8.620
28	4 1/4	8.642
65	-	19.812
66	-	20.117
66	3 3/8	20.203
66	6 1/8	20.272
76	11	23.444
77	10 3/8	23.733
78	6 7/8	23.949
80	2 3/4	24.454
86	-	26.213
87	11	26.797
102	10	31.344
106	-	32.309
130	9	39.853
137	6 1/4	41.916
140	8 3/8	42.885
148	6 1/4	45.269
204	9	62.408
208	8 5/8	63.617
213	7 1/4	65.107
215	11 1/2	65.824
216	0 1/2	65.849
216	1 1/2	65.875
216	2 1/2	65.900
219	7	66.929
220	8 3/4	67.276
225	0 3/4	68.599
226	5 3/8	69.021
226	5 3/4	69.031
227	0 1/2	69.202
227	6 3/8	69.352
227	6 1/2	69.355
228	0 1/4	69.501
228	0 3/8	69.504
228	6 7/8	69.669
229	3 7/8	69.898
229	4 1/8	69.904
230	1 1/4	70.136
230	1 1/2	70.142

CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 30186 CONTINUED

FEET	INCHES	METRES
230	10 3/4	70.377
230	11	70.383
231	8 1/4	70.618
231	8 1/2	70.625
232	-	70.714
232	5 3/8	70.850
232	5 1/2	70.853
232	6	70.866
232	6 1/4	70.872
232	10 3/4	70.987
233	3 7/8	71.117
233	4	71.120
233	4 1/8	71.123
233	4 1/4	71.126
233	7 3/8	71.206
233	7 1/2	71.209
233	9 5/8	71.263
233	9 3/4	71.266
234	1 5/8	71.364
234	3	71.399
234	3 1/8	71.403
249	7 1/2	76.086
259	6 3/4	79.115
269	4 1/2	82.105
269	7 1/2	82.182
304	9	92.888
305	1 1/4	92.996
305	1 1/2	93.002
334	3 1/4	101.886
504	10 1/2	153.886
569	2 3/4	173.501
583	9	177.927
788	7 1/2	240.373
808	7 1/2	246.469
811	9 1/4	247.428
821	1 1/4	250.273
823	4 1/2	250.965
838	8 1/8	255.629
921	7 1/4	280.905
928	11 3/8	283.143
930	9	283.693
931	11	284.048
932	7	284.251
934	4 1/2	284.798
935	2 1/2	285.052
936	2 1/4	285.350
938	-	285.902
938	6	286.055
939	9 1/2	286.448
941	9	287.045
945	-	288.036
948	3	289.027
951	5 3/8	290.001

PLAN

~~of 6822 Fol 138 &~~ of subdn. of part of the land in C/T Vol. 1381 Fols. 132 & 133.

...ey – County of Cumberland

Scale: 300 feet to an inch

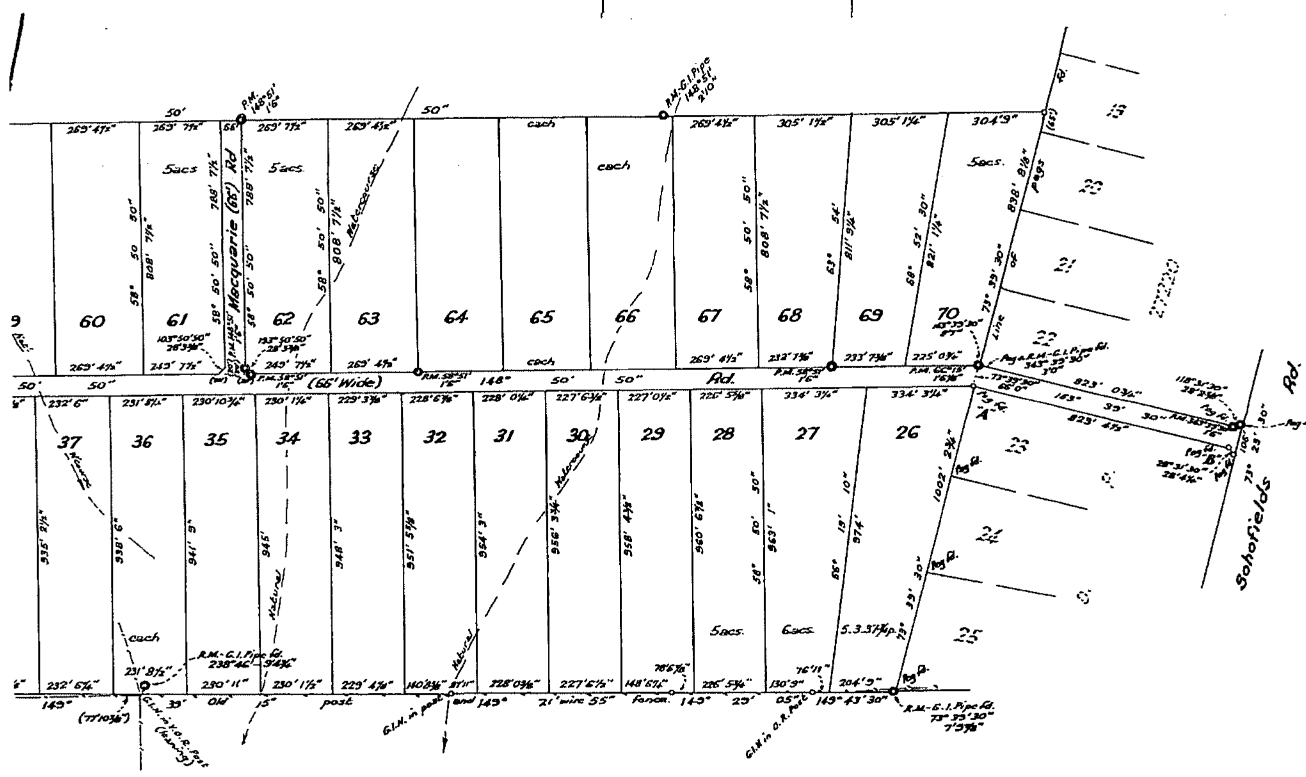
CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 30186 CONTINUED

FEET	INCHES	METRES
954	3	290.855
956	3 3/4	291.484
958	4 3/8	292.110
960	6 7/8	292.783
963	1	293.548
974	-	296.875
1002	2 3/4	305.479
1006	8 5/8	306.848
1007	2	306.984
1007	6 3/4	307.105
1007	11 1/2	307.226
1008	4 3/8	307.350
1008	9	307.467
1118	2	340.817

AC	RD	P	HA
5	-	-	2.023
5	3	37 3/4	2.422
6	-	-	2.428

Dealt with Plan No. 30186 E
this 4th day of November 1959
Registrar General



...ng and Macquarie Roads
...' wide as shown hereon in
...

...he Shire
...sions of
...ed.

I, John Patrick O'Keefe of 16 George Street, Parramatta a surveyor registered under the Surveyors Act, 1929-1946 hereby certify that the survey represented in this plan is accurate and has been made by me in accordance with the Survey Practice Regulations, 1933, and was completed on 2nd May 1957 and I hereby solemnly and sincerely declare that the permanent marks as shown hereon have been placed.
And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act, 1900.

(Signature) ____________
Surveyor registered under Surveyors Act, 1929-1946.

Subscribed and declared before me at ____________
this ___ day of ____ 1957

____________ J.P.
Justice of the Peace

Req:R398072 /Doc:DP 0030186 P /Rev:16-Aug-1999 /Sts:OK.OK /Prt:06-Feb-2012 16:36 /Pgs:ALL /Seq:2 of 4
Ref:ALS /Src:T

Shire of Blacktown

G892119 11-2-58

PLAN

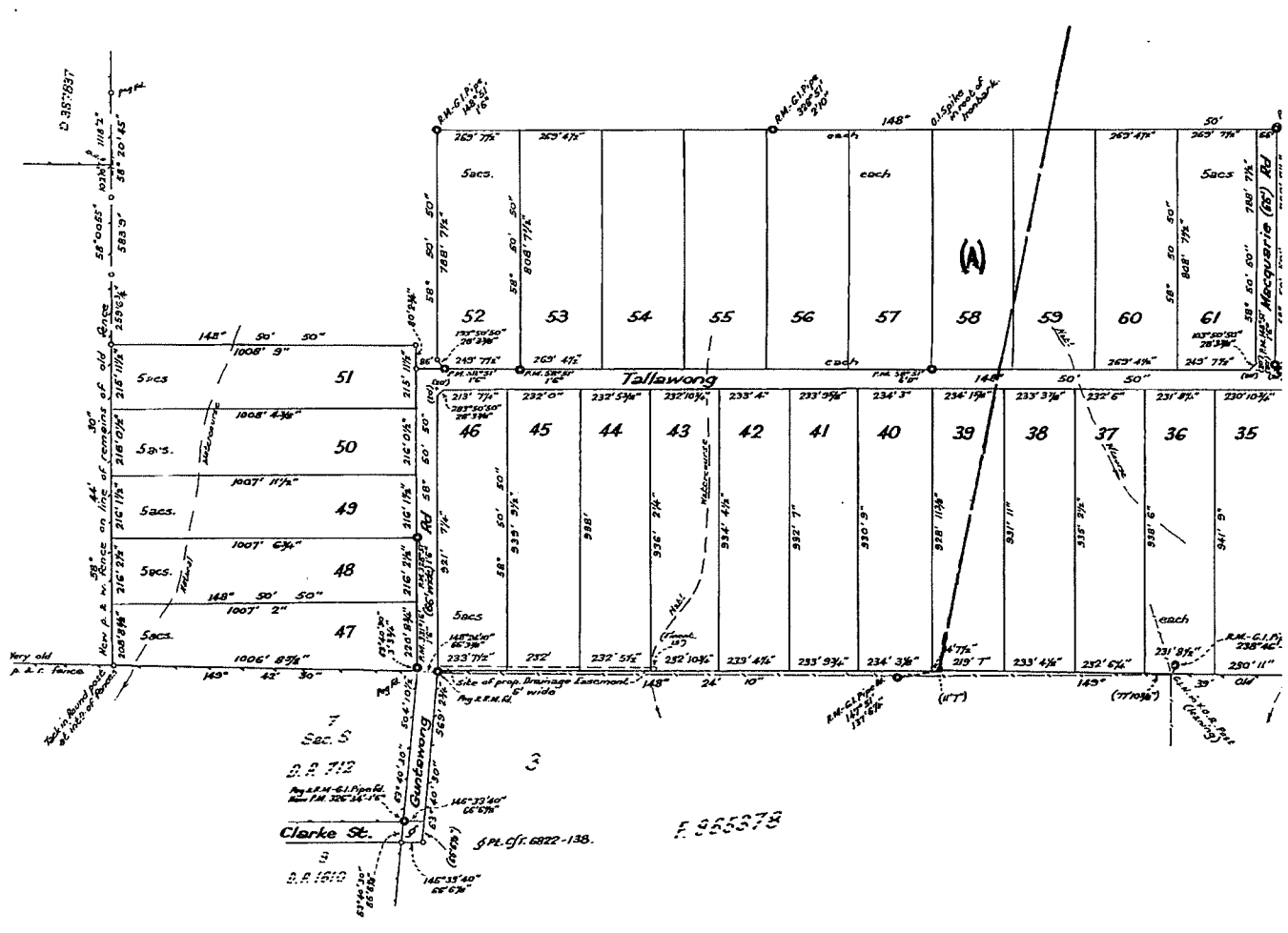
of

~~of part of the land in C/T. Vol. 6822 Fol. 138 & sub~~

C/T. Vol: 1381 Fols. 132

—Parish of Gidley—County of

Scale: 300 feet to an inch



Notes (i) It is intended to dedicate Tallawong, Guntawong and Mocquarie Roads to the public.
(ii) It is intended to create a Drainage Easement 6' wide as shown hereon in favour of the Council of the Shire of Blacktown.
(iii) Permanent Marks are concrete set G.I. Pipes

DP 30186 E

Datum line of azimuth "A"-"B".

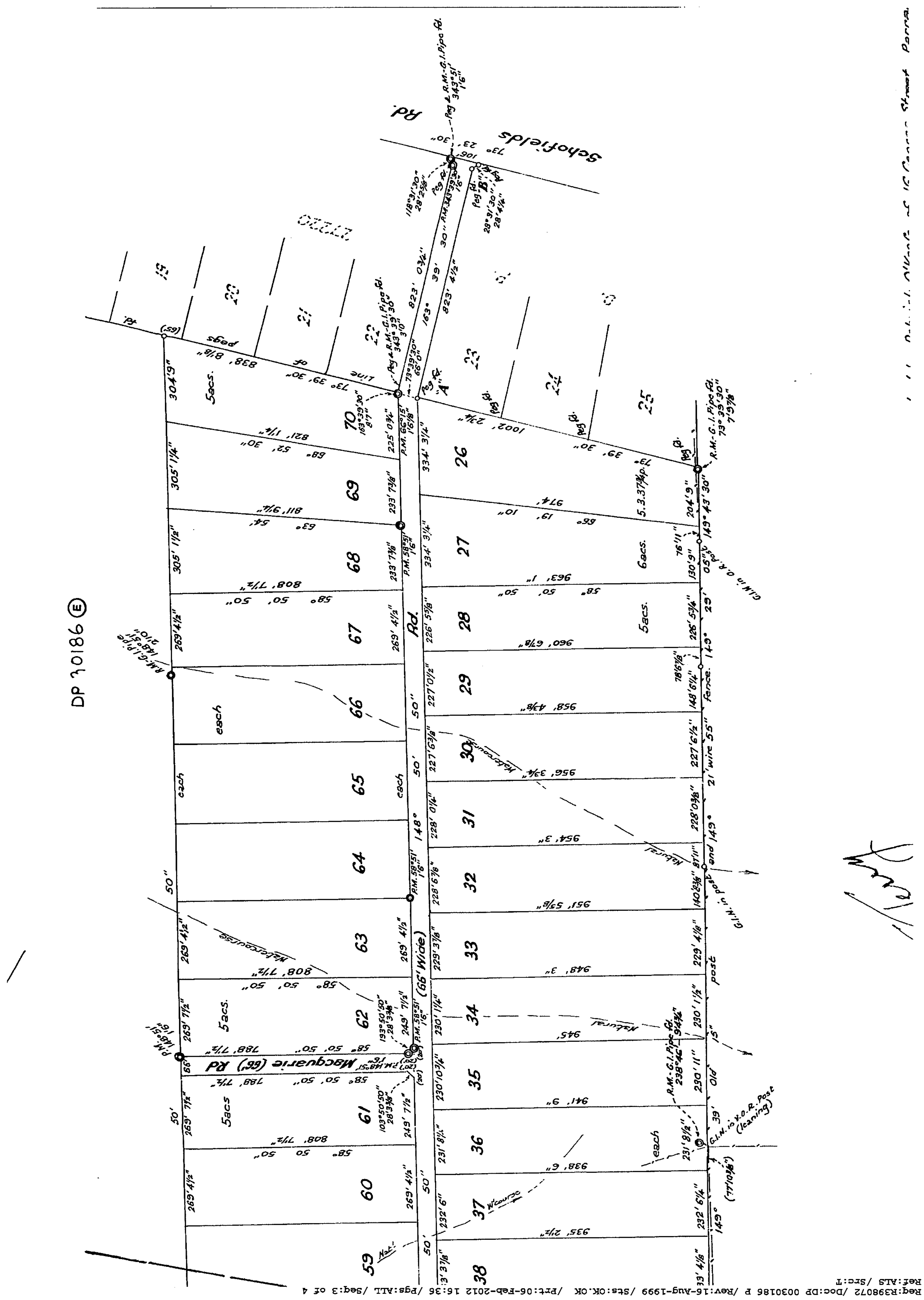
Approved under the Common Seal of the Council of the Shire of Blacktown and certified in accordance with the provisions of Section 327 of the Local Government Act, 1919, as amended.
Councils Minute No 128. Plan No. 2219.

President

Shire Clerk.

3rd. February, 1958.

D.P 30186


DP 30186 (E)
Schofields Rd.
Macquarie (66') Rd
Rd. (66' Wide)
Line of Pegs
Watercourse
Natural
fence. 149° 29' 21' wire 55"
5acs.
6acs.
each
G.I.N. in Y.O.R. Post (leaning)
R.M.-G.I. Pipe fd.
Peg "A"
Peg "B"

DP 30186 (E)

Tallawong

Guntawong

Macquarie (66') Rd

Clarke St.

Notes (i) It is intended to dedicate Tallawong, Guntawong and Macquarie Roads to the public.
(ii) It is intended to create a Drainage Easement 6' wide as shown hereon in favour of the Council of the Shire of Blacktown.
(iii) Permanent Marks are concrete set G.I. Pipes

F 965378

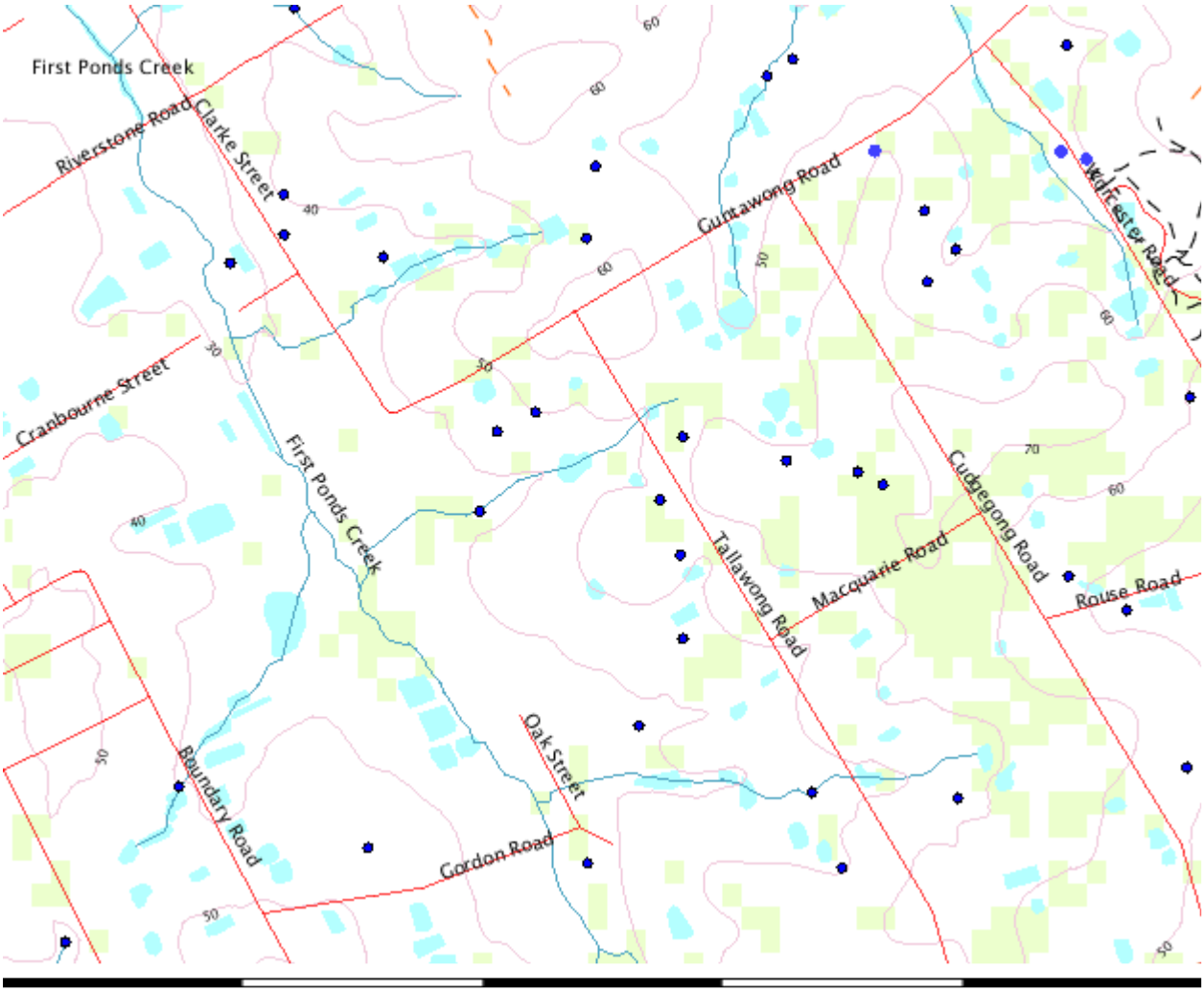
Req:R398072 /Doc:DP 0030186 P /Rev:16-Aug-1999 /Sts:OK.OK /Prt:06-Feb-2012 16:36 /Pgs:ALL /Seq:4 of 4
Ref:ALS /Src:T

Appendix D
Groundwater Works Database Search

Map from the NSW Natural Resource Atlas

Map created with NSW Natural Resource Atlas - http://www.nratlas.nsw.gov.au

Friday, January 24, 2014



Legend

Symbol	Layer	Custodian
	Cities and large towns renderImage: Cannot build image from features	
Cowra	Populated places renderImage: Cannot build image from features	
	Towns	
	Groundwater Bores	
	Catchment Management Authority boundaries	
	Major rivers	
	Topographic base map	

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, January 24, 2014

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW054878

Works Details (top)

GROUNDWATER NUMBER	GW054878
LIC-NUM	10WA108185
AUTHORISED-PURPOSES	STOCK
INTENDED-PURPOSES	STOCK
WORK-TYPE	Well
WORK-STATUS	Supply Obtained
CONSTRUCTION-METHOD	Hand Dug
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	1981-11-01
FINAL-DEPTH (metres)	7.00
DRILLED-DEPTH (metres)	7.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	212 - HAWKESBURY RIVER
AREA-DISTRICT	
CMA-MAP	9030-1S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6271745.00
EASTING	305788.00
LATITUDE	33 40' 35"
LONGITUDE	150 54' 18"
GS-MAP	0056D3

AMG-ZONE	56
COORD-SOURCE	GD.,ACC.MAP
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	GIDLEY
PORTION-LOT-DP	L11 DP567606 (6)

Licensed (top)

COUNTY	CUMBERLAND
PARISH	GIDLEY
PORTION-LOT-DP	11 567606

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1	1	Casing	(Unknown)	0.00	0.00	1524			(Unknown)

Water Bearing Zones (top)

no details

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	7.01	7.01	Soil Nominal		
0.00	7.01	7.01	Shale Nominal		
0.00	7.01	7.01	Clay Nominal		

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

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, January 24, 2014

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW107940

Works Details (top)

GROUNDWATER NUMBER	GW107940
LIC-NUM	10WA109471
AUTHORISED-PURPOSES	INDUSTRIAL
INTENDED-PURPOSES	INDUSTRIAL
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	Rotary
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2005-08-22
FINAL-DEPTH (metres)	240.00
DRILLED-DEPTH (metres)	240.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	BORG
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	4500.00
YIELD	1.10

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6271763.00
EASTING	305732.00
LATITUDE	33 40' 35"
LONGITUDE	150 54' 16"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	GIDLEY
PORTION-LOT-DP	11 567606

Licensed (top)

COUNTY	CUMBERLAND
PARISH	GIDLEY
PORTION-LOT-DP	11 567606

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	18.00	241			Down Hole Hammer
1		Hole	Hole	18.00	42.00	171			Down Hole Hammer
1		Hole	Hole	42.00	240.00	146			Down Hole Hammer
1	1	Casing	PVC Class 9	0.30	18.00	175			Glued; Driven into Hole

Water Bearing Zones (top)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK-CAT-DESC	S-W-L	D-D-L	YIELD	TEST-HOLE-DEPTH (metres)	DURATION	SALINITY
72.00	78.00	6.00			80.00	0.15	80.00	0.50	7100.00
108.00	109.00	1.00			110.00	0.45	110.00	0.50	6400.00
204.00	205.00	1.00			206.00	0.85	206.00	0.50	5500.00
216.00	217.00	1.00				1.10	240.00	1.00	4500.00

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	2.00	2.00	FILL		

2.00	5.00	3.00	BROWN SHALE
5.00	39.00	34.00	SHALE
39.00	92.00	53.00	SANDSTONE
92.00	105.00	13.00	SANDSTONE,SHALE
105.00	106.00	1.00	SHALE
106.00	146.00	40.00	SANDSTONE, SHALE
146.00	148.00	2.00	SHALE
148.00	154.00	6.00	SANDSTONE, SHALE
154.00	170.00	16.00	SANDSTONE
170.00	180.00	10.00	SANDSTONE, SHALE
180.00	184.00	4.00	SANDSTONE, QUARTZ
184.00	190.00	6.00	SANDSTONE, SHALE
190.00	194.00	4.00	SANDSTONE, QUARTZ
194.00	198.00	4.00	SANDSTONE, SHALE,QUARTZ
198.00	206.00	8.00	SANDSTONE, SHALE
206.00	232.00	26.00	SANDSTONE, QUARTZ
232.00	239.00	7.00	SANDSTONE
239.00	240.00	1.00	SHALE

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

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, January 24, 2014

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW108452

Works Details (top)

GROUNDWATER NUMBER	GW108452
LIC-NUM	10WA109148
AUTHORISED-PURPOSES	DOMESTIC STOCK
INTENDED-PURPOSES	DOMESTIC STOCK
WORK-TYPE	Bore
WORK-STATUS	Abandoned - Backfilled
CONSTRUCTION-METHOD	Down Hole Hammer
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2007-01-08
FINAL-DEPTH (metres)	60.00
DRILLED-DEPTH (metres)	60.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	FALCONE
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	12.00
SALINITY	
YIELD	2.30

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	212 - HAWKESBURY RIVER
AREA-DISTRICT	
CMA-MAP	9030-1S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6271757.00
EASTING	305320.00
LATITUDE	33 40' 35"
LONGITUDE	150 53' 60"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GIS - Geographic Information System
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	GIDLEY
PORTION-LOT-DP	157//208203

Licensed (top)

COUNTY	CUMBERLAND
PARISH	GIDLEY
PORTION-LOT-DP	157 208203

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	2.50	204			(Unknown)
1		Hole	Hole	2.50	60.00	163			Down Hole Hammer
1		Backfill	Drilled cuttings	0.00	2.50	204			
1		Backfill	Drilled cuttings	2.50	60.00	163			

Water Bearing Zones (top)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK-CAT-DESC	S-W-L	D-D-L	YIELD	TEST-HOLE-DEPTH (metres)	DURATION	SALINITY
46.00	46.50	0.50				0.35			
52.10	52.20	0.10		12.00		1.35			
56.00	56.30	0.30				0.60			

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	2.00	2.00	Clay		
2.00	34.00	32.00	Shale		
34.00	36.50	2.50	Sandstone, with Shale		
36.50	46.00	9.50	Sandstone, light grey		
46.00	46.50	0.50	Sandstone & Quartz		
46.50	52.10	5.60	Sandstone, grey		
52.10	52.20	0.10	Sandstone, fractured		

52.20	56.00	3.80	Sandstone, grey
56.00	56.30	0.30	Sandstone, soft
56.30	60.00	3.70	Sandstone, grey

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

Appendix E
Dangerous Goods Search

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/028684

Your Ref: Josie Most

7 March 2014

Attention: Josie Most
DLA Environmental
Unit 2B,
30 Leighton Pl
Hornsby NSW 2077

Dear Ms Most,

RE SITE: 151 Tallawong Rd Rouse Hill NSW

I refer to your site search request received by WorkCover NSW on 5 March 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team