



Environmental Site Assessment

Fusion Property Partners

Redfern RSL
157 Redfern Street
Redfern, NSW

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JBS 40565-12343
JBS Environmental Pty Ltd

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List of Abbreviations

A list of the common abbreviations used throughout this report is provided below.

AHD	Australian Height Datum
As	Arsenic
bgs	below ground surface
Cd	Cadmium
CSM	Conceptual site model
Cr	Chromium
Cu	Copper
BTEX	Benzene, toluene, ethylbenzene and xylenes
B(a)P	Benzo(a)pyrene
DECC	NSW Department of Environment and Climate Change
DQOs	Data Quality Objectives
DWE	NSW Department of Water and Energy
EMP	Environmental Management Plan
EPA	NSW Environment Protection Authority (now the DECC)
GILs	Groundwater investigation levels
Ha	Hectare
Hg	Mercury
HIL	Health based investigation level
JBS	JBS Environmental
LOR	Limit of Reporting
Mn	Manganese
Ni	Nickel
PAHs	Polycyclic aromatic hydrocarbons
Pb	Lead
PBIL	Phytotoxicity based investigation level
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAQP	Sampling, Analysis and Quality Plan
SPLP	Synthetic Precipitation Leaching Procedure
TCLP	Toxic Characteristic Leaching Potential
TPH	Total Petroleum Hydrocarbons
WQOs	Water Quality Objectives
Zn	Zinc

Executive Summary

JBS Environmental Pty Ltd was engaged by Fusion Property Partners Pty Ltd (Fusion) to complete a combined Stage 1 and 2 environmental site assessment (ESA) at the current Redfern RSL site located at 157 Redfern St Redfern comprising Lot A in DP354,297 and Lots 1 and 2 in DP7,328. It is understood that the ESA is required to accompany site documents with the proposed sale of the property. The site has a total area of approximately 1.6ha.

There is a potential that the site will be redeveloped subsequent to sale, with a likely requirement of development consent being that potential contamination issues are assessed.

The objective of the investigation was to undertake an intrusive soil investigation to conclude the site suitability for a range of potential land uses (with potential future redevelopment), or provide recommendations to enable such conclusions.

The assessment consisted of the assessment of soils over accessible areas of the site. A limited potential of groundwater contamination was considered to be present based on the presence of sub-surface structures (i.e. tunnels and platforms) associated with Redfern Station underlying the site.

Soil samples from across the accessible area of the site were analysed for a range of potential environmental contaminants, based on an assessment of the site history and relevant Department of Environment and Climate Change (DECC) guidelines. A sample was also recovered from an underground storage tank (UST) located in the basement of the Club Building. A program of quality assurance / quality control (QA/QC) was also completed with the works. Soils data has been found to be appropriate and data from within the UST indicative of the contents of the UST.

Levels of environmental impact have been found to fall below published assessment criteria for commercial / industrial and high density residential sites. Hot-spots of polycyclic aromatic hydrocarbon (including benzo(a)pyrene) and lead impact exceeding the published assessment criteria for standard residential use have been recorded in fill based soils underlying the site. Exceedances of phytotoxicity based criteria have been recorded in the fill based soils. A single sample analysed for the presence of potential acid sulphate soils has recorded a level of potential acidity marginally exceeding the published assessment criteria. The UST was found to contain oily water, more than likely contaminated with former petroleum products stored in the UST.

Recommendations and Approximate Costings

The following recommendations are made:

- The underground storage tank (UST) and any associated contaminated tank backfill sands present in the basement of the club require to be removed and remediated where the buildings on the site are demolished (\$30,000 ex GST). Where site buildings are retained then the UST requires to be decommissioned in-situ (\$10,000 ex GST);
- Where alterations to site paving and/or excavation of soils is proposed, a comprehensive acid sulphate soils assessment requires to be completed to assess for the presence and extent of potential acid sulphate soils (\$20,000 ex GST);
- Surface soils underlying the site are generally unsuitable for use in garden / accessible areas associated with a residential development of the site. Where a

residential development with significant areas of accessible gardens is proposed then top soils / growing medium would require to be imported to the site. Areas of soils with elevated levels of lead and benzo(a)pyrene would either require remediation or management within inaccessible areas under proposed buildings (\$120/tonne ex GST to dispose of soils off-site);

- Where near surface fill based soils are required to be removed from the site they will be classified as 'general solid waste'. These soils would require to be disposed at a licensed landfill (\$120/tonne ex GST to dispose of soils off-site).

1 Introduction

1.1 Background

JBS Environmental Pty Ltd was engaged by Fusion Property Partners Pty Ltd (Fusion) to complete a combined Stage 1 and 2 environmental site assessment (ESA) at the current Redfern RSL site located at 157 Redfern St Redfern comprising Lot A in DP354,297 and Lots 1 and 2 in DP7,328. It is understood that the ESA is required to accompany site documents with the proposed sale of the property. The site has a total area of approximately 1.6ha.

There is a potential that the site will be redeveloped subsequent to sale, with a likely requirement of development consent being that potential contamination issues are assessed.

The objective of the investigation was to undertake an intrusive soil investigation to conclude the site suitability for a range of potential land uses (with potential future redevelopment), or provide recommendations to enable such conclusions.

The investigation has been conducted in general accordance with relevant NSW Department of Environment and Climate Change (DECC) guidelines.

1.2 Objectives

The environmental site assessment had the following objectives:

- To determine the likelihood of potential contamination sources on the site.

and where potential contamination sources were identified:

- To assess for the occurrence of contamination in soils;
- To assess the likely migration of soil contamination (if identified) via groundwater;
- Draw conclusions regarding the suitability of the site for a range of potential future land-uses, or make recommendations to enable such conclusions; and
- Where contamination is identified, provide indicative costings of completion of remediation works to enable the site to be made suitable.

1.3 Scope of Work

The scope of work comprised:

- Review of available information relating to the historic use of the site, to identify areas of environmental concern and associated contaminants of potential concern (COPCs);
- A sampling and analysis program to investigate soils at the site;
- Comprehensive soil sampling via hand augered boreholes from 10 onsite locations targeting identified areas of concern and associated COPCs;
- Analysis of selected soil samples at a laboratory NATA certified for Total Petroleum Hydrocarbons (TPH), Monocyclic Aromatic Hydrocarbons (MAHs), Polycyclic Aromatic Hydrocarbons (PAHs), heavy metals, Volatile Hydrocarbons (VHCs), Organochlorine Pesticides (OCPs), Polychlorinated Biphenyls (PCBs), total cyanide, sulphate and asbestos; and,

- Preparation of a Environmental Site Assessment report in general accordance with relevant DECC Guidelines.

2 Site Condition & Surrounding Environment

2.1 Site Identification

The Redfern RSL is located approximately 3 km south to southwest of the Sydney CBD. The site covers an irregular shaped area of 1,638m². The site area is bound by Gibbons St to the west, Redfern St to the north and commercial and residential properties to the south and east.

The location of the site is shown in **Figure 1**. The site layout is shown in **Figure 2** and **3**. The site details are summarised in **Table 2.1** and described in detail in the following sections.

Table 2.1 Summary Site Details

Lot/DP	Lot A DP 354297, and Lots 1 & 2 Section D, DP7328 (Figure 3)
Address	157 Redfern Street, Redfern, NSW
Local Government Authority	Council of the City of Sydney
Parish	Alexandria
County	Cumberland
Current Use	Redfern RSL – Commercial/Industrial
Zone	Business Zone – Commercial Core
Site Area	Approximately 1.6ha

2.2 Site Description

The site consists of a large building, which is present over the western and central portion of the site. The entire site is paved with concrete and asphalt, the majority of which is utilised as undercover parking (**Figure 4**).

The northern boundary of the site runs adjacent to Redfern Street, and the Western boundary runs adjacent to Gibbons Street. A sturdy iron picket fence runs along the Western Boundary, and approximately 8m along the western portion of the northern boundary. The boundary to the east consists of the western edge of a small closed off lane way, which is located between the RSL and Magau VIP club and bottle shop. To the southeast and south west are commercial and residential properties, split by William Lane, the northern end of which leads to the southern boundary and cellar door of the RSL.

An underground storage tank (UST) was identified during the site inspection located in the southern portion of the cellar. The base of the UST was noted to be 1.8m below ground level, and 1.2 metres diameter. The UST is not in use, and has been filled with water (**Figure 4**).

No vegetation or patches of bare earth were identified, the entire site appears to consist of hard-covered paving. The cellar floor consists of a 300mm thick concrete slab, with a small portion of earth being exposed in a small room located in the western portion of the cellar. A disused UST was identified during the site inspection within the RSL cellar. Minimal storm water infrastructure was identified within the site.

The site slopes to the south and slightly to the west.

2.3 Surrounding Landuse

The current landuse of properties in proximity of the site is summarised below.

- North – The former high rise twin TNT towers, now used for a variety of commercial/industrial purposes, including the Redfern Police Station are located across Redfern Street;

- East – across the closed off lane are medium density commercial/industrial properties fronting onto Regent Street;
- South – William Lane leads away from the cellar door of Redfern RSL, and the surrounding properties consist of low-medium density commercial and residential properties; and
- West – Redfern Rail station is located across Gibbons Street.

The site has also been identified by Railcorp as being present above rail tunnels and platforms associated with Redfern Rail Station.

Based on review of the surrounding land uses, there does not appear to be any significant potential contamination sources located in the properties surrounding the site.

2.4 Topography

The regional topographic map (DNR 1975¹) indicates that the site has an elevation of between 20m and 40m Australian Height Datum (AHD). The site topography slopes gently to the southwest towards Alexandra canal, which is located 3km to the south-west

The regional topography is characterised by broad rounded crests and ridges with gently inclined slopes. The site sits on a gentle southward slope, inclined very slightly to the west.

2.5 Geology

According to the Sydney 1:100,000 Geological Series Sheet 9130, the site lies within the Cumberland Lowlands. This consists of low lying, gently undulating plains and low hills underlain with shales and sandstones of the Wianamatta Group of Triassic Age.

The site is underlain by Quaternary sediments comprising medium to fine grained yellow marine Podzolic soil which has been produced by the bedrock producing a clay subsoil in response to in situ weathering. The loamy sand has developed due to the lateral movement of the surface layer from weathered sandstone upslope. This is underlain by Ashfield Shale of the Wianamatta Group. Ashfield Shale typically weathers to form clays of medium to high plasticity.

This is consistent with site observations where uncharacterised fill was observed to a depth of 0.7m, underlain by dry, coarse sandy clays, which were underlain by stiff, red clays.

Based on the Acid Soil Sulphate Risk Map (1997)², the site and immediate surrounds have no known occurrence of acid sulphate soil materials.

2.6 Hydrology

The nearest surface water receptor is Alexandra Canal which is located approximately 3km southwest of the southern site boundary. Alexandra Canal (formerly Shea's Creek) is an engineered canal running in a south - south-westerly direction, and joins the Cooks River approximately 5.5km southwest of the site. The Cooks River drains into Botany Bay, approximately 8km southwest of the site.

¹ Department of Natural Resources (1975). National Topographic Map Series. Campbelltown Sheet 9029-1N (Ed 1).

² DLWC (1997). Acid Sulphate Soil Risk Map (Edition 2).

There is no storm water infrastructure on the paved area of the site. Precipitation is expected to pool in uneven portions of the hardstand site surface, and following periods of heavy rainfall, surface run-off would be expected to flow in a generally south-westerly direction, infiltrating storm water drains located along Gibbons Street.

2.7 Hydrogeology

The groundwater within Redfern is believed to be an intermittent perched groundwater table, overlying the clay and/or rock surface, particularly following periods of extended wet weather. Noting the presence of the rail tunnel reportedly located at shallow depth below the site, significant groundwater resource is not to be present in close proximity of the ground surface, more than likely being present underlying the rail tunnel and effectively inaccessible from the site surface.

Registered groundwater bore information from the Department of Water and Energy (DWE) is included in **Appendix A**.

The search identified 65 bores located within a 5 km radius of the site. The closest of these groundwater bores was approximately 1 km southeast of the site. The available information for the 65 bores was variable. Of those bores which detailed water bearing zones, there was some variety in reported depths of groundwater (e.g. 2.0 -6.5m (GW071907) and 15.8-20.9m (GW037956)). This variability is attributable to the variability in reported information, variability in bore uses, drillers, elevation of monitoring wells and localities.

3 Site History

3.1 Aerial Photographs

A review of the historical aerial photographs provided by the Land and Property Information Centre was undertaken for all available historical photographs including 1930, 1951, 1968, 1970, 1978, 1986, 1996, and 2005.

The aerial photograph review identified the following features in relation to the history of the site:

- 1930 – The site appears to consist of one large structure covering the entire Lot A DP354297, while Lots 1 and 2 appear cleared of vegetation and structures. Directly to the north appears two single storey structures, to the east residential low-medium density housing is evident and to the south, commercial or industrial sheds are evident;
- 1951 – The site consists of one large structure covering the entire of Lot A, joined to a structure that takes up the southern half of Lots 1 and 2 on the corner of Redfern St and Gibbons St. The structure directly to the north entails a double or triple storey building on the western corner, and a single storey structure taking up the eastern corner of the block. No change is visible to the east or south;
- 1968 – The site is now one large structure covering the entire three lots, appearing as a single storey building, with limited parking evident. Immediately to the east, the residential properties have been replaced with what appears to be a double storey commercial structure. No change is evident to the north or south;
- 1970 – No change is apparent on the site or the neighbouring properties;
- 1978 – No change is apparent on the site, however the twin TNT towers (two multi-storey buildings) are now present on the property directly to the north. Directly to the west across Gibbons St, Redfern Station appears to contain more building structures than previously noted;
- 1986 – The site appears to have several car spaces visible on the western side of the building. No other change is noted on the site, to the north or east. The area of Redfern Station directly to the west, across Gibbons Street, appears to have grass covering with trees present throughout. The property to the south has been converted into a multi-storey car park;
- 1996 – No change is apparent on the site or the neighbouring properties;
- 2005 - No change is apparent on the site, or the neighbouring properties.

3.2 DECC Records

A search of the DECC's public register under the *Protection of the Environment Operations Act 1997* was undertaken, and results are included in **Appendix B**. The search identified that, for the site, there were:

- No prevention, clean-up or prohibition notices; and/or
- No transfer, variation, suspension, surrender or revocation of an environment protection licence.

A search was also undertaken through the DECC's public contaminated land register (**Appendix B**). The search identified that there have been no notices issued under the *Contaminated Land Management Act 1997* for the site.

3.3 Australian and NSW Heritage Register

A search of the Australian Heritage Trust database and the NSW Heritage Inventory did not reveal any Heritage listed items at the site (**Appendix C**). However, several items of heritage significance were registered for Redfern Street, but nothing within the immediate vicinity of the Redfern RSL.

3.4 Development and Building Applications

The Council of the City of Sydney have the following records of Development and Building Applications submitted for the site located at 157-159 Redfern Street, Redfern as listed in **Table 3.1**.

Table 3.1 Summary of DA/BA Applications

DA/BA Plans		Summary	Date Lodged	Date Approved
DA 342/57 BA1287/57	RSL	Proposed erection of the single storey building with part basement, approx 89x56 feet for use as a licenses Ex-servicemen's Club	28/5/57 28/5/57	11/6/57 6/12/57
439/57	Bond Deed	Bond deed as surety to remove asbestos fibro wall (temporarily erected) within 3 years		9/10/57
DA 474/59 BA 1529/59	RSL	Proposed additional club amenities. Second storey – reinforced concrete, brick and timber (clubroom, games room, dining room, bat and ball courts,, toilets, office and TV room)	22/6/59 7/7/59	24/8/59 19/11/59
DA 693/60	RSL	Addition of exhaust canopy to kitchen	23/3/60	11/4/60
BA 2800/60	RSL	Application to erect air conditioning duct	22/11/60	1/12/60
BA 1406/64	RSL	Installation of Air-conditioning	17/6/64	28/8/64
BA 1747/67	RSL	Internal alterations to existing WC Block (Reinforced concrete and Timber)	15/8/67	11/10/67
DA 240/78 BA 346/78	RSL	First floor extension to Club lounge and office (New dining room, kitchen, female toilets and car park)	30/8/78 29/11/78	7/12/78 22/11/78
BA 44032/99	RSL	Building work to provide disabled hoist access to main floor	28/9/99	13/1/00

3.5 Historical Title Deeds

Commencing with conveyance dated 2nd April 1914, the title to Lots 1 &2, Section D, in DP7328 has evolved as following (*including leases*):

- 2nd April 1914 Chief Commissioner for Railways and Tramways
- 6th July 1914 *Leased to: The Commonwealth Fish Exchange Ltd of Redfern*
- 27th Aug 1934 Change of name (Application No. 272936)
The Commissioner for Railways;
- 26th Nov 1962 *Leased to: Myra Murrell (Widow from Bondi)*
- 20th Aug 1979 Change of Name (Application No. R287258)
The Public Transport Commission of New South Wales;
- 20th Aug 1979 *Leased to: Redfern RSL Club Ltd*
- 11th Nov 1987 Change of Name (Application No. x139551)
State Rail Authority;

- 14th Apr 1988 Change of owners (x431001)
Redfern R.S.L Club Limited.

Commencing with Conveyance dated 2nd April 1914, the title to Lot A, in DP354297 has evolved as following (*including leases*):

- 9th Nov 1912 *Leased to : John Fitzgerald of Ultimo, Joseph Sciacea of Woolloomooloo, Charles Johann Gustafsen of Redfern, William Henry Tenible of Sydney, Isaac Barry Evans of Sydney, Albert Joseph Cusack of Redfern, Edward Patrick Cusack of Redfern, John Henry Cusack of Redfern, William Wright of Paddington, John William Andreson Smith of Woolloomooloo, Humphrey Michael Earl of Petersham, William James Duncan of Botany and William Latona of Drummoyne – Commission Agents of Part;*
- 8th Sep 1917 The Commonwealth Co-operative Fish Exchange Ltd;
- 8th Sep 1917 *Leased to: John William Anderson Smith of Woolloomooloo, John Fitzgerald of Ultimo, William Henry Tenible of Sydney and Isaac Barry Evand of Sydney – Commission Agents Part;*
- 28th Feb 1923 The Municipal Council of Sydney;
- 23rd Dec 1946 *Leased to: the Federation of New South Wales, Police Citizens Boys Club;*
- 28th June 1954 The Council of the City of Sydney (Application G93697);
- 31st Aug 1954 Trustees: Augustus Rolfe (Butcher of Redfern), Gordon Maxwell McKinnon (Stonemason of Redfern), and Alexis Stewart (Tobacconists of Earlwood);
- 23rd Nov 1957 Trustees: Augustus Rolfe (Butcher of Redfern), Gordon Maxwell McKinnon (Storeman of Redfern), and Michael Joseph Dard (Glass Beveller of Redfern);
- 5th May 1967 Trustees: Augustus Rolfe (Butcher of Redfern), Gordon Maxwell McKinnon (Stonemason of Redfern), and William Alexander Hornsby (Labourer of Darlington);
- 26th Jul 1978 Trustees: Gordon Maxwell McKinnon (Retired storeman of Alexandria), Myles Clark (Retired, of Zetland), and Alfred Joseph Reid (Retired of Dulwich Hill);
- 22nd Jun 1993 Trustees: Cecil Richard Brooker, Albert Arthur Booth, and Colin Talbet Dunlop;
- 22nd Jun 1993 *Leased to: Redfern R.S.L. Club Ltd (3 year term with renewal option);*
- 9th Dec 1997 Trustees: Wallis Frederick Nash, Albert Arthur Booth, and Colin Talbet Dunlop;
- 5th Aug 1999 Trustees: Wallis Frederick Nash, Albert Arthur Booth, and Colin Talbet Dunlop;
- 5th Aug 1999 *Redfern R.S.L. Club Ltd (5 year term with renewal option);*
- 8th Jun 2007 Trustees: Wallis Frederick Nash, Barry Dixon, and Charles Clifford Wilcock;

- 23rd Aug 2007 Redfern R.S.L. Club Ltd.

Documentation resulting from the historical title deeds search is included as **Appendix D**.

3.6 Council Records

The planning certificates for the site (Lots A DP354297 and Lots 1 & 2 DP7328) from the Council of the City of Sydney are included in **Appendix E**, and include the following information regarding the site:

- Lots A, 1 and 2 are zoned – Business Zone – Commercial Core;
- This property is not affected by a draft zone;
- This property is affected by local planning controls. The development control plans that apply include: signage and advertising structures; visitor and tourist accommodation; telecommunications and radio communications; and Late night trading premises;
- The land does not include or comprise critical habitat. The land is not in a conservation area and there are no known items of environmental heritage on the land;
- The land is not affected by a policy adopted by the Council that restricts the development of the land because of likelihood of tidal inundation or acid sulphate soils;
- This land is not affected by the Coastal Protection Act, 1979;
- This land is not proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act, 1961;
- This land is not affected by Road Widening and/or Road Realignment Act;
- Development at the land is not subject to flood related controls;
- This site is not identified as being bush fire prone land;
- The land is not affected by provisions under an environmental planning instrument applying to the land that provides for acquisition by a public authority;
- The land is not a declared investigation area or remediation site, or the subject of an investigation order or remediation order under the CLM Act 1997. The land is not the subject of a voluntary investigation or remediation proposal or a site audit statement within the meaning of the CLM Act 1997.

3.7 Workcover Records

A WorkCover search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover did not uncover any records pertaining to the site (**Appendix F**).

3.8 Site History Summary

A summary of the site history is provided in **Table 3.2**.

Table 3.2 Summary Site History

Period	Activity	Source
1914	Lot A belonged to the NSW Railways	Historical Titles
1917	The site was used as Redfern City Fish Market (Lot A owned by the Commonwealth Fish Exchange, and Lots 1 & 2 were leased to the Commonwealth Fish Exchange).	Historical Titles
1923	Lot A owned by the Council of the City of Sydney	Historical Titles
1946	Leased to the Federation of NSW for the Police Citizens Boys Club	Historical Titles
1954	Lot A leased to the Redfern R.S.L. Club (building commenced in 1957)	Historical Titles, DA/BA Records, Aerial Pics
1979	Leased Lots 1 & 2	
1988	Acquired ownership	
2007	Acquired ownership of Lot A	

3.9 Integrity Assessment

The data obtained from these sources has, in general, been found to be in agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

4 Potential Contamination Issues

4.1 Potential Areas of Environmental Concern

Based on the field observations from the site, areas of environmental concern have been identified and are presented in **Table 4.1**.

Table 4.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern

Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPC)
Building on site	Heavy metals, OCPs, asbestos
Fill material brought onto the site during regrading and development	Heavy metals, TPH, PAHs, MAHs, Cyanide, Sulphate, OCPs, PCBs, and asbestos
UST	Heavy metals, TPH, PAHs and MAHs

4.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Fill material; and
- Natural soils.

Findings from the site inspection identified the potential for fill material at the site. The source of the fill is unknown, however may have originated from industrial activities. Based on this, the fill material underlying the site has been identified as a potentially contaminated medium.

Based on the potential leachability of the contaminants in the fill and the historical uses of the site, vertical migration of contaminants through the fill into the underlying natural soils may occur. It is noted that substantial vertical migration would be restricted by the occurrence of the underlying rail tunnels and platforms.

Groundwater has not been identified as a potentially contaminated medium due to the estimated depth to groundwater, the bedrock located in the area, the hard-stand surfaced nature of the site, and the presence of sub-surface impermeable structures (tunnels and platforms at Redfern Station).

Surface water is not identified as a potentially contaminated medium based on the absence of any water body which dissects the site and the distance to the nearest water body. In addition, the surfaced nature of the site limits the potential for surface water runoff, with the majority of rainfall likely draining into local storm water infrastructure.

4.3 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified as part of the site inspection are generally in solid/liquid form (e.g. asbestos, lead in flaking paint) and potential contaminants located within the soil.

The entire area of the site is hardstand which significantly reduces the potential for windblown contaminants to migrate from the site.

The potential for contaminants to migrate via surface water runoff from the site is considered low, based on the unlikely infiltration due to the sealed nature of surface soils.

Rainfall infiltration at the site is expected to be minimal. Based on the proximity of regional hydrogeological information, there is the limited potential for shallow groundwater flow across the surface of the bedrock, being significantly impacted by the excavation placed under the structure for the purposes of Redfern Station. Hence, there is a limited migration pathway via groundwater flow.

The potential migration pathways of contamination from the identified UST within the site is expected to be minimal. Based on the presence of water within the disused UST, there appears to be no leakage from the UST. The low potential for groundwater to be present above the associated rail tunnels and platforms minimises the potential for migrations through groundwater. Any contamination associated with the UST would be expected to be within localised fill material in the sub-surface soils.

5 Sampling and Analysis Plan

5.1 Data Quality Objectives

Data quality objectives (DQOs) were developed for the investigation, as discussed in the following sections.

5.1.1 State the Problem

For the site to be approved for redevelopment, contamination investigations are required to assess the suitability of the site for a range of potential uses.

5.1.2 Identify the Decision

Based on the decision making process for assessing urban redevelopment sites detailed in DEC (2006), the following decisions must be made:

- Are there any unacceptable risks to likely future onsite receptors from soil or groundwater?
- Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues?
- Is there any evidence of, or potential for, migration of contaminants from the site?
- Is a site management strategy required?

5.1.3 Identify Inputs to the Decision

Inputs to the decisions are:

- Site condition information and site historical information;
- Observations from site inspections;
- Soil analytical data; and
- Environmental characteristics of the contents of the UST.

5.1.4 Define the Study Boundaries

The site is described as Lot A DP354297 and Lots 1 and 2 Section D, DP7328 Redfern, as shown in **Figures 2, 3 and 4**. The study targeted the potential contamination issues detailed in **Section 4.1**.

The vertical extent of the investigation extended to 0.7-1.0m bgs.

Due to the nature of potential contaminants identified, seasonality was not assessed as part of this investigation.

5.1.5 Develop a Decision Rule

Soil analytical data was assessed against DECC endorsed criteria including:

- *National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council, 1999 (NEPC 1999); and
- *Contaminated Sites: Guidelines for Assessing Service Station Sites*, NSW EPA, 1994 (EPA 1994).

5.1.6 Specify Limits of Decision Error

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data.

Guidance for acceptable limits on decision errors is provided in AS4482.1-2005 'Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non volatile and semi-volatile compounds'. Two types of error are nominated in AS4482.1 including:

- Deciding that the site is acceptable when it actually is not; and
- Deciding that the site is unacceptable when it is.

It is nominated in AS4482.1 that limits should be set on these, with a 5% probability set for A type errors and 20% probability set for B type errors. The number of samples required to be collected to allow these limits on decision errors to be met is calculated using the following relationship:

$$n = 6.2 \times \sigma^2 / (C_s - \mu)^2$$

Where:

- n – number of sample needed
- 6.2 – factor derived from 0.05 A risk and 0.2 B risk
- σ – Estimated standard deviation of contaminants concentration (mg/kg or mg/l where a soil validation data set is formed with leachate data)
- μ – Average concentration of contaminant (mg/kg or mg/l where a soil validation data set is formed with leachate data)
- C_s – acceptable limit (mg/kg or mg/l where a soil validation data set is formed with leachate data)

Specific limits for this project are in accordance with the appropriate guidance from the NEPC (1999) and DEC (2006), appropriate indicators of data quality (DQIs used to assess quality assurance / quality control) and standard JBS Environmental procedures for field sampling and handling.

An assessment of the compliance of the environmental data set for the site with these decision limits has been undertaken and is summarised in **Table 5.1** following. Noting that the site is currently used for a commercial/industrial purpose, C_s has been based on Commercial/industrial criteria.

Table 5.1 Assessment of Compliance with Decision Error

Constituent	Mean (μ)	Standard Deviation (σ)	Acceptance Limit (C_s)	n
TPH C ₁₀ -C ₃₆	266	264	1,000	<1
PAHs (Total)	12	23	100	<1
Benzo(a)pyrene	1.0	1.9	5	1.4
As	7.0	5.5	500	<1
Cr	35	40	500	<1
Cu	44	33	5,000	<1
Pb	256	260	1,500	<1
Hg	0.3	0.2	75	<1
Ni	36	43	3,000	<1
Zn	202	204	35,000	<1

Noting the calculated value of 'n' in **Table 5.1** is below or very close to a value of 1, it is considered that the extent of environmental data is sufficient to allow the limits for decision error for the project to be met.

5.1.7 Optimise the Design for Obtaining Data

Various strategies for developing a statistically based sampling plan are identified in EPA (1995)³, including judgemental, random, systematic and stratified sampling patterns.

Based on the site history a systematic grid sampling program was adopted, based on the risk profile of fill material across the site. Soil samples will be collected from 10 locations across the site (as shown in **Table 5.2** and **Figure 5**), targeting identified areas of environmental concern (fill materials) within the grid regime. This sampling density is considered adequate for the purposes of the investigation and for a site of area 1000-2000m².

5.1.8 Soil Sampling Methodology

Soil samples across the site were collected via hand augered boreholes, which were extended down to 0.7-1.0m below ground surface (bgs). Samples were collected from the surface (0-0.1m), and within every change in soil profile until borehole termination.

Sufficient sample material was collected to allow both field and laboratory analyses. Additional samples were collected from any soil horizons, which exhibited staining, odours, or other physical evidence of potential contamination.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indications of contamination were noted on field sheets. Collected soil samples were immediately transferred to laboratory supplied sample jars. The sample containers were transferred to an esky for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory.

Not all soil samples collected were analysed. Samples were analysed in accordance with the analytical schedule (**Section 5.2**). All samples remain at the primary laboratory for a period of three months if future analysis (provided analysis of analytes is within holding times) is required following the receipt of sample results.

5.1.9 UST Sampling Methodology

Water samples from the UST were collected using a disposable bailer, which was lowered down into the tank as far as possible, allowed to fill with water and retracted for sample collection. Sufficient sample material was collected to allow both field and laboratory analyses.

During the collection of water samples from the identified UST, features such as colour, sheen and odour were noted on field sheets. Collected water samples were immediately transferred to laboratory supplied sample bottles. The sample containers were transferred to an esky for sample preservation prior to and during shipment to the testing laboratory. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory.

Samples were analysed in accordance with the analytical schedule (**Section 5.2**). All samples remain at the primary laboratory for a period of three months if future analysis (provided analysis of analytes is within holding times) is required following the receipt of sample results.

³ *Sampling Design Guidelines*. NSW EPA. September 1995. (EPA 1995)

5.2 Laboratory Analyses

Envirolab Service Pty Ltd (Envirolab) was used as the primary laboratory for the required analyses. The secondary laboratory used for the works was SGS Environmental (SGS). Both laboratories are NATA registered for the required analyses. The laboratories were required to meet JBS Environmental's internal QA/QC requirements. Laboratory analysis of samples was conducted, with reference to COPCs as listed in **Table 5.2**.

Table 5.2 Analytical Schedule

Media	No. of Sampling Locations	No. of Analyses (incl QA/QC Samples)
Fill material External	9	Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn) – 12 samples TPH – 12 samples MAHs – 12 samples PAHs – 12 samples VHCs – 2 samples Cyanide – 2 samples PCBs – 2 samples OCPs – 2 samples Asbestos – 12 samples Total Sulphate – 2 samples
Fill material within cellar (including adjacent to disused UST identified within cellar)	1	Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn) – 2 samples TPH – 2 sample MAHs – 2 sample PAHs – 2 sample PCBs – 1 sample VHCs – 1 sample Cyanide – 1 sample Total Sulphate – 1 sample OCP – 1 sample Asbestos – 2 samples
Liquid in UST	2	TPH trace

It is noted that a substantial portion of the site is non-accessible for soil sampling. Soil sampling has been completed for the accessible area of the site only. Noting that the site has been developed as a single development, it is considered likely that any fill materials, or similar wide scale contamination sources will be consistent across the site. However, it is noted that point sources of impact present in the non-accessible area of the site will not be identified by this sampling strategy.

5.3 Quality Assurance/Quality Control

To assess the usability of the data prior to making decisions, the data was assessed against pre-determined Data Quality Indicators (DQIs) for completeness, comparability, representativeness, precision and accuracy. The pre-determined Data Quality Indicators (DQIs) established for the project are discussed below in relation to precision, accuracy, representativeness, comparability and completeness (PARCC parameters), and are shown in **Table 5.3**.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that is generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.

- **Representativeness** –expresses the degree which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; ensuring analysing laboratories use consistent analysis techniques and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.

Table 5.3 Summary of Quality Assurance / Quality Control Program

Data Quality Objective	Frequency	Data Quality Indicator
Precision		
Blind duplicates (intra laboratory)	1 / 20 samples	<30-50% RPD ¹
Blind duplicates (inter laboratory)	1 / 20 samples	<30-50% RPD ¹
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	<LOR
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	-	-
Samples extracted and analysed within holding times.	-	organics (14 days), inorganics (6 months)
Trip spike	1 per sampling event	70-130% recovery
Trip blank	1 per sampling event	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All samples
Standard analytical methods used for all analyses	All Samples	All samples
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples
Limits of reporting appropriate and consistent	All Samples	All samples
Completeness		
Soil description and COCs completed and appropriate	All Samples	All samples
Appropriate documentation	All Samples	All samples
Satisfactory frequency and result for QC samples	All QA/QC samples	-
Data from critical samples is considered valid	-	Critical samples valid

(1) If the RPD between duplicates is greater than the pre-determined data quality indicator, a judgment will be made as to whether the excess is critical in relation to the validation of the data set or unacceptable sampling error is occurring in the field.

6 Assessment Criteria

6.1 Regulatory Guidelines

The investigation was undertaken with consideration to aspects of the following guidelines, as relevant:

- *Contaminated Sites: Guidelines for Assessing Service Station Sites*, NSW EPA, 1994 (EPA 1994);
- *Contaminated Sites: Sampling Design Guidelines*, NSW EPA, 1995 (EPA 1995);
- *Contaminated Sites: Guidelines for the Vertical Mixing of Soil on Former Broad-Acre Agricultural Land*, NSW EPA, 1995 (EPA 1995b);
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*, NSW EPA, 1997 (EPA 1997);
- *Contaminated Sites: Guidelines for Assessing Banana Plantation Sites*, NSW EPA, 1997 (EPA 1997b);
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 2nd Edition*, NSW EPA, 2006 (DEC 2006);
- *Contaminated Sites: Guidelines on Significant Risk of Harm from Contaminated Land and the Duty to Report*, NSW EPA, 1999 (EPA 1999);
- *National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council, 1999 (NEPC 1999);
- *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*, Australian and New Zealand Environment and Conservation Council and the National Health and Medical Research Council, 1992 (ANZECC/NHMRC 1992);
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Paper No 4, 2000 (ANZECC/ARMCANZ 2000);
- *Australian Drinking Water Guidelines*, National Health and Medical Research Council and Agriculture and Resource Management Council of Australia and New Zealand, 2004 (NHMRC/NRMMC 2004);
- *Composite Sampling*, Lock, W. H., National Environmental Health Forum Monographs, Soil Series No.3, 1996, SA Health Commission, (NEHF 1996);
- *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards*, Department of Health and Ageing and EnHealth Council, Commonwealth of Australia, June 2002 (EnHealth 2002);
- *Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination*, NSW DEC, March 2007 (DEC 2007); and
- *ASSMAC: Acid Sulphate Soil Assessment Guidelines*, NSW DECC, August 1998 (ASSMAC, 1998).

6.2 Soil Criteria

Based on the proposed commercial/industrial and residential D use, and in accordance with the decision process for assessment of urban redevelopment sites (DEC 2006), concentrations of contaminants in the soil will be compared against investigation levels for:

- Standard Residential (NEHF-A);
- Residential use with minimal opportunities for soil and garden access (NEHF-D);
- Commercial/industrial (NEHF-F); and
- Provisional Phytotoxicity Based Criteria

Table 6.1: Soil Criteria (all units in mg/kg)

	Limit of Reporting	Residential – A (NEHF-A) ¹	Residential - D (NEHF – D) ²	Commercial / Industrial (NEHF – F) ³	Provisional Phytotoxicity ⁴
METALS					
Arsenic	4.0	100	400	500	20
Cadmium	1.0	20	80	100	3
Chromium (VI)	1.0	100	400	500	1
Copper	1.0	1000	4000	5000	100
Nickel	1.0	600	2400	3000	60
Lead	1.0	300	1200	1500	600
Zinc	1.0	7000	28000	35000	200
Mercury (inorganic)	0.1	15	60	75	1
PETROLEUM HYDROCARBONS					
C6 – C9 Fraction	25	65 ⁵	65 ⁵	65 ⁵	-
C10 – C36 Fraction	250	1000 ⁵	1000 ⁵	1000 ⁵	-
BTEX					
Benzene	1	1 ⁵	1 ⁵	1 ⁵	1 ⁵
Toluene	1	1.4 ⁵	1.4 ⁵	1.4 ⁵	1.4 ⁵
Ethylbenzene	1	3.1 ⁵	3.1 ⁵	3.1 ⁵	3.1 ⁵
Total Xylenes	3	14 ⁵	14 ⁵	14 ⁵	14 ⁵
POLYCYCLIC AROMATIC HYDROCARBONS					
Benzo(a)pyrene	0.05	1	4	5	-
Total PAHs	1.55	20	80	100	-
ORGANOCHLORINE PESTICIDES					
Aldrin + Dieldrin	0.2	10	40	50	-
Chlordane	0.1	50	200	250	-
DDT + DDD + DDE	0.3	200	800	1000	-
Heptachlor	0.1	10	40	50	-
PCBs					
PCBs (total)	0.9	10	40	50	-
OTHER					
Asbestos	Presence	No fibres observed using NATA accredited analysis	No fibres observed using NATA accredited analysis	No fibres observed using NATA accredited analysis	-
Cyanide	0.5	250	1000	1250	-
Sulphate	25	2,000 ⁶	2,000 ⁶	2,000 ⁶	-

¹ Column 1 (NEHF-A) Health-based Investigation Levels (DEC 2006)

² Column 2 (NEHF - D), Health-based Investigation Levels (DEC 2006)

³ Column 4 (NEHF - F), Health-based Investigation Levels (DEC 2006)

⁴ Column 5 (PBIL), Soil Investigation Levels for Urban Redevelopment Sites (DEC 2006)

⁵ Table 3 (EPA 1994)

⁶ Based on protection of built structures

It is noted that where any site gardens or vegetated areas are proposed with a redevelopment scenario that consideration of phytotoxicity based criteria may be required.

The criterion to be used for the assessment of acid sulphate soils is summarised in **Table 6.2** following.

Table 6.2: Acid sulphate soil criteria

Type of material		Action Criteria	
		Existing & Potential Acidity	
Texture	Approx. Clay Content (%<0.002mm)	Sulphur Trail %S Oxidisable ($S_{TAA} + S_{CR}$)	Acid Trail mol H ⁺ /tonne ($TAA + a - S_{CR}$)
Coarse Texture (sands to loamy sands)	<5	0.03	18
Medium Texture (sandy loams to light clays)	5-40	0.03	18
Fine texture (medium to heavy clays)	>40	0.03	18

7 Quality Assurance / Quality Control

7.1 Soil QA/QC Results

The QA/QC results for soil are summarised in **Table 7.1** and discussed in **Section 7.2** below. Detailed QA/QC results are included the laboratory reports in **Appendix F**.

Table 7.1 - Soil QA/QC Results Summary

Data Quality Objective	Results	DQI met?
Precision		
Soil Blind duplicates (intra laboratory)	0 - 61% RPD	Partial ¹
Soil Blind triplicates (inter laboratory)	0 - 120% RPD	Partial ¹
Trip spike	87-92%	Yes
Trip blank	<LOR	Yes
Accuracy		
Surrogate spikes	70-131% recovery	Partial ¹
Matrix spikes	60 - 136% recovery	Partial ¹
Representativeness		
Sampling appropriate for media and analytes	All sampling conducted in accordance with JBS procedures	Yes
Laboratory blanks	<LOR	Yes
Samples extracted and analysed within holding times.	All samples were extracted and analysed within 6 days of sampling.	Yes
Comparability		
Standard operating procedures used for sample collection & handling	A single field staff member used same standard operating procedures throughout works	Yes
Standard analytical methods used	Standard analytical methods used as listed in Table 6.1 .	Yes
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted by the same field staff member using standard operating procedures in the same conditions throughout the works. Primary and secondary labs remained consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	Limits of reporting were consistent and appropriate.	Yes
Completeness		
Soil description & COCs completed	All bore logs and COCs were completed appropriately.	Yes
Appropriate documentation	All appropriate field documentation is included in the Appendices.	Yes
Satisfactory frequency/result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples is considered valid	Data from critical samples is considered valid.	Yes

¹ See discussion of DQI exceedances below.

7.2 Soil QA/QC Discussion

Blind duplicate RPDs were calculated slightly outside the target range for one metal, Mercury (RPD 61%). The Blind duplicate RPD result outside the target range is not considered to affect the analytical dataset significantly, as all Mercury concentrations were reported well below the site acceptance criteria. It is further likely that localised heterogeneous distribution of contaminants may occur in the fill based soils.

Blind triplicate RPDs were exceeded for four PAH samples (67%, 100%, 105%, and 120%). The blind triplicate RPD results outside the target range are not considered to affect the analytical dataset significantly, as all PAH concentrations were reported well below the site acceptance criteria. As discussed above this is more than likely attributable to heterogeneous distribution of impact in the fill.

Surrogate spikes were detected slightly outside the target range for trifluorotoluene (surrogate for BTEX) (131%). The surrogate spike recovery result outside the target range is not considered to affect the analytical dataset significantly, as all MAH compounds were reported below the laboratory LOR.

Matrix spikes were detected slightly outside the target range for xylenes (132%, 136%). The matrix spike recoveries outside the target range are not considered to affect the analytical dataset significantly. MAHs across the site were consistently reported below the laboratory limit of reporting. It is noted that it is generally acceptable for QA/QC samples to over recover where corresponding primary analytes are below detection limits.

7.3 QA/QC Conclusion

Some under-recovery of analytes was also observed with the matrix spike sample analysed. However, though these results were outside the preferred JBS range of recoveries, they did fall within the laboratories NATA endorsed limits.

The field sampling and handling procedures produced QA/QC results which indicate that the soil data is of an acceptable quality and is suitable for use in site characterisation.

The NATA certified laboratory result sheets indicate that the project laboratory was generally achieving levels of performance within its recommended control limits during the period when the samples from this program were analysed.

In absence of field quality assurance/quality control, as completed for the soil samples, the analysis of the liquid sample removed from the UST should be considered indicative only.

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality upon which to draw conclusions regarding the environmental condition of the site.

8 Discussion of Soil Results

8.1 Field Observations

Geology encountered at the site during the field works is summarised below. Test pit logs are included in **Appendix G**.

Building rubble was identified within fill material across the site to an approximate depth of 0.8m bgs. The silty sand was noted to contain brick, cement, glass, plastic and tile fragments. No asbestos was noted in any subsurface soils encountered.

Other fill material at the site appeared to be reworked natural material, comprising silty clay material with gravel inclusions.

Fill material was observed to be underlain by natural silty clay soil at approximately 0.8m bgs.

8.2 Soil Analytical Results

The soil sampling locations are shown on **Figure 5** and summarised laboratory results are presented in **Table B**. Detailed laboratory reports and chain of custody documentation is provided in **Appendix F**.

The laboratory results are discussed in the following sections.

8.2.1 Metals

No levels of heavy metals have exceeded the high density residential (NEHF-D) or commercial / industrial (NEHF-F) assessment criteria. The following exceedances of the standard residential (NEHF-A) criteria have been recorded:

- The level of total chromium at sample location 5 at a depth of 0.1m has exceeded the published criteria for chromium (VI); and
- The level of lead at sample locations 3 at a depth of 0.3m, 8 at a depth of 0.2m, 9 at a depth of 0.3m and 10 at a depth of 0.15m has exceeded the published criteria for lead.

Numerous exceedances of the phytotoxicity based criteria have been recorded across the soils, with level of total chromium exceeding the published assessment criteria for chromium (VI) and other localised exceedances of copper, nickel and zinc criteria.

The location of heavy metals exceedances above health based criteria are summarised in **Figure 5**.

8.2.2 TPH/MAH

There were no reported concentrations of TPH/MAH compounds above the NSW EPA (1994) threshold concentrations detected at the site.

8.2.3 PAHs

No levels of total PAHs have exceeded the adopted commercial / industrial or high density residential criteria. However the level of benzo(a)pyrene at sample location 3 has exceeded the adopted commercial / industrial criteria and high density residential criteria.

The following exceedances have been recorded for the standard residential criteria:

- The level of total PAHs and benzo(a)pyrene at sample location 3 has substantially exceeded the adopted assessment criteria; and

- The level of total PAHs and benzo(a)pyrene at sample locations 9 and 10 have exceeded the adopted assessment criteria.

The location of PAH (including benzo(a)pyrene) exceedances above health based criteria are summarised in **Figure 5**.

8.2.4 OCP/PCBs

There were no reported concentrations of OCP or PCBs above the laboratory detection limit in any sample. On this basis, OCP and PCB compounds are not considered to pose a contamination issue in soil at the site.

8.2.5 Volatile Halogenated Compounds

There were no reported concentrations of VHCs above the adopted criteria in any sample.

8.2.6 Asbestos

Asbestos fibres were not reported in any soil sample selected for analysis and no potential asbestos containing materials were identified within the soils sampled during the assessment.

8.2.7 Other Constituents

Levels of sulphate were recorded below laboratory detection limits. Levels of cyanide were recorded slightly above the laboratory detection limit in one sample only, but were well below the adopted assessment criteria.

8.2.8 Leachable metals and PAHs

TCLP analysis was undertaken for selected heavy metals and benzo(a)pyrene for the most impacted soil samples. Results were compared to waste classification criteria provided to DECC (2008) 'Waste Classification Guidelines'. No levels of potentially leachable constituents were found to exceed TCLP limits for 'general solid waste'.

8.2.9 Acid Sulphate Soils

One sample was analysed for Acid Sulphate Soils, with no concentrations of Total Actual Acidity being detected, and Total Potential Acidity having a concentration slightly over the guidelines (18moles H⁺/tonne) with a concentration of 20 moles H⁺/tonne.

8.3 Water Analytical Results

One water sample was taken from the contents of the disused UST within the cellar, shown on **Figure 4** and summarised laboratory results are presented in **Table B**. Detailed laboratory reports and chain of custody documentation is provided in **Appendix F**.

Concentrations of all VOCs were below laboratory detection limits apart from 1,3,5-trimethylbenzene and 1,2,4-trimethylbenzene. Elevated levels of semi-volatile TPH constituents were also recorded in this sample. The sample is considered to be representative of oily water, was most likely mixed with a former petroleum product that may have been held in the UST.

8.4 Statistical Analysis

Statistical analysis was undertaken of benzo(a)pyrene concentrations recorded in the fill material across the site. Statistical analysis was undertaken using the US EPA 'ProcUCL'

package. As per the requirements of NSW EPA (1995) statistical results are summarised following:

- 95% UCL_{avg} – 3.1 mg/kg;
- Maximum – 6.5 mg/kg;
- Standard Deviation – 1.9 mg/kg; and
- Recommended distribution – gamma.

The statistically derived level is found to be less than the adopted commercial / industrial (NEHF – F) and high density residential (NEHF – D) assessment criteria. The maximum concentration is less than 2.5 times the respective assessment criteria and the standard deviation is less than 0.5 times the assessment criteria. By reference to NEPC (1999) the level of benzo(a)pyrene is found to be below the assessment criteria for the site.

8.5 Discussion and Likely Costs Associated with Future Remediation Works

The fill material underlying the site is found to be generally suitable, from a chemical contamination perspective, for future use on a commercial / industrial or high density residential site where minimal access to soils occurs. Where soils are proposed to be accessible for a site redevelopment (i.e. low density residential, or high density residential with site soils used in gardens) then soil remediation works would be required. In the scenario where gardens are proposed with a site redevelopment, it is likely that imported top soils would require to be used. Fill based soils with the highest levels of impact, particularly lead and benzo(a)pyrene, would be required to be either removed from the site, or managed by placement under structures.

Where soils were required to be removed from the site, the fill materials would be classified as 'general solid waste' under the recent DECC (2008) waste guidelines. Fees in the order of \$120/tonne (ex GST) would be required to transport and dispose of this material at a landfill legally licensed to accept the material.

A single sample has been analysed for the presence of potential acid sulphate soils, and found to have a level of potential acidity marginally exceeding the published assessment criteria. Noting the slight exceedance of the criteria, and the nature of the soils, it is considered unlikely that substantial actual of potential acid sulphate soils are present across the site. However where site redevelopment (including disturbance of soils and/or removal of site pavement) was proposed this would need to be assessed and confirmed by a more detailed acid sulphate soil assessment. An allowance of \$20,000 (ex GST) should be provided to complete this assessment. It is considered that where soils and site pavement is left in place, the risk of acid sulphate soils is negligible and no further works require to be undertaken.

The UST requires to have the contents removed by a licensed liquid waste tanker and removed from site for destruction at a licensed tank destruction facility. There is a potential that backfill soils in proximity of the UST may also be contaminated and require remediation. An allowance of \$30,000 (ex GST) should be provided to complete these works. Where the current structure is require to be retained, the UST will require to be decommissioned in-situ. An allowance of \$10,000 should be made to complete these works.

9 Conclusions and Recommendations

9.1 Conclusions

An environmental site assessment has been completed at the pretty located at 157 Redfern St, Redfern known as the Redfern RSL club. The assessment consisted of the assessment of soils over accessible areas of the site. A limited potential of groundwater contamination was considered to be present based on the presence of sub-surface structures (i.e. tunnels and platforms) associated with Redfern Station underlying the site.

Soil samples from across the accessible area of the site were analysed for a range of potential environmental contaminants, based on an assessment of the site history and relevant Department of Environment and Climate Change (DECC) guidelines. A sample was also recovered from an underground storage tank (UST) located in the basement of the Club Building. A program of quality assurance / quality control (QA/QC) was also completed with the works. Soils data has been found to be appropriate and data from within the UST indicative of the contents of the UST.

Levels of environmental impact have been found to fall below published assessment criteria for commercial / industrial and high density residential sites. Hot-spots of polycyclic aromatic hydrocarbon (including benzo(a)pyrene) and lead impact exceeding the published assessment criteria for standard residential use have been recorded in fill based soils underlying the site. Exceedances of phytotoxicity based criteria have been recorded in the fill based soils. A single sample analysed for the presence of potential acid sulphate soils has recorded a level of potential acidity marginally exceeding the published assessment criteria. The UST was found to contain oily water, more than likely contaminated with former petroleum products stored in the UST.

9.2 Recommendations

The following recommendations are made:

- The underground storage tank (UST) and any associated contaminated tank backfill sands present in the basement of the club require to be removed and remediated where the buildings on the site are demolished. Where site buildings are retained then the UST requires to be decommissioned in-situ;
- Where alterations to site paving and/or excavation of soils is proposed, a comprehensive acid sulphate soils assessment requires to be completed to assess for the presence and extent of potential acid sulphate soils;
- Surface soils underlying the site are generally unsuitable for use in garden / accessible areas associated with a residential development of the site. Where a residential development with significant areas of accessible gardens is proposed then top soils / growing medium would require to be imported to the site. Areas of soils with elevated levels of lead and benzo(a)pyrene would either require remediation or management within inaccessible areas under proposed buildings;
- Where near surface fill based soils are required to be removed from the site they will be classified as 'general solid waste'. These soils would require to be disposed at a licensed landfill.

10 Limitations

This report has been prepared for use by the client who commissioned the works in accordance with the project brief only and has been based in part on information obtained from other parties. The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements and site history, not on sampling and analysis of all media at all locations for all potential contaminants.

Limited sampling and laboratory analyses were undertaken as part of the investigations, as described herein. Ground conditions between sampling locations may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the sites, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS Environmental Pty Ltd reserves the right to review the report in the context of the additional information.

Figures



Site Location

Figure 1 - Site Location



Source: NSW Spatial Information Exchange
 Note- All locations shown are approximate only






..... Site Boundary



**Figure 2 - Site Layout Redfern RSL
157 Redfern St**

Note- All locations shown are approximate only



-  Lot A, DP 354297
-  Lot 1, Section D, DP 7328
-  Lot 2, Section D, DP 7328



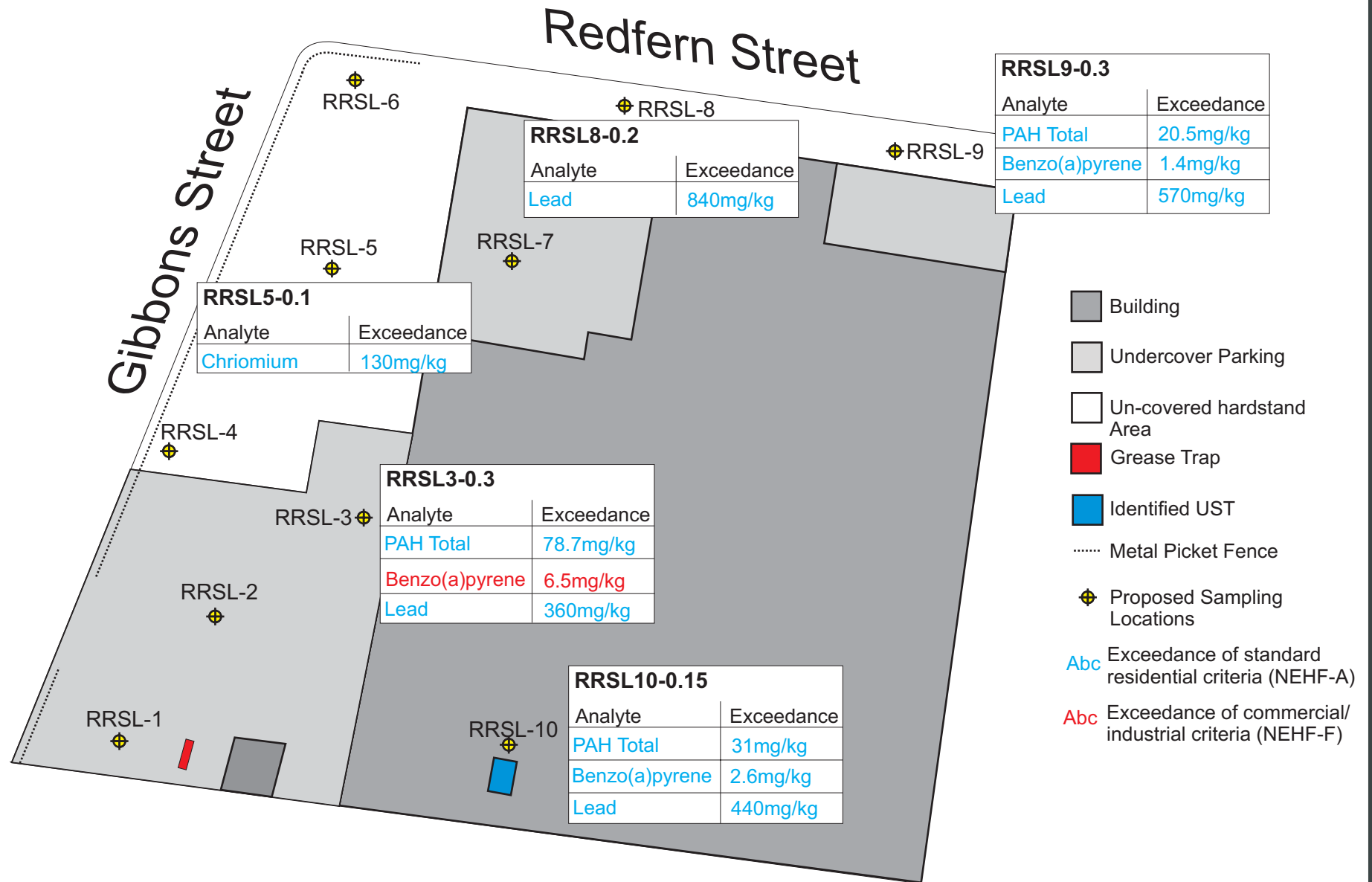
**Figure 3 - Lot and DP boundaries
Redfern RSL - 157 Redfern St**

Note- All locations shown are approximate only



Figure 4 - Sample Locations
Redfern RSL - 157 Redfern St

Note- All locations shown are approximate only



**Figure 5 - Site criteria Exceedances
Redfern RSL - 157 Redfern St**

Note- All locations shown are approximate only

Tables

**Table B - TPH Results
Redfern RSL ESA
157 Redfern St, Redfern**



				TPH				
				TPH C 6 - C 9 Fraction	TPH C10 - C14 Fraction	TPH C15 - C28 Fraction	TPH C29-C36 Fraction	TPH C10 - C36 (Sum of total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				25	50	100	100	
Health-Based Investigation Level (Residential A) NEHF-A				65	-	-	-	1000
Health-Based Investigation Level (Residential D) NEHF-D				65	-	-	-	1000
Health-Based Investigation Level (Commercial/Industrial) NEHF-F				65	-	-	-	1000
Provisional phytotoxicity-based investigation levels				-	-	-	-	-
Field ID	LocCode	Sample Depth (m)	Sampled Date					
RRSL1-0.1	Soil	0.1	26/05/2008	<25	<50	<100	<100	0
RRSL2-0.3	Soil	0.3	26/05/2008	<25	<50	130	110	240
RRSL3-0.3	Soil	0.3	26/05/2008	<25	<50	220	<100	220
RRSL4-0.3	Soil	0.3	26/05/2008	<25	<50	<100	<100	0
RRSL5-0.1	Soil	0.1	26/05/2008	<25	<50	<100	<100	0
RRSL6-0.4	Soil	0.4	26/05/2008	<25	<50	<100	<100	0
RRSL7-0.6	Soil	0.6	26/05/2008	<25	<50	<100	<100	0
RRSL7-0.8	Soil	0.8	26/05/2008	<25	<50	<100	<100	0
RRSL8-0.2	Soil	0.2	26/05/2008	<25	<50	540	200	740
RRSL9-0.3	Soil	0.3	26/05/2008	<25	<50	570	270	840
RRSL10-0.15	Soil	0.15	26/05/2008	<25	<50	<100	<100	0
RRSL10-0.7	Soil	0.7	26/05/2008	<25	<50	<100	<100	0
QA/QC								
QA1	RRSL7-0.6	0.6	26/05/2008	<25	<50	<100	<100	0
QA1a	RRSL7-0.6	0.6	26/05/2008	<20	<20	<50	<50	0

Table C - PAH Results
Redfern RSL ESA
157 Redfern St, Redfern



				Polynuclear Aromatic Hydrocarbons																	
				Total PAHs	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene		
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.1	0.1	0.1	
Health-Based Investigation Level (Residential A) NEHF-A				20	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Health-Based Investigation Level (Residential D) NEHF-D				80	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
Health-Based Investigation Level (Commercial/Industrial) NEHF-F				100	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Provisional phytotoxicity-based investigation levels				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field ID	LocCode	Sample Depth (m)	Sampled Date																		
RRSL1-0.1	Soil	0.1	26/05/2008	0.79	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.2	0.2	<0.1	0.1	<0.2	0.09	<0.1	<0.1	<0.1		
RRSL2-0.3	Soil	0.3	26/05/2008	5	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	0.8	0.9	0.5	0.5	0.8	0.5	0.3	<0.1	0.3		
RRSL3-0.3	Soil	0.3	26/05/2008	78.7	0.3	0.9	0.1	1	12	2.8	13	13	6.2	6.3	8.6	6.5	4	0.7	3.3		
RRSL4-0.3	Soil	0.3	26/05/2008	2.3	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.3	0.3	0.2	0.2	0.4	0.3	0.2	<0.1	0.2		
RRSL5-0.1	Soil	0.1	26/05/2008	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.2	<0.05	<0.1	<0.1	<0.1		
RRSL6-0.4	Soil	0.4	26/05/2008	2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	0.3	0.2	0.2	0.4	0.2	0.2	<0.1	0.1		
RRSL7-0.6	Soil	0.6	26/05/2008	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.1	<0.2	0.08	<0.1	<0.1	<0.1		
RRSL7-0.8	Soil	0.8	26/05/2008	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1		
RRSL8-0.2	Soil	0.2	26/05/2008	3.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.5	0.6	0.3	0.3	0.5	0.2	0.2	<0.1	0.2		
RRSL9-0.3	Soil	0.3	26/05/2008	20.5	<0.1	<0.1	0.1	<0.1	2.4	0.5	4.7	4	1.5	1.6	2.4	1.4	1	0.1	0.8		
RRSL10-0.15	Soil	0.15	26/05/2008	31	0.2	0.6	<0.1	0.5	3.9	1	5.5	4.9	2.6	2.4	3.9	2.6	1.5	0.3	1.1		
RRSL10-0.7	Soil	0.7	26/05/2008	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1		
				QA/QC																	
QA1	RRSL7-0.6	0.6	26/05/2008	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1		
QA1a	RRSL7-0.6	0.6	26/05/2008	1.22	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.3	0.2	0.1	0.1	0.2	0.12	<0.1	<0.1	<0.1		

**Table D - Metals Results
Redfern RSL ESA
157 Redfern St, Redfern**



				Metals							
				Arsenic	Cadmium	Chromium (total)	Copper	Lead	Mercury	Nickel	Zinc
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				4	1	1	1	1	0.1	1	1
Health-Based Investigation Level (Residential A) NEHF-A				100	20	100	1000	300	15	600	7000
Health-Based Investigation Level (Residential D) NEHF-D				400	80	400	4000	2400	60	1200	28000
Health-Based Investigation Level (Commercial/Industrial) NEHF-F				500	100	500	5000	3000	75	1500	35000
Provisional phytotoxicity-based investigation levels				20	3	1	100	600	1	60	200
Field ID	LocCode	Sample Depth (m)	Sampled Date								
RRSL1-0.1	Soil	0.1	26/05/2008	<4.0	<1.0	100	36	17	<0.1	120	82
RRSL2-0.3	Soil	0.3	26/05/2008	17	<1.0	18	30	260	0.3	13	370
RRSL3-0.3	Soil	0.3	26/05/2008	6	<1.0	55	54	360	0.33	49	680
RRSL4-0.3	Soil	0.3	26/05/2008	17	<1.0	28	74	250	0.28	30	72
RRSL5-0.1	Soil	0.1	26/05/2008	<4.0	<1.0	130	36	7.5	<0.1	120	53
RRSL6-0.4	Soil	0.4	26/05/2008	6.8	<1.0	20	37	160	0.17	31	230
RRSL7-0.6	Soil	0.6	26/05/2008	<4.0	<1.0	7.2	46	130	0.64	2.4	60
RRSL7-0.8	Soil	0.8	26/05/2008	<4.0	<1.0	12	2.1	16	<0.1	1.4	3.7
RRSL8-0.2	Soil	0.2	26/05/2008	8.5	<1.0	14	38	840	0.55	14	130
RRSL9-0.3	Soil	0.3	26/05/2008	12	<1.0	12	39	570	0.56	12	290
RRSL10-0.15	Soil	0.15	26/05/2008	5	<1.0	7.4	130	440	0.47	6.4	420
RRSL10-0.7	Soil	0.7	26/05/2008	4.7	<1.0	16	3.4	20	<0.1	3.3	33
QA/QC											
QA1	RRSL7-0.6	0.6	26/05/2008	<4.0	<1.0	8.6	62	150	1.2	3.4	58
QA1a	RRSL7-0.6	0.6	26/05/2008	<3	<0.3	6.7	38	87	0.42	2.3	41

**Table J - Metals TCLP Results
Redfern RSL ESA
157 Redfern St, Redfern**



				Metals					
				Arsenic	Cadmium	Chromium (total)	Lead	Mercury	Nickel
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				4	1	1	1	0.1	1
Field ID	LocCode	Sample Depth (m)	Sampled Date						
RRSL3-0.3	Soil	0.3	26/05/2008	<0.05	<0.01	<0.01	0.36	<0.0005	<0.02
RRSL8-0.2	Soil	0.2	26/05/2008	<0.05	<0.01	<0.01	0.08	<0.0005	<0.02

**Table L - Other analyte results
Redfern RSL ESA
157 Redfern St, Redfern**



				Other		
				Sulfate (total)	Cyanide	Asbestos
				mg/kg	mg/kg	mg/kg
EQL				25	0.5	-
Health-Based Investigation Level (Residential A) NEHF-A				-	250	0
Health-Based Investigation Level (Residential D) NEHF-D				-	1000	0
Health-Based Investigation Level (Commercial/Industrial) NEHF-F				-	1250	0
Prvisional phytotoxicity-based investigation levels				-	-	-
Field ID	LocCode	Depth	Date			
RRSL3-0.3	Soil	0.3	26/05/2008	<25	0.7	None
RRSL6-0.4	Soil	0.4	26/05/2008	<25	<0.5	None
RRSL10-0.15	Soil	0.15	26/05/2008	<25	<0.5	None

Table M - TPH Trace - Liquid
Redfern RSL ESA
157 Redfern St, Redfern



				TPH				
				TPH C 6 - C 9 Fraction	TPH C10 - C14 Fraction	TPH C15 - C28 Fraction	TPH C29- C36 Fraction	TPH C10 - C36 (Sum of total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				100	50	100	100	
Field ID	LocCode	Depth	Date					
RRSL-UST	Liquid	-	26/05/2008	<100	2000	7500	<100	9500

**Table N - RPDs of TPH
Redfern RSL ESA
157 Redfern St, Redfern**



				TPH				
				TPH C 6 - C 9 Fraction	TPH C10 - C14 Fraction	TPH C15 - C28 Fraction	TPH C29-C36 Fraction	TPH+C10 - C36 (Sum of total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				25	50	100	100	
Field ID	LocCode	Sample Depth (m)	Sampled Date					
QA1	RRSL7-0.6	0.6	26/05/2008	<25	<50	<100	<100	-
RRSL7-0.6	Soil	0.6	26/05/2008	<25	<50	<100	<100	-
RPDs (%)				0	0	0	0	-
QA1a	RRSL7-0.6	0.6	26/05/2008	<20	<20	<50	<50	-
RRSL7-0.6	Soil	0.6	26/05/2008	<25	<50	<100	<100	-
RPDs (%)				-	-	-	-	-

Table O - RPDs of Metals
Redfern RSL ESA
157 Redfern St, Redfern



				Metals								
				Arsenic	Cadmium	Chromium (total)	Copper	Lead	Mercury	Nickel	Zinc	
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				4	1	1	1	1	0.1	1	1	1
Field ID	LocCode	Sample Depth (m)	Sampled Date									
QA1	RRSL7-0.6	0.6	26/05/2008	<4.0	<1.0	8.6	62	150	1.2	3.4	58	
RRSL7-0.6	Soil	0.6	26/05/2008	<4.0	<1.0	7.2	46	130	0.64	2.4	60	
RPDs (%)				0	0	18	30	14	61	34	3	
QA1a												
RRSL7-0.6	Soil	0.6	26/05/2008	<3	<0.3	6.7	38	87	0.42	2.3	41	
RRSL7-0.6	Soil	0.6	26/05/2008	<4.0	<1.0	7.2	46	130	0.64	2.4	60	
RPDs (%)				-	-	7	19	40	42	4	38	

**Table P - RPDs of PAHs
Redfern RSL ESA
157 Redfern St, Redfern**




				Polynuclear Aromatic Hydrocarbons																
				Total PAHs	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
EQL				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.1	0.1	
Field ID	LocCode	Depth	Date	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
QA1	RRSL7-0.6	0.6	26/05/2008	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.1	<0.2	0.08	<0.1	<0.1	<0.1
RRSL7-0.6	Soil	0.6	26/05/2008	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.1	<0.2	0.08	<0.1	<0.1	<0.1	
RPDs (%)				-	-	-	-	-	-	-	-	-	-	-	-	105	-	-	-	
QA1a	RRSL7-0.6	0.6	26/05/2008	1.22	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.3	0.2	0.1	0.1	0.2	0.12	<0.1	<0.1	<0.1	
RRSL7-0.6	Soil	0.6	26/05/2008	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.1	<0.2	0.08	<0.1	<0.1	<0.1	
RPDs (%)				105	-	-	-	-	120	-	100	67	-	-	-	40	-	-	-	


Appendix A
Groundwater Bore Search

NSW Groundwater Works

Preformatted reports containing information about licensed water bores, wells and excavations.

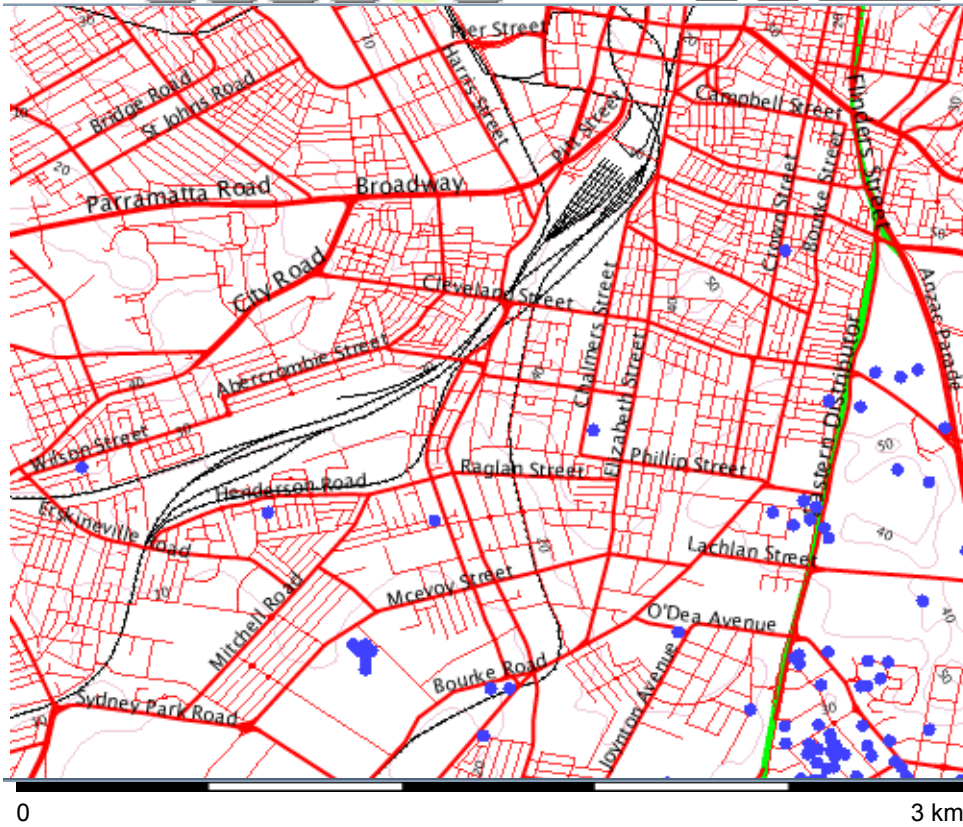
Instructions

Click the map to zoom to your area of interest, then select the info tool 

and click a monitoring site  for data.



Map tools



- [Help](#)
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Appendix B
DECC Records

[About the public register](#)[Search for licences, applications and notices](#)[Search for prosecutions and civil proceedings](#)[Enforceable undertakings](#)[Exemptions](#)[Frequently asked questions](#)[Glossary](#)[List of licences](#)[About the POEO Act](#)[Links](#)[Terms of use](#)

Search results

Your search for: **Name (licence holder, applicant, premises or notice recipient) - 157-159 Redfern Street**
Suburb - Redfern

matched

[Search again](#)[Return to previous page](#)

No records match your query.



**Print-friendly
version**

26 May 2008

Appendix C
Heritage Records

Working with the community to know, value and care for our heritage



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Click on the BACK button of your browser to return to the search.

Statutory Listed Items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into two sections.

- **Section 1.** contains items listed by the **Heritage Council** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Branch.
- **Section 2.** contains items listed by **Local Councils & Shires and State Government Agencies**. This section may also contain additional information on some of the items listed in the first section.

Section 1. Items listed under the NSW Heritage Act.

Click on an item name to view the full details.

The search results can be re-sorted by clicking on the **(sort)** option at the top of each column.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Listed Under Heritage Act
Redfern Post Office	113 Redfern Street	Redfern	Sydney	Yes

There was 1 record in this section matching your search criteria.

Section 2. Items listed by Local Government and State agencies.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Information Source (sort)
Redfern Court House and Police Station (former)	103-105 Redfern Street	Redfern	Sydney	LGOV
Redfern Park	Redfern Street	Redfern	Sydney	LGOV
Redfern Post Office	119 Redfern Street	Redfern	Sydney	LGOV
Redfern Street Heritage Streetscape (HS9)	Redfern Street	Redfern	Sydney	LGOV
Shop and residence	122 Redfern Street	Redfern	Sydney	LGOV
St Vincents Roman Catholic Church Group	111-117 Redfern Street	Redfern	Sydney	LGOV
St Vincents Roman Catholic Church Presbytery	111-117 Redfern Street	Redfern	Sydney	LGOV
Terrace house	124 Redfern	Redfern	Sydney	LGOV

	Street			
Terrace houses	111-117 Redfern Street	Redfern	Sydney	LGOV

There were **9** records in this section matching your search criteria.

There was a total of **10** records matching your search criteria.

Key:

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

Note: The Heritage Branch seeks to keep the State Heritage Inventory (SHI) up to date, however the latest listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included. Always check with the relevant Local Council or Shire for the most recent listings.

NSW Government

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Search Results

No results found.

Enter at least one search criterion.

[Search Hints](#)

<input type="button" value="Search"/> <input type="button" value="Reset form"/>	
Place name <input type="text"/>	
Street name <input type="text" value="redfern street"/>	
Town or suburb <input type="text" value="redfern"/>	State <input type="text" value="New South Wales"/>
Country <input type="text" value="Australia"/>	

Advanced search options

List <input type="text" value="National Heritage List"/>	
<i>Different lists will provide different status and class options</i>	
Local Government Area <input type="text"/>	Place ID number <input type="text"/>
Legal status <input type="text" value="--All--"/>	Class <input type="text" value="--All--"/>
Keyword Search <input type="text"/>	
<input checked="" type="checkbox"/> Description <input checked="" type="checkbox"/> Statement of Significance <input checked="" type="checkbox"/> Place history	
Latitude/Longitude	
N Latitude 1 Longitude 1 <input type="text"/> S Longitude 2 W <input type="text"/> E Latitude 2 <input type="text"/> E E <input type="text"/> S S	
<input type="radio"/> Wholly within region <input checked="" type="radio"/> Wholly or partially within region	
<i>Longitude coordinates should be entered as ddd.mm.ss</i> <i>Latitude coordinates should be entered as dd.mm.ss</i>	
Map Ref No	

1:100,000 eg 2357

1:250,000 eg SF-50-01

Search Hints

- Not all fields need to be filled in. The fewer you fill in the more results you will get.
- If you cannot find a place, check spelling and try alternative names. Reduce the number of words that you include and use fewer fields.
- The Local Government field used on its own will provide a comprehensive list of places in an area.

Report Produced: Tue May 20 12:01:43 2008

[Accessibility](#) | [Disclaimer](#) | [Privacy](#) | [© Commonwealth of Australia](#)

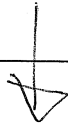
Appendix D
Historical Title Deeds

~ Search ~

re Lots 1 & 2 of Sec D in D.P. 7328

Title Tree

Auto Counsel 15523-170



V. 15523 F. 170



V. 2462 F. 220

20/5/08

~ Search ~

re 157 Redfern Street Redfern
Part Being Lots 1 & 2 etc D in DP 7328

Schedule of Registered Proprietors

V. 2462 F.220 Chief Commissioner for Railways
and Tramways.
wined 2/4/14

Appln 272936 The Commissioner for Railways
Reg 27/8/34
V. 2462 F.220

Appln R287258 The Public Transport Commission
of New South Wales
Reg 20/8/79
V. 2462 F.220

Appln X139551 State Rail Authority
Reg 11/11/87
V. 2462 F.220

Appln X 431001 Redfern R.S.L. Club Limited
Reg 14/4/88
V. 2462 F.220

20/5/08

~ Search ~

re 157 Redfern Street Redfern
Part Being Lots 1 & 2 Rec D DP 7328

Schedule of Registered Leases

Lease 649968 to Tooth & Company Limited
Reg. 29/5/12 of Part (?) Expired 26/11/62.

Lease A113818 to The Commonwealth Fish
Reg 6/7/14 Exchange Limited of Redfern
Expired under J 164830 Reg 26/11/62

Lease J 164831 to Myra Murrell
Reg 26/11/62 of Bondi, Widow
Expired 31/8/73.

Lease R 287259 to Redfern RSH Club
Reg 20/8/79 Limited

20/5/08.

JENNERS TITLE SEARCHING CO.

Level 6 229 Macquarie Street Sydney NSW 2000 Phone:02 9233 7077 Fax:02 9233 8330 http://www.jajenner.com.au

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 15523-170

SEARCH DATE	TIME	EDITION NO	DATE
19/5/2008	12:02 PM	2	23/8/2007

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT REDFERN
LOCAL GOVERNMENT AREA SYDNEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP7328

FIRST SCHEDULE

REDFERN R.S.L. CLUB LIMITED

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 X431000 RESTRICTION(S) ON THE USE OF LAND
- 3 AD277662 MORTGAGE TO SYDNEY CREDIT UNION LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 1-2 SEC. D IN DP7328.

*** END OF SEARCH ***

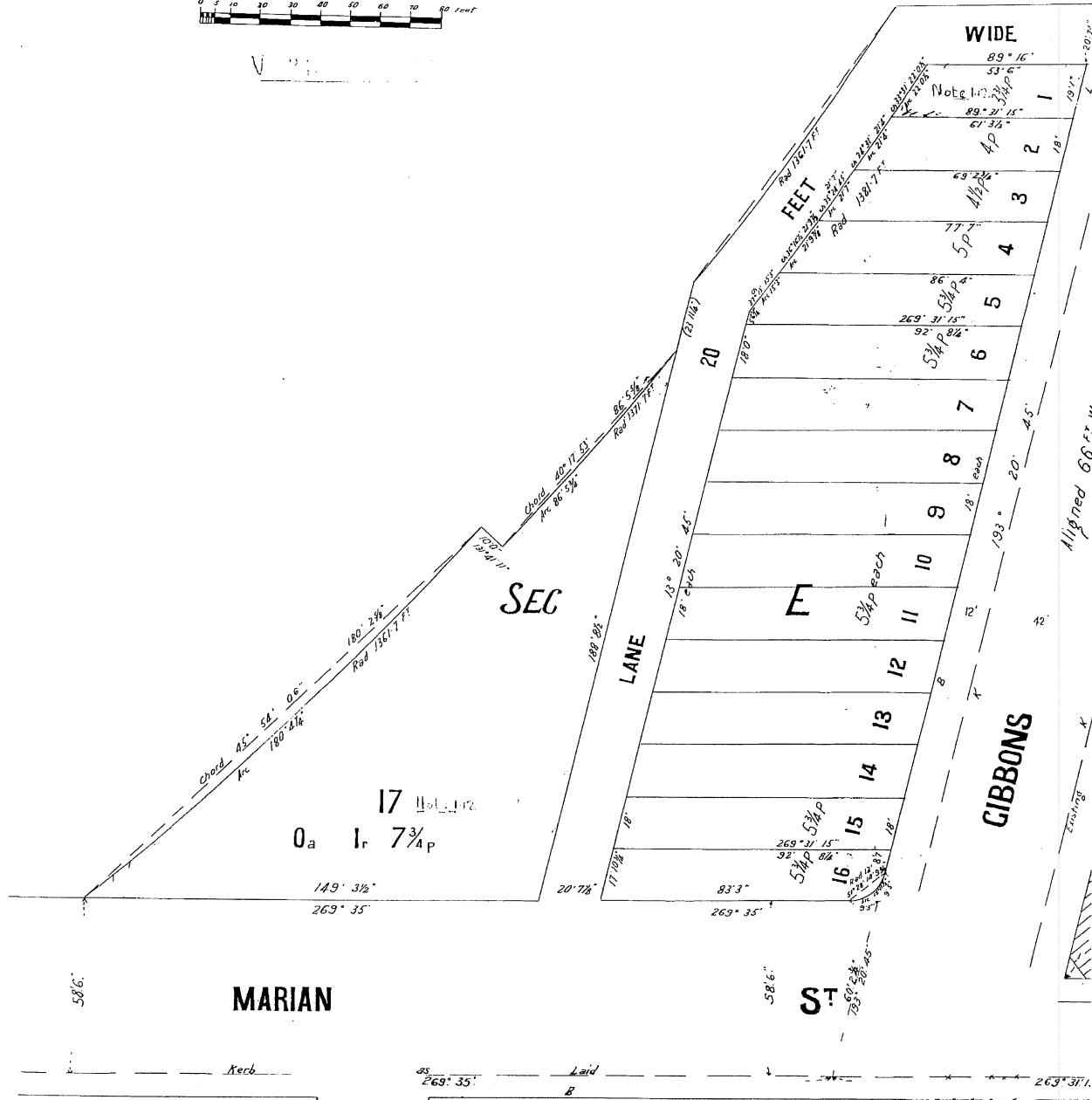
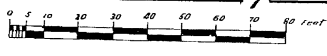
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PRINTED ON 19/5/2008

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WARNING: THE INFORMATION APPEARING UNDER **NOTATIONS** HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

PLAN
 of Sub dⁿ of part of Railway Lands
being part of the land in Dep. Plans 80 and 4209
MUNICIPALITY OF REDFERN
Parish of Alexandria — County of Cumberland

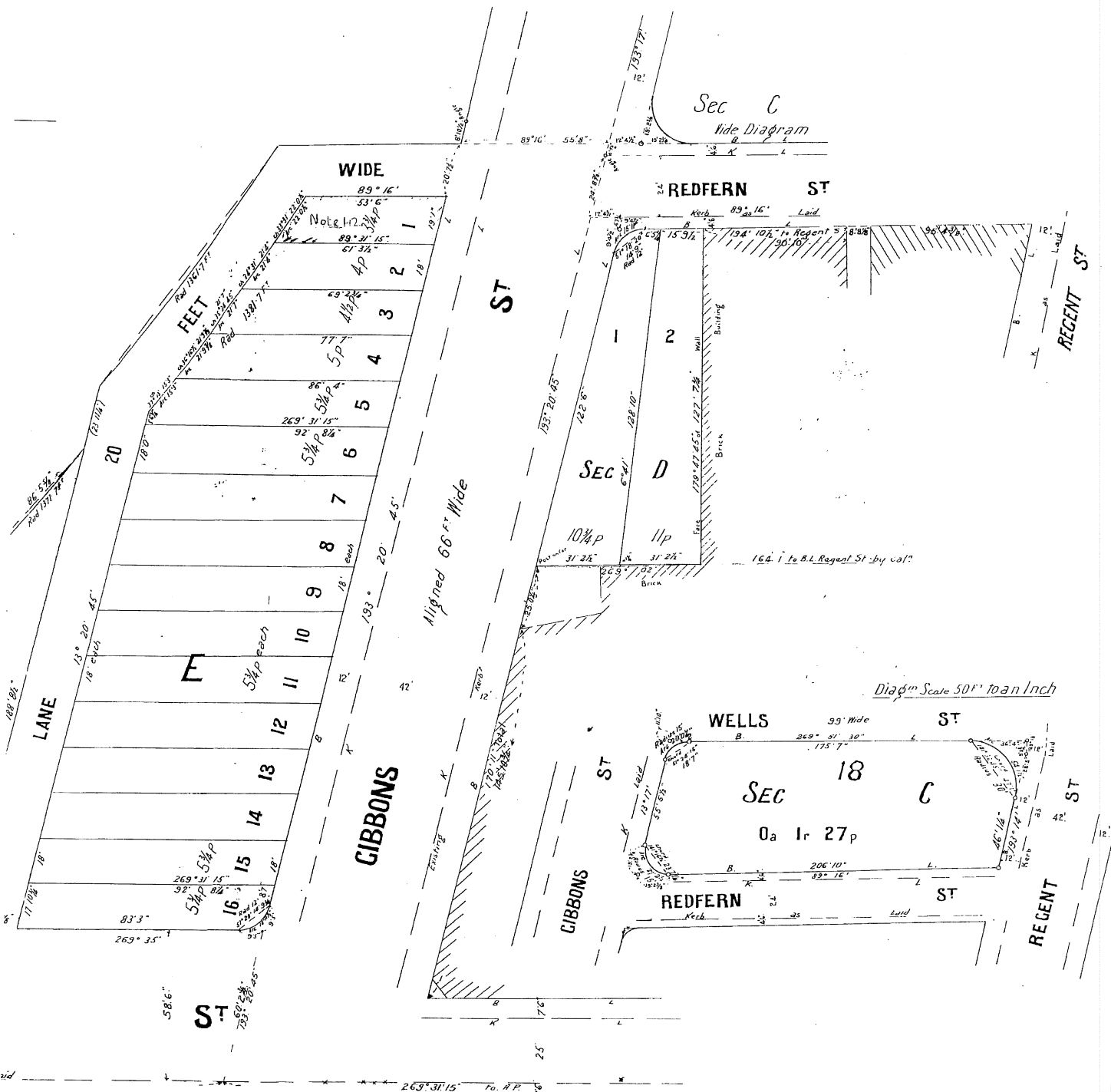


DP. 7328

Subscribed and declared before me at Sydney
 this 28th Day of July AD 1913
[Signature] J.P.

*Date of Survey January 1913
 Azimuth taken from Detail Survey (Buildings demolished)*

D.P. 7328



Subscribed and declared before me at Sydney
 this 28th Day of July AD 1913
 [Signature]

I, Edward Henry Conder of Sydney Licensed Surveyor, specially licensed under the Real Property Act, do hereby solemnly and sincerely declare that the boundaries and measurements shown on this Plan are correct for the purposes of the said Act, and that the said Plan and the Survey of the land to which the same relates have been prepared and made by me, or under my immediate supervision, and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act 1900
 Ed. H. Conder
 Licensed Surveyor

DP. 7328

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 7328 CONTINUED

FEET	INCHES	METRES		
180	2 5/8	54.93		
180	4 1/4	54.97		
188	8 1/2	57.52		
194	10 1/2	59.4		
206	10	63.04		
1361	7	415.01		
1371	7	418.06		
AC	RD	P	SQ	M
-	-	3 3/4	94.8	
-	-	4	101.2	
-	-	4 1/2	113.8	
-	-	5	126.5	
-	-	5 3/4	145.4	
-	-	10 3/4	271.9	
-	-	11	278.2	
-	-	1 7 3/4	1208	
-	-	1 27	1695	

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 7328

FEET	INCHES	METRES
-	1 3/4	0.095
3	-	0.915
4	6	1.37
4	7 3/4	1.415
5	6 3/4	1.695
6	5 1/4	1.96
7	6	2.285
8	7	2.615
8	8 1/8	2.645
8	10 1/2	2.705
9	3 3/4	2.84
9	4 1/2	2.855
9	5	2.87
10	-	3.05
11	10	3.605
12	-	3.66
12	4 1/2	3.77
14	7 3/4	4.465
14	9	4.495
15	-	4.57
15	3	4.65
15	9 1/2	4.815
15	11	4.85
17	10 3/4	5.455
18	-	5.485
18	7	5.665
19	2 3/8	5.85
19	2 5/8	5.86
20	0 1/2	6.11
20	7 1/8	6.275
20	7 1/2	6.285
21	4	6.5
21	7	6.58
21	9 7/8	6.65
22	0 1/2	6.72
23	7 3/4	7.205
23	11 1/4	7.295
24	-	7.315
24	8 7/8	7.54
24	10 7/8	7.59
25	-	7.62
25	0 1/4	7.625
27	2 1/2	8.295
28	5	8.66
30	-	9.145
31	2 1/2	9.51
36	4	11.075
42	-	12.8
46	1 1/4	14.05
47	1	14.35
53	6	16.305
54	1 1/2	16.495
55	5 1/2	16.905
55	8	16.965
58	6	17.83
60	2 3/4	18.36
61	3 1/2	18.68
66	-	20.115
69	2 3/4	21.1
77	7	23.645
83	3	25.375
86	4	26.315
86	5 5/8	26.355
86	5 3/4	26.36
90	10	27.685
92	8 1/4	28.25
95	4 3/8	29.065
99	-	30.175
100	-	30.48
122	6	37.34
127	7 3/4	38.905
128	10	39.27
145	10 3/4	44.47
149	3 1/2	45.505
164	1	50.01
170	11	52.1
175	7	53.52

JENNERS TITLE SEARCHING CO.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

19/5/2008 12:02PM

FOLIO: AUTO CONSOL 15523-170

<u>Recorded</u>	<u>Number</u>	<u>Type of Instrument</u>	<u>C.T. Issue</u>
2/4/1992		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 15523-170	
		PARCELS IN CONSOL ARE: 1-2/D/7328.	
12/6/2007	AD161902	APPLN FOR REPLACEMENT CT	EDITION 1
23/8/2007	AD277662	MORTGAGE	EDITION 2

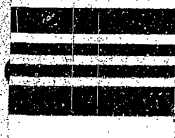
*** END OF SEARCH ***

Jenners Title Searching Co

PRINTED ON 19/5/2008

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WARNING: THE INFORMATION APPEARING UNDER **NOTATIONS** HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



STATE OF TITLE
PROPERTY ACT, 1900



15523170

NEW SOUTH WALES

First Title Old System

Prior Title Vol. 2462 Fol.220

Vol. 15523 Fol. 170

EDITION
ISSUED 4 5 1988



I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

~~CANCELLED~~

Registrar General.



SEE AUTO FOLIO

15523 Fol. 170
(Page 1) Vol.

LAND REFERRED TO

Lots 1 and 2 of Section D in DP7328 at Redfern in the City of Sydney Parish of Alexandria County of Cumberland.

Title Diagram: DP7328

FIRST SCHEDULE

REDFERN R.S.L. CLUB LIMITED.

X431001

SECOND SCHEDULE

1. Reservations and conditions in the Crown Grant.
- R/L* 2. X431000p Restriction on the use of land.

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

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

FIRST SCHEDULE (continued)
REGISTERED PROPRIETOR

Registrar General

CANCELLED

SEE AUTO FOLIO

SECOND SCHEDULE (continued)

PARTICULARS

Registrar General

CANCELLATION

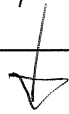
NOTATIONS AND UNREGISTERED DEALINGS

~ Search ~

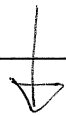
re 157 Redfern Street Redfern
Being Lot A in DP 354297

Title Tree

A/354297



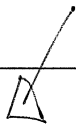
V. 10567 F. 86



V. 5608 F. 58



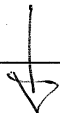
V. 5146 F. 147.



V. 3426 F. 72



V. 508 F. 204.



V. 2775 F. 163

~ Search ~

re 157 Redfern Street Redfern
Part Being Lot A in DP 354297

Schedule of Registered Proprietors

Jfr 14324216 } The Commonwealth Co-Operative
Reg 8/9/17 } Fish Exchange Limited
(V. 2775 F. 163) }
(V. 508 F. 204)

Jfr 909998 }
Reg 28/2/23 } The Municipal Council of
(V. 2775 F. 163) } Sydney
(V. 508 F. 204)

Jfr G 93697 } The Council of the City of Sydney
Reg 28/6/54 }
(V. 5608 F. 58)

Jfr G 141188 } Augustus Rolfe of Redfern Butcher
Reg 31/8/54 } Gordon Maxwell McKinnon of Redfern, Stonemason
(V. 5608 F. 58) } Alexis Howarth of Earlwood, Tobacconist
as Trustees

Jfr G 847949 } Augustus Pius Rolfe, Butcher
Reg 23/11/57 } Gordon Maxwell McKinnon, Stonemason
(V. 5608 F. 58) } Michael Joseph Dard, Glass
Jenners Title Searching Co.

~ Search ~

re 157 Redfern Street Redfern
Being Lot A in DP 354297

Schedule of Registered Proprietors
Conta.

App. K647504 Gordon Maxwell Mc Kinnon
Reg 5/5/67 Augustus Pius Rolfe
V. 5608 F. 57) William Alexander Hensley
of Darlington, Labourer
as Trustees

App. Q 753851 Gordon Maxwell Mc Kinnon
Reg 26/7/78 of Alexandria, Retired Storeman
V. 10567 F. 86) Myles Clark of Zetland, Retired
Alfred Joseph Reid of Dulwich Hill, Retired
as Trustees

App. I 353412 Cecil Richard Brooker
Reg 22/6/93 Albert Arthur Booth
A/354297) Colin Talbot Dunlop. as Trustees

R. 3602583 Wallis Frederick Nash
Reg 9/12/97 Albert Arthur Booth
A/354297) Colin Talbot Dunlop. as Trustees

~ Search ~

re 157 Redfern Street Redfern
Being Lot A in DP 354297

Schedule of Rega Prop. Contd.

R. 6013603	Wallis Frederick Nash
Reg 5/8/99	Albert Arthur Booth
(A/354297)	Colin Talbot Dunlop as Trustees
R. AD105866	Wallis Frederick Nash
Reg 8/6/07	Barry Dixon
(A/354297)	Charles Clifford Dilcock as Trustee
Tr AD277661	Redfern R.S.L Club Limited
Reg 23/8/07	
(A/354297)	

MS 20/5/08

~ Search ~

ne 157 Redfern St. Redfern
Being Left A in DP 354/297

Schedule of Registered Leases.

Lease 687883 to John Fitzgerald
Reg 9/11/12 of Ultimo, Commission Agent
V. 2775 F.163) of Part

Lease 687884 to Joseph Sciacea
Reg 9/11/12 of Woolloomooloo
V. 2775 F.163) Commission Agent, of Part

Lease 687885 to Charles Johann Gustafsen
Reg 9/11/12 of Redfern, Commission Agent
V. 2775 F.163) of Part.

Lease 687886 William Henry Trumble, Isaac Barr
Reg 9/11/12 Evans, both of Ryane, Commission Agent
V. 2775 F.163) of Part

Lease 687887 Albert Joseph Cusack, Edward Patrick
Reg 9/11/12 Cusack, both of Redfern, Commission Agent
V. 2775 F.163) of Part

20/15/08

~ Search ~

re 157 Redfern St Redfern
Being Lot 7 in DP354297

Schedule of Rega Leases Centa

Use 687888 to John Henry Cusack
Reg 9/11/12 of Redfern, Commission Agent
V.2775 F.163) of Part

Use 687889 to William Wright
Reg 9/11/12 of Paddington, Commission Agent
V.2775 F.163) of Part

Use 687890 to John William Anderson Smith
Reg 9/11/12 of Woolloomooloo, Commission Agent
V.2775 F.163) of Part

Use 687891 to Humphrey Michael Earl
Reg 9/11/12 of Petersham, Commission Agent
V.2775 F.163) of Part

Use 687892 to William James Duncan
Reg 9/11/12 of Dotany, Commission Agent
V.2775 F.163) of Part

~ Search ~

re 157 Redfern St Redfern
Being Lot A in DP354297

Schedule of Rega Leases Contd.

Use 687893 to William Latona
Reg 9/11/12 of Drummoyn, Commission Agent
V.2775 F.163) of Part

Use A324217 to John William Anderson Smith
Reg 8/9/17 of Woolloomooloo, Commission Agent
V.2775 F.163) of Part

Use A324219 to John Fitzgerald
Reg 8/9/17 of Ultimo, Commission Agent
V.2775 F.163)

Use A324221 to William Henry Twinkl & Isaac Barry
Reg 8/9/17 Evans, both of Sydney, Commission Agent
V.2775 F.163) of Part

Leases 687883-687893, A324217 &
A324219 expired vide A909997 Reg 28/2/01

MJ 20/5/08
Jenners Title Searching Co.

~ Search ~

re 157 Redfern Street Redfern
Being Lot A in DP 354297

Schedule of Registered Leases Cont

Lease D 605178 to Federation of New South Wales
Police Citizens' Boys' Club.

Reg 23/12/46
(V. 5608 F. 58) Surrendered vide F. 849260 Reg 18/6/5

Lease I 353413 to Redfern R.S.L. Club Limited
Reg 22/6/93 Term 3 years
(A/354297) Option of Renewal.

Lease 6013604 to Redfern R.S.L. Club Limited
Reg 5/8/99 Term 5 years
(A/354297) Option of Renewal.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: A/354297

SEARCH DATE	TIME	EDITION NO	DATE
16/5/2008	12:21 PM	7	23/8/2007

LAND

LOT A IN DEPOSITED PLAN 354297
LOCAL GOVERNMENT AREA SYDNEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP354297

FIRST SCHEDULE

REDFERN RSL CLUB LIMITED

(T AD277661)

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 K647503 CAVEAT BY THE REGISTRAR GENERAL
- 3 AD277662 MORTGAGE TO SYDNEY CREDIT UNION LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

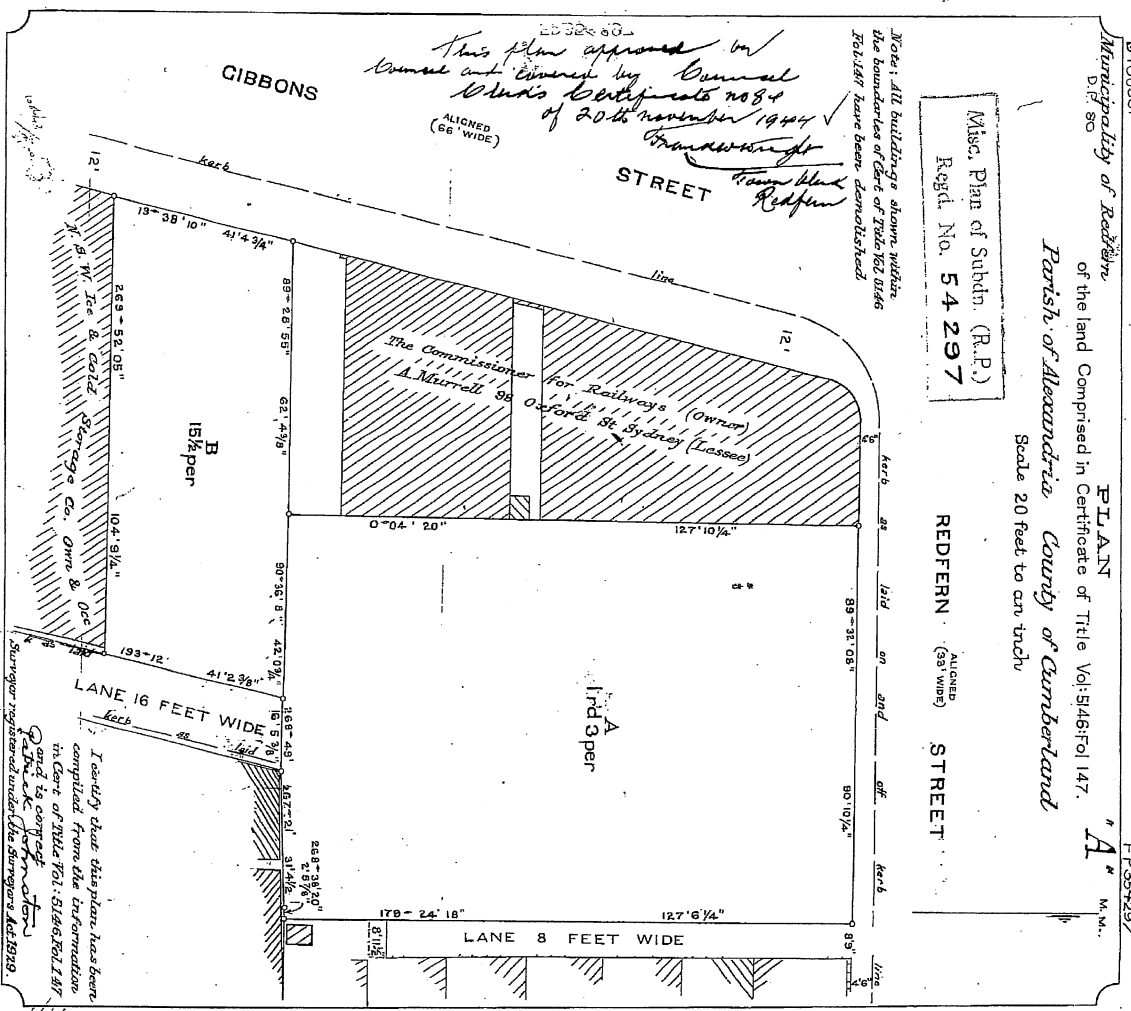
*** END OF SEARCH ***

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DP 354292

Municipality of Redfern
 of the land Comprised in Certificate of Title Vol: 5146: fol 147.
 Parish of Alexandria County of Cumberland
 Scale 20 feet to an inch

Misc. Plan of Subdn. (R.P.)
 Regd. No. 54 297

REDFERN STREET

This is the plan marked "A" referred to in Memorandum of Transfer Dated 5th April 1946, The Municipal Council of Sydney to Arthur Alexander Murray 98 Oxford Street Sydney.

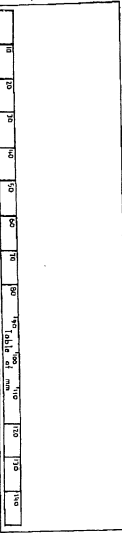
The Common Seal of The Municipal Council of Sydney was hereunto affixed by me Roy Hendy Town Clerk of the City of Sydney this 11th day of December 1945.

Roy Hendy
 Town Clerk

The Common Seal of Redfern Municipality of New South Wales - Public Seal

Arthur Alexander Murray

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 8th day of August, 1978



CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

FEET	INCHES	METRES
2	5 7/8	0.759
4	6	1.312
8	6	2.439
8	11 1/2	2.667
12	11 1/2	3.658
16	5 3/8	4.877
16	4 1/2	5.013
31	4 1/2	9.565
33	2 3/8	10.058
41	2 3/8	12.557
41	4 3/4	12.617
42	3 1/4	12.802
42	4 3/8	12.822
66	4 3/8	20.117
90	10 1/4	27.692
104	9 1/4	31.934
127	6 1/4	38.868
127	10 1/4	38.970
AC RD P		SO M
- 15 1/2		392
- 1 3		1088



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

16/5/2008 12:21PM

FOLIO: A/354297

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 10567 FOL 86

Recorded	Number	Type of Instrument	C.T. Issue
29/7/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/8/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
15/6/1992	E493703	WITHDRAWAL OF CAVEAT	
15/6/1992	E493704	DISCHARGE OF MORTGAGE	EDITION 1
22/6/1993	I353412	APPLICATION	
22/6/1993	I353413	LEASE	EDITION 2
4/9/1997		AMENDMENT: LOCAL GOVT AREA	
9/12/1997	3602583	APPLICATION	EDITION 3
18/6/1999	5883637	APPLN FOR REPLACEMENT CT	EDITION 4
5/8/1999	6013603	REQUEST	
5/8/1999	6013604	LEASE	EDITION 5
14/3/2004	AA472866	DEPARTMENTAL DEALING	
8/6/2007	AD105865	APPLN FOR REPLACEMENT CT	
8/6/2007	AD105866	APPLICATION	EDITION 6
23/8/2007	AD277660	WITHDRAWAL OF CAVEAT	
23/8/2007	AD277661	TRANSFER	
23/8/2007	AD277662	MORTGAGE	EDITION 7

*** END OF SEARCH ***

Jenners Title Searching Co

PRINTED ON 16/5/2008

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B



I D
353412 C

APPLICATION

REAL PROPERTY ACT, 1900

(See Instructions for Completion on back of form)

AP

\$

DESCRIPTION OF LAND
Note (a)

Torrens Title reference	If Part Only, Delete Whole and Give Details	Location
Folio Identifier: A/354297	WHOLE	Parish of Alexandria County of Cumberland

Type of Dealing	Registered Number	Torrens Title Reference
/		

GORDON MAXWELL MCKINNON & ALFRED JOSEPH REID

is presently recorded as REGISTERED PROPRIETOR of the land above described ~~abovementioned registered dealing~~ Application is hereby made to record

CECIL RICHARD BROOKER, ALBERT ARTHUR BOOTH & COLIN TALBOT DUNLOP

OFFICE USE ONLY

as REGISTERED PROPRIETOR of the land above described pursuant to a Deed of Appointment dated 20 February 1993 ~~abovementioned registered dealing~~ being registered Book 4019 No 815

Note (f)

DATE 17 May 1993

EXECUTION
Note (g)

I hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900
Signed in my presence by the applicant who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

NJC
Signature of Applicant is solicitor
Nicholas John Cowie

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

LODGED BY		LOCATION OF DOCUMENTS	
ABBOTT TOUT RUSSELL KENNEDY SOLICITORS LEVEL 50, MLC CENTRE, 19-29 MARTIN PLACE, SYDNEY DX. 129 TEL. 231-8555 61C L-Becker Delivery Box Number		CT	OTHER
		1	
		Herewith. /	
		In L.T.O. with	
		Produced by	
Checked <i>NJC</i> <i>DLIS</i>	Passed	REGISTERED	- 19
Signed	Extra Fee	Secondary Directions	
		Delivery Directions	

OFFICE USE ONLY

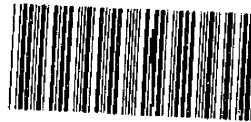
B27
/Req: C062806
/Doc: DL1353412
/Pt: 22-May-2008

RP1



LEASE

Real Property Act, 1900



I D
353413 A



Office

00*6RT4

10/6T690900Z 11 16Z 66500Z

(A) PROPERTY LEASED

Show no more than 20 References to Title.
Specify the part or premises if appropriate.

Folio Identifier
A/364297

11189-

(B) LODGED BY

L.T.O. Box 61C	Name, Address or DX and Telephone L-brooker REFERENCE (max. 15 characters):	Abbott Tout Russell Kennedy Solicitors Level 50, MLC Centre 19-29 Martin Place SYDNEY NSW 2000 DX: 129 TEL: 231 8555 NJC
--------------------------	--	---

(C) LESSOR

J

RICHARD ARTHUR TALBOT
CECIL/BROOKER, ALBERT BOOTH and COLIN DUNLOP

(D) The lessor leases to the lessee the property described above subject to the following ENCUMBRANCES

1. **(K647609)** 2. **(Q184125)** 3. 4.

(E) LESSEE

L **REDFERN RSL CLUB LIMITED (ACN 001 064 437) of 157 Redfern Street, Redfern**

as joint tenants/tenants in common

(G) 1. TERM: Three (3) years

2. COMMENCING DATE: **1 August 1992**

3. TERMINATING DATE: **31 July 1995**

4. With an **OPTION TO RENEW** for a period of **three (3) years**

set out in **Clause 24 of Annexure "A"**

5. ~~With an OPTION TO PURCHASE set out in-~~

6. ~~Together with and reserving the RIGHTS set out in-~~

7. Incorporates the provisions set out in ANNEXURE "A" hereto.

8. Incorporates the provisions set out in MEMORANDUM No. filed in the Land Titles Office.

UNIT 5 2184125
DUK 0-0

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

PLS

6013603T

Form: 97-11R
Licence: 61C/0717/97

REQUEST
New South Wales
Real Property Act 1900



(A) **STAMP DUTY**
If applicable.

Office of State Revenue use only

(B) **TITLE**

A/354297

(C) **REGISTERED DEALING**
If applicable.

(D) **LODGED BY**

LTO Box	Name, Address or DX and Telephone	Dealing Code
61C	Abbott Tout Solicitors Level 5, Tower Life Building, 69 Phillip Street PARRAMATTA NSW 2150 DX: 8285 Parramatta Tel: (02) 9842 8888 REFERENCE (15 character maximum): JWC:JAR:648959	

(E) **APPLICANT**

WALLIS FREDERICK NASH

(F) **REQUEST**

The abovenamed applicant, being the first mentioned registered proprietor of the land above described, hereby requests the Registrar General to amend the folio of the Register for the purpose of correcting the error in my name, in proof of which, I state as follows:

1. My name is Wallis Frederick Nash.
2. My name is incorrectly recorded in the Register, and in registered Deed Number 829 Book 4182, registered in the general register of Deeds of 30 October 1997, as "Wallis Fredwick Nash".
3. To the best of my knowledge, information and belief the error has occurred as a result of a letter issued by the Redfern sub-Branch of The Returned and Services League of Australia (New South Wales Branch) to the New South Wales State Branch of that League, dated 17 March 1997, in which my name was incorrect referred to as "Wallis Fredwick Nash". That letter was subsequently used by the solicitors for the State Branch in preparing the Deed of Appointment dated 20 October 1997, referred to above, and the Request, number 3602583, registered in the Land Titles Office. The error was not identified by me at the time that I signed those documents.

NOS lodged ✓

6013604R

Form: 97-07L
Licence: 61C/0683/97

LEASE
New South Wales
Real Property Act 1900



Office of State Revenue use only

10/579825204 11 8096 667010
\$798.35
N.S.W. STAMP DUTY

(A) **PROPERTY LEASED**
If appropriate, specify the part or premises

FOLIO IDENTIFIER A/354297

(B) **LODGED BY**

L.T.O. Box

61C

Name, Address or DX and Telephone

Abbott Tout Solicitors
Level 5, Tower Life Building,
69 Phillip Street, Parramatta NSW 2150
DX 8285 PARRAMATTA Tel: (02) 9842 8888
Reference (15 character maximum): JWC:JAR:648959

L-648959



(C) **LESSEE** WALLIS FRED^{ER}WICK NASH, ALBERT ARTHUR BOOTH and COLIN TALBOT DUNLOP

(D) The lessor leases to the lessee the property described above.

Encumbrances (if applicable) 1. 2. 3. 4.

(E) **LESSEE**

L

REDFERN RSL CLUB LIMITED
ACN 001 064 437

(F) **TENANCY:**

(G) 1. **TERM:** FIVE (5) YEARS

2. **COMMENCING DATE:** 1 JANUARY 1999

3. **TERMINATING DATE:** 31 DECEMBER 2003

4. With an **OPTION TO RENEW** for a period of FIVE (5) YEARS set out in **CLAUSE 15 OF ANNEXURE "A"**.

5. ~~With an **OPTION TO PURCHASE** set out in~~

6. Together with and reserving the **RIGHTS** set out in **SCHEDULE "1"** hereto.

7. Incorporates the provisions set out in **ANNEXURE "A"** hereto.

8. ~~Incorporates the provisions set out in **MEMORANDUM** No. filed in the Land Titles Office.~~

Walls F Nash
Albert A. Booth

[Signatures]
C T Dunlop
B Jilcock

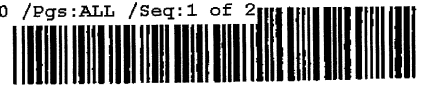
Form: 04RP
Release: 2.1
www.lands.nsw.gov.au

**APPLICATION TO RECORD
NEW REGISTERED PROPRIETOR**

New South Wales

Section 46C Real Property Act 1900

Section 12(4) Trustee Act 1925



AD105866W

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only	NEW SOUTH WALES DUTY
	06-09-2006 0003794626-10
	SECTION 54(3)
	DUTY \$ *****10 00

(A) LAND

Torrens Title A/354297

(B) REGISTERED DEALING

Number	Torrens Title
--------	---------------

(C) LODGED BY

Document Collection Box 48T	Name, Address or DX and Telephone	CODE AP
	Thomson Playford DX 69 Sydney Tel: 8248 5800 Reference: 2378877 <i>LLPN: 123819E CITYLINK M/Gibbs/NASH</i>	

(D) APPLICANT

Wallis Frederick NASH

(E) PRESENT REG'D PROPRIETOR

Wallis Frederick NASH, Albert Arthur BOOTH and Colin Talbot DUNLOP
--

(F) NEW REG'D PROPRIETOR

Wallis Frederick NASH, Barry DIXON and Charles Clifford SILCOCK

(G) APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900 NOT APPLICABLE

In regard to the above _____, the applicant requests the Registrar General to record the new registered proprietor on the relevant folio of the Register, the CLICK & PICK >>> having vested in the new registered proprietor pursuant to—

(H)

(G) APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925

In regard to the above land, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register consequent on—

(I) See Annexure "A"

DATE _____

(J)

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature: *Phillip Wade*

Signatory's name: Phillip James Wade
Signatory's capacity: Applicant's solicitor

Caveat Q184125 & REX K647503 DO NOT PREVENT REGN

SEE EV 25190

BE
RSO

FILM WITH AD 105866

This page is Annexure A to the Application to Record New Registered Proprietor for the Land Comprised in Certificate of Title Folio Identifier A/354297

Barry Dixon replacing Albert Arthur Booth as trustee of the Redfern RSL Sub-Branch of the Returned and Services League of Australia pursuant to Deed of Appointment Registered Book 4495 No. 307 and Charles Clifford Silcock replacing Colin Dunlop as trustee of the Redfern RSL Sub-Branch of the Returned and Services League of Australia pursuant to Deed of Appointment Registered Book 4495 No. 308.



Appln. No. 2861
Prior Title Vol. 5608 Fol. 58

Vol. 10567 Fol. 86



RP Edition issued 31-5-1967

K647504

10567 Fol. 86
(Page 1) Vol.

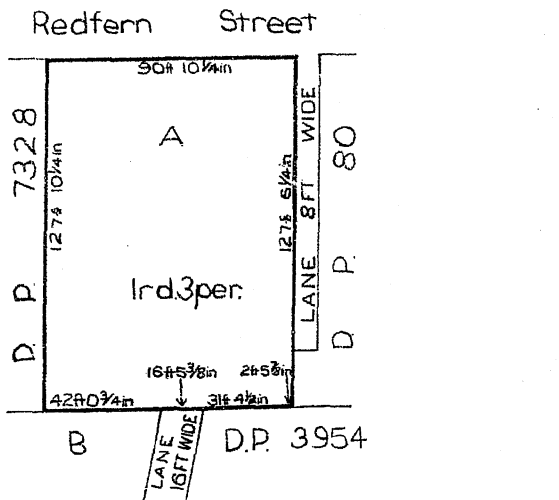
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *M. Walter*

Jawatson
Registrar General.



PLAN SHOWING LOCATION OF LAND



K647504 L.H.

Scale: 50 feet to one inch

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot A in plan lodged with Transfer No. D488561 (filed as F.P.354297) in the City of Sydney, Parish of Alexandria and County of Cumberland being part of 95 acres granted to William Chippendale on 31-8-1819.

FIRST SCHEDULE (continued overleaf)

~~GORDON MAXWELL MCKINNON of Redfern, Storeman, AUGUSTUS PIUS ROLFE of Redfern, Butcher and WILLIAM ALEXANDER HORNSEY of Darlington, Labourer as Joint Tenants.~~

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. ~~Mortgage No. H980640 to Commonwealth Trading Bank of Australia. Entered 5-4-1962. DISCHARGED 1756709~~

Jawatson
Registrar General.

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

B27
/Req: C061620
/Doc: CT 10567-086
/Prt: 16-May-2008

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Gordon Maxwell, McKinnon of Alexandria, Retired Storeman, Nyles Clark of Zealand and Alfred Joseph Reid of Dulwich Hill, both Retired, as joint tenants.

FILED
IN THE
REGISTER
OF
INSTRUMENTS
26 JUL 1978

SECOND SCHEDULE (continued)

NATURE	INSTRUMENT NUMBER	DATE	PARTICULARS	ENTERED	Signature of Registrar-General	DATE	ENTERED	Signature of Registrar-General
RX	642503F	18-4-1967	By the Registrar General to Bank of New South Wales	13-6-1967	<i>Jones</i>			
MX	4756710F	1-7-1967	to Bank of New South Wales	20-8-1967	<i>Jones</i>			
X	Q184125 P	15-7-1968	by The Returned Services League of Australia (New South Wales Branch)	15-7-1968	<i>Jones</i>	Discharged	14/04/66	<i>Jones</i>
X	6937684P		by the Bank of New South Wales Savings Bank Limited	31-5-1977	<i>Jones</i>			
X				24-7-1980	<i>Jones</i>			

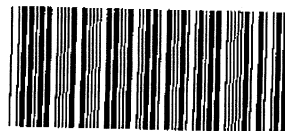
NOTE: ERRORS, OMISSIONS AND AMENDMENTS INDICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

p. 1, 17 V.C.N. Bligh, Government Printer

6937684 file X R
 9753850/101
 152
 R5719926/101
 974
 0184122/101 X
 17404040/101
 1986/101
 1986/101
 1986/101
 1986/101

Form: 97-11R
Licence: 61C/0717/97

REQUEST
New South Wales
Real Property Act 1900



3602583 N

(A) **STAMP DUTY**
If applicable.

Office of State Revenue use only

(B) **TITLE**

Folio Identifier A/354297

(C) **REGISTERED DEALING**
If applicable.

(D) **LODGED BY**

LTO Box	Name, Address or DX and Telephone	Dealing Code
61C	Abbott Tout Solicitors Level 5, Tower Life Building 69 Phillip Street PARRAMATTA NSW 2150 DX: 8285 PARRAMATTA Tel: (02) 9842 8888 REFERENCE (15 character maximum): JWC:JAR:634904	AP

L-Brocker

(E) **APPLICANT**

WALLIS FREDWICK NASH

(F) **REQUEST**

DECEASED REGISTERED PROPRIETOR:

CECIL RICHARD BROOKER

CONTINUING REGISTERED PROPRIETORS:

**ALBERT ARTHUR BOOTH
COLIN TALBOT DUNLOP**

The Applicants require the Registrar-General to record him as the new Registered Proprietor in the Register in the place of the Deceased Registered Proprietor and in addition to the Continuing Registered Proprietors pursuant to a Deed of Appointment dated *20 October 1997* being registered Book *4182*, No. *829*.

APR

X WFN

CHECKED BY (LTO use).....*for*.....
Undry Q184125
only Caveater Consented

(G)

STANDARD EXECUTION

Certified correct for the purposes of the Real Property Act 1900

DATE: 16th October, 1997

Signed in my presence by the Applicant who are personally known to me.

X [Signature]
Signature of Witness

X NOEL SMITH
Name of Witness (BLOCK LETTERS)

X 61 ALEXANDER ST
Address of Witness

X [Signature]
Signature of Applicant

EXECUTION INCLUDING STATUTORY DECLARATION

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act 1900, and I certify this Application correct for the purposes of the Real Property Act 1900. Made and subscribed at Sydney in the State of N.S.W. on 16th Oct 1997 in the presence of

[Signature]
Signature of Witness

RONALD JAMES WILLIAMS
Name of Witness (BLOCK LETTERS)

91 THURLOW STREET, REDFERN N.S.W.
Address and Qualification of Witness

[Signature]
Signature of Applicant

DEED TITLE

(C)

New South Wales.

CANCELLED



REGISTER BOOK

[Reference to last Certificate]

[Vol. 178 Folio 115]

Vol. 508 Folio 201

Anne Elizabeth Armstrong wife of Edward Armstrong of Redfern Laborer
 transfers under Instrument of Transfer from William Smith numbered 43317 is now the proprietor
 of an estate in Fee simple subject nevertheless to the reservations and conditions if any contained in
 the Grant hereinafter referred to And also subject to such power of Appointment encumbrances liens and
 interests as are notified hereon in That piece of land situated at Chippendale in the Parish of
 Alexandria and County of Cumberland containing Eleven and a quarter perches or thereabouts
 as shown on the plan hereon and thereon edged red being Lot 10 of Section 2 on a plan deposited in the
 Land Titles Office Sydney Number 80 and part of ninety five acres delineated in the public map of the
 said Parish deposited in the office of the Surveyor General originally granted to William Chippendale by Survey
 Grant dated the thirty first day of August one thousand eight hundred and nineteen.

In witness whereof, I have hereunto signed my name and affixed my Seal, this twenty first day of
October one thousand eight hundred and eighty.

Signed the 21st day of October 1880
 in the presence of
Henry B. M. G.

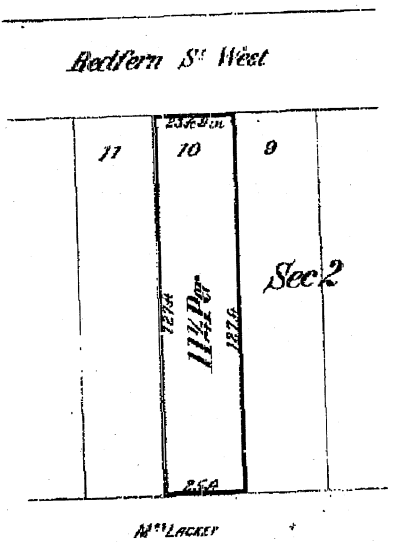
[Signature]
 Registrar General.



NOTIFICATION REFERRED TO.


Power of Appointment exercisable by the said Anne Elizabeth Armstrong by any Instrument to be registered under the provisions and for the purposes of the Real Property Act or by Will which Instrument or Will she is authorized to make at any time notwithstanding any contrary instrument.


[Signature]





NO. 478 599 TRANSFER DATED 25th Nov 1907
 FROM THE SAID Anne Elizabeth Armstrong
 to George Thomas Trevillian of
Redfern Tramway Employee
 OF THE LAND within DESCRIBED
 PROCESSED & ENTERED 25th November
 1907 AT 2.30 O'CLOCK IN THE fore NOON
[Signature]
 Deputy Registrar General.





No. 507075 MORTGAGE DATED 10th October 1908
 FROM THE SAID George Thomas Spensillian
Frederick James Williamson of Sydney
and James James Williamson of Reading
 PRODUCED & ENTERED 10th October
 1908 AT 11 o'clock IN THE afternoon

 DEPUTY REGISTRAR GENERAL.

DISCHARGE OF above MORTGAGE NO. 507075
 DATED 15th April 1910 PRODUCED & ENTERED
19th April 1910 AT 2 o'clock
2 o'clock IN THE afternoon

 DEPUTY REGISTRAR GENERAL.

No. 560545 TRANSFER DATED 15 April 1910
 FROM THE SAID George Thomas Spensillian
To The Commonwealth Co-operative
Fish Exchange Limited
 OF THE LAND WITHIN DESCRIBED
 PRODUCED & ENTERED 19th April
 1910 AT 2 o'clock IN THE afternoon

 DEPUTY REGISTRAR GENERAL.

No. A 324216 TRANSFER dated 17th July 1917
 from the said the Commonwealth Co-operative Fish
Exchange Limited in liquidation to the Commonwealth
Co-operative Fish Exchange Limited
 OF THE LAND WITHIN DESCRIBED.
 Produced and entered 8th September 1917
 at 10 o'clock in the fore noon.

 REGISTRAR GENERAL.

No. A 300099 TRANSFER dated 9 February 1923
 from the said The Commonwealth Co-operative
Fish Exchange Limited to the
Municipal Council of Sydney
 OF THE LAND WITHIN DESCRIBED
 Produced and entered 9th February 1923
 at 12 o'clock in the noon.

 REGISTRAR GENERAL.

This Deed is Cancelled and Certificate of Title issued
 Vol. 5146 Fol. 147
Ben W. Willis
 C905554 Registrar General.


Handwritten notes:
 A 514216R
 A909999R
 C905554
 3rd April 1924

Appendix E
Council Records

City of Sydney

ABN 22 636 550 790
GPO Box 1591 Sydney NSW 2001 Australia
Town Hall House 456 Kent Street Sydney NSW 2000 Australia
Phone +61 2 9265 9333 Fax +61 2 9265 9222 TTY +61 2 9265 9276
council@cityofsydney.nsw.gov.au www.cityofsydney.nsw.gov.au



JBS ENVIRONMENTAL
128 O'RIORDAN STREET
MASCOT NSW 2020

PLANNING CERTIFICATE

Under Section 149 of the Environmental Planning and Assessment Act, 1979

Applicant: JBS ENVIRONMENTAL

Applicant's reference:

Address of property: 157-159 Redfern Street , REDFERN NSW 2016

Owner (as per last valuation): REDFERN RSL CLUB LTD

Description of land: Lot A DP 354297

Area:

Certificate No.: 2008303589

Certificate Date: 20/05/08

Receipt No: 2864644

Fee: \$60.00

Paid: 20/05/08

Title information, description, dimensions and area of land are provided from data supplied by the valuer general and shown where available.

Issuing Officer 
per **Monica Barone**
Chief Executive Officer

CERTIFICATE ENQUIRIES:

Ph: 9265 9333
Fax: 9265 9415

**PLANNING CERTIFICATE UNDER SECTION 149 (2) OF THE ENVIRONMENTAL
PLANNING AND ASSESSMENT ACT, 1979**

**MATTERS AFFECTING THE LAND AS PRESCRIBED BY SCHEDULE 4 -
ENVIRONMENTAL PLANNING & ASSESSMENT REGULATION, 2000, CLAUSES (1) - (2).**

DEVELOPMENT CONTROLS

The following information must be read in conjunction with and subject to all other provisions of the environmental planning instruments specified in this certificate. In addition to the controls listed below clause 29 of the Environmental Planning And Assessment (Savings And Transitional) Regulation 1998 sets out further circumstances where development consent will be required for particular development. These circumstances may include development that does not require development consent under the controls listed below. A copy of clause 29 is attached.

ZONING

Zoned Business Zone – Commercial Core - State Environmental Planning Policy (Major Projects) 2005 (Amendment 7)

Clause 9

- (2) Development for any of the following purposes is prohibited on land within the Business Zone- Commercial Core
Bulky goods premises; depots; dual occupancies; dwelling house; hazardous industries; hazardous storage establishments; heavy industries; home occupations (sex services); industries; light industries; offensive industries; offensive storage establishments; restricted premises; sex services premises; transport depots; truck depots; vehicle body repair workshops; warehouses or distribution centres
- (3) Except as otherwise provided by this Policy, development is permitted with consent on land within the Business Zone – commercial Core unless it is prohibited by Subclause (2).

Clause 17 Exempt development

The following development is exempt development if it is carried out on land Within the Redfern – Waterloo Authority Sites, is of minimal environmental impact and complies with the criteria set out in the guidelines prepared by the Redfern – Waterloo Authority (and Approved by the Minister and made publicly available) for the purposes of this clause:

- (a) The temporary use of the land for community events that are open to the general public, including public gatherings, ceremonies, sporting events or outdoor exhibitions,
- (b) The erection and use of temporary structures, having minimal visual impact, for the purposes of, or in connection with, any such community event,
- (c) The erection and use of outdoor seating, tables and similar furniture located in the public domain and associated with cafes, restaurants, bars and other similar development,
- (d) The erection and use of public furniture, planter boxes, lighting, bus shelters, public telephone booths or post boxes, or the carrying out of street planing, footpath widening and related road works, undertaken by a public authority,
- (e) The erection and use of public furniture and the carrying out of landscaping associated with existing public recreation areas, such as the erection of shade structures, tables seats, children's play equipment, barbeques and toilets,
- (f) Development for the purposes of real estate signs,

- (g) The erection of a flagpole, if the maximum height of the flagpole is not more than 6 metres above existing ground level,
- (h) Erection of a side or rear boundary fence located behind the front wall of a building, if the fence does not exceed 1.8 metres in height and is not of masonry construction,
- (i) The use of premises for home business.

PROPOSED ZONING

This property is not affected by a draft zone.

LOCAL PLANNING CONTROLS

City of Sydney Signage and Advertising Structures Development Control Plan 2005 (commenced 28.03.2005) – This DCP applies to all land within the City of Sydney Local Government Area, the boundaries of which may change from time to time. An indicative map of the City of Sydney is shown in Figure 1 within the DCP.

City of Sydney Visitor and Tourist Accommodation Development Control Plan 2006 (commenced 24.03.2006) – This DCP applies to all land within the City of Sydney Local Government Area, the boundaries of which may change from time to time. An indicative map of the City of Sydney is shown in Figure 1 within the DCP.

City of Sydney Telecommunications and Radiocommunications Development Control Plan 2006 (commenced 14.08.2006) – This DCP applies to all land within the City of Sydney Local Government Area, the boundaries of which may change from time to time. An indicative map of the City of Sydney is shown below in Figure 1 within the DCP.

City of Sydney Late Night Trading Premises Development Control Plan 2007 (commenced 01.01.2008) – This DCP applies to all land within the City of Sydney Local Government Area, the boundaries of which may change from time to time. An indicative map of the City of Sydney is shown in Figure 1 within the DCP.

HERITAGE

State Heritage Register (Amendment To Heritage Act, 1977 Gazetted 2/4/99)

This property may be identified as being of state heritage significance, and entered on the State Heritage Register.

To confirm whether the site is listed under the Heritage Act 1977 a Section 167 Certificate should be obtained from the NSW Heritage Office by contacting the NSW Heritage office on (02) 9873 8500 for an application form or by downloading the application form from www.heritage.nsw.gov.au

STATE PLANNING CONTROLS

Clause 29 of the Environmental Planning and Assessment (Savings And Transitional) Regulation 1998 affects the provisions of certain state environmental planning policies and how they apply to the land. A copy of clause 29 is attached and should be read in conjunction with the State Environmental Planning Policies listed. Full copies of State Environmental Planning Policies are available online at www.planning.nsw.gov.au.

State Environmental Planning Policy No. 1 – Development Standards

This policy makes development standards more flexible. It allows Council 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 allows relatively simple or minor changes of land or building use and certain types of development by public authorities without the need for formal development applications. The types of development covered are outlined in the policy.

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. 10 – Retention of Low-Cost Accommodation

This policy aims to provide a mechanism for the retention of low-cost rental accommodation. The policy establishes criteria for determining a low-cost rental residential building (including boarding houses, hostels and low rental residential flat buildings), matters for Council consideration and requirements for development proposed under the policy.

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

This is a policy to protect and preserve bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. This 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. 22 – Shops and Commercial Premises

This policy allows, with the consent of Council, a change of use from a shop to another kind of shop or commercial premises, where the new use is prohibited under an environmental planning instrument.

State Environmental Planning Policy No. 32 – Urban Consolidation

This policy implements the principles of urban consolidation, including the orderly, economic use and development of land. The policy enables urban land which is no longer required for the purpose for which it is currently zoned or used to be redeveloped for multi-unit housing and related development.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

This policy aims to amend the definitions of hazardous and offensive industries; to render ineffective any environmental planning instruments not defining hazardous or offensive as per this policy; to control development of hazardous and offensive industries.

State Environmental Planning Policy No. 34 – Major Employment Generating Industrial Development

This policy aims to promote and coordinate orderly and economic use of development land and facilitate certain types of major employment generating industrial development of state significance.

State Environmental Planning Policy No. 37 – Continued Mines and Extractive Industries

This policy aims to provide for certain existing mines and extractive industries to continue to operate subject to conditions during the three month registration period and the two year moratorium period.

State Environmental Planning Policy No. 55 – Managing Land Contamination

This policy provides 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.

To assist councils and developers, the Department, in conjunction with the Environment Protection Authority, has prepared Managing Land Contamination: Planning Guidelines.

State Environmental Planning Policy No. 64 – Advertising and Signage

This policy aims to ensure that signage (including advertising):

Is compatible with the desired amenity and visual character of an area, and

- Provides effective communications in suitable locations, and
- Is of a high quality design and finish.

To this end the policy regulates signage (but not content) under Part 4 of the Act and provides limited time consents for the display of certain advertisements. The policy does not apply to signage that is exempt development under an environmental planning instrument. It does apply to all signage that can be displayed with or without consent and is visible from any public place or reserve, except as provided by the policy.

This policy should be read in conjunction with the Sydney Local Environmental Plan 2005, the City of Sydney Signage and Advertising Structures Development Control Plan 2005 and State Environmental Planning Policy No. 60 where these apply.

State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Buildings

This policy aims to improve the design quality of flats of three or more storeys with four or more self contained dwellings. The policy sets out a series of design principles for local councils to consider when assessing development proposals for residential flat development. The policy also creates a role for an independent design review panel and requires the involvement of a qualified designer in the design and approval process.

State Environmental Planning Policy (Seniors Living) 2004

This Policy does not apply to land described in Schedule 1 (Environmentally sensitive land), or land that is zoned for industrial purposes, or land to which an interim heritage order made under the *Heritage Act 1997* by the Minister administering that Act applies, or land to which a listing on the State Heritage Register kept under the *Heritage Act 1997* applies.

The Policy aims to encourage the provision of housing (including residential care facilities) that will increase the supply and diversity of residences that meet the needs of seniors or people with a disability, and make efficient use of existing infrastructure and services, and be of good design.

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

Aims to ensure consistency in the implementation of the BASIX scheme throughout the State. This Policy achieves its aim by overriding provisions of other environmental planning instruments and development control plans that would otherwise add to, subtract from or modify any obligations arising under the BASIX scheme.

State Environmental Planning Policy (Major Projects) 2005

This Policy aims to identify development of economic, social or environmental significance to the State or regions of the State so as to provide a consistent and comprehensive assessment and decision making process for that development.

NB: This SEPP also contains exempt & complying provisions

State Environmental Planning Policy (Temporary Structures and Places of Public Entertainment) 2007

This Policy aims to ensure that suitable provision is made for ensuring the safety of persons using temporary structures or places of public entertainment.

State Environmental Planning Policy (Infrastructure) 2007

This Policy aims to facilitate the effective delivery of infrastructure across the state.
NB: This SEPP also contains exempt & complying provisions

DRAFT State Environmental Planning Policy No. 66 – Integrating Land Use and Transport

Aims to ensure that urban structure, building forms, land use locations, development designs, subdivision and street layouts help achieve planning objectives such as improved accessibility to housing, employment and services by walking, cycling and public transport.

DRAFT State Environmental Planning Policy (Application of Development Standards) 2004 (proposed to replace SEPP No.1)

Aims to provide an appropriate degree of flexibility in the application to particular development of a development standard specified in or under an environmental planning instrument, and to achieve better outcomes for and from development in the circumstances addressed in this Policy, and to promote good strategic planning practice by incorporating provisions allowing flexibility in local environmental plans.

REGIONAL PLANNING CONTROLS

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

This plan applies to land within the Sydney Harbour Catchment, as shown edged heavy black on the Sydney Harbour Catchment Map, being part of the Sydney Region declared by order published in Gazette No 38 of 7 April 1989 at page 1841.

This plan has the following aims with respect to the Sydney Harbour Catchment: to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected and maintained: as outstanding natural asset, and as a public asset of national and heritage significance, for existing and future generations; to ensure a healthy, sustainable environment on land and water; to achieve a high quality urban environment; to ensure a prosperous working waterfront and an effective transport corridor, to encourage a culturally rich and vibrant place for people; to ensure accessibility to and along Sydney Harbour and its foreshores; to ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity, to provide a consolidated, simplified and updated legislative framework for future planning.

**OTHER MATTERS AFFECTING THE LAND AS PRESCRIBED BY SCHEDULE 4 -
E. P. & A. REGULATION, 2000. CLAUSES (3) - (10)**

(3) Any development, or class of development, that is State Significant Development by virtue of a declaration that has been made by the Minister under section 76A(7)(b) of the Act and that applies to the land.

This item has been omitted from planning certificates vide Government Gazette No. 96 of 29/7/05.

(4) Coastal Protection Act, 1979

The council has not been notified by the department of public works that the land is affected by the operation of section 38 or 39 of the coastal protection act, 1979.

(5) Mine Subsidence District

This 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/or Road Realignment affected by (a) Division 2 of Part 3 of the Roads act 1993 or (c) any resolution of council or other authority.

This land **is not** affected by road widening and/or road realignment under section 25 of the Roads Act, 1993 and/or resolution of Council or any other authority.

(6) Road Widening and/or Road Realignment Affected by (b) any environmental planning instrument.

This land **is not** affected by any road widening or road realignment under any planning instrument.

(7) Council and other public authorities policies on hazard risk restrictions:

- (a) The land **is not** affected by a policy adopted by the Council that that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk; and
- (b) The land **is not** affected by a policy adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to on planning certificate issued by Council, that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk.

(7A) Flood related development controls information.

The development on this land or part of this land is not subject to flood related development controls.

(8) Land reserved for acquisition

No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority, as referred to in section 27 of the Act.

(9) Contribution plans

The following Contributions Plans apply to properties within the City of Sydney local government area. Contributions plans marked **YES** may apply to this property:

<ul style="list-style-type: none"> ▪ Central Sydney Contributions (Amendment) Plan 2002 – in operation 16th June 2003 	NO
<ul style="list-style-type: none"> ▪ Ultimo Pyrmont Section 94 Contributions Plan (approved C.S.P.C 15th December 1994 and Council 19th December 1994) 	NO
<ul style="list-style-type: none"> ▪ City of Sydney Development Contributions Plan 2006 – in operation 7th April 2007 	NO
<ul style="list-style-type: none"> ▪ Redfern Waterloo Authority Contributions Plan 2006 – in operation 16th May 2007 ▪ Redfern Waterloo Authority Affordable Housing Contributions Plan – in operation 16th May 2007 	YES

(10) Matters arising under the Contaminated Land Management Act 1997

(a) The land to which the certificate relates **is not** within land declared to be an **investigation area** or **remediation site** under Part 3 of the Contaminated Land Management Act 1997.

(b) The land to which the certificate relates **is not** subject to an **investigation order** or a **remediation order** within the meaning of the Contamination Land Management Act 1997.

(c) The land to which the certificate relates **is not** the subject of a voluntary investigation proposal (or voluntary remediation proposal) the subject of the Environmental Protection Authority's agreement under section 19 or 26 of the Contaminated Land Management Act 1997.

(d) At the date of issue of this section 149 certificate, Council **has not** identified that a site audit statement has been received in respect of the land the subject of the certificate. Council is in the process of reviewing systems for the purpose of identifying whether a site audit statement has been received in respect of this land. Parties should make specific requisitions in relation to contamination to the owner of the land.

(11) Bush fire prone land

The land has not been identified as Bush fire prone land.

(12) Property vegetation plans

Not Applicable.

(13) Orders under Trees (Disputes Between Neighbours) Act 2006

Council has not been notified of an order which as been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land.

(14) Directions under Part 3A

Not Applicable.

PLANNING CERTIFICATE SECTION 149(2) INFORMATION:

Information provided in accordance with planning certificate section 149 (2) has been taken from council's records and advice from other authorities but council disclaims all liability for any omission or inaccuracy in the information. Specific inquiry should be made where doubt exists.

PLANNING CERTIFICATE UNDER SECTION 149 (5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

PLANNING CERTIFICATE SECTION 149 (5) ADVICE is current as at 12:00 noon two working days prior to the date of issue of this certificate. The following matters have been considered & details provided where information exists: easements in favour of council; parking permit scheme; heritage floor space restrictions; low-rental residential building; foreshore building line; tree preservation order.

Contaminated Land Potential:

Council records do not have sufficient information about the uses (including previous uses) of the land which is the subject of this section 149 certificate to confirm that the land has not been used for a purpose which would be likely to have contaminated the land. Parties should make their own enquiries as to whether the land may be contaminated.

Construction Noise and View Loss Advice:

Intending purchasers are advised that the subject property may be affected by construction noise and loss or diminution of views as a result of surrounding development.

City of Sydney Tree Preservation Order 2004 (TPO)

This order applies to all land within the Local Government Area of the City of Sydney for which either the City of Sydney Council or the Central Sydney Planning Committee is the relevant consent authority under the *Environmental Planning & Assessment Act 1979*. This TPO is made pursuant to clause 8 *Environmental Planning and Assessment Model provisions 1980*, (Preservation of trees) as adopted in clause 16 of the City of Sydney Local Environmental Plan 1996, clause 32 of the South Sydney Local Environmental Plan 1998 and clause 9 of the Leichhardt Town Plan 2000. Contact Council's Contract and Asset Management section for more information.

Outstanding Notice & Order information

In relation to this property, there **is not** an outstanding Order or Notice of Intention to issue an Order relating to Fire Safety (being an Order or Notice of Intention to issue an Order of type 6, 10, 11 under Section 121B of the *Environmental Planning and Assessment Act, 1979*). Further information about the Order or Notice of Intention to issue an Order may be obtained by applying for a certificate under Section 121ZP of the *Environmental Planning and Assessment Act* and Section 735A of the *Local Government Act*.

In relation to this property, there **is not** an outstanding Order or Notice of Intention to issue an Order (being an Order or Notice of Intention to issue an Order of a type other than relating to fire safety). Further information about the Order or Notice of Intention to issue an Order may be obtained by applying for a certificate under Section 121ZP of the *Environmental Planning and Assessment Act* and Section 735A of the *Local Government Act*.

Residential Parking Scheme

The City of Sydney co-ordinates a Residential Parking Scheme. This property may be restricted from participating in the scheme. For more information contact Council's call centre on 9265 9333.

The Minister is the Consent Authority

The Minister is the consent authority where the development requires development consent as per State Environmental Planning Policy (Major Projects) 2005.

ADVICE FROM OTHER BODIES

Advice provided in accordance with planning certificate section 149 (5) is supplied in good faith. Council accepts no liability for the validity of the advice given. (see section 149 (6) of the Environmental Planning and Assessment Act, 1979).

For information regarding outstanding notices and orders a CERTIFICATE FOR OUTSTANDING NOTICES OF INTENTION AND/OR AN ORDER UNDER SECTION 735A OF THE LOCAL GOVERNMENT ACT, 1993 AND SECTION 121ZP OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979 may be applied for at Sydney City Council.

Planning certificate section 149 (2), local planning controls are available for inspection at the following locations:

General Enquiries :
Telephone: 02 9265 9333
Facsimile: 02 9265 9415

Town Hall House

Level 2,
Town Hall House,
456 Kent Street,
Sydney.
8am – 6pm, Monday - Friday

Neighbourhood Service Centre Glebe Town Hall

Glebe Town Hall,
160 St. Johns Road,
Glebe
8.30am – 5.30pm Monday – Friday

Neighbourhood Service Centre Kings Cross

50 Darlinghurst Road,
Potts Point
9am – 5pm, Monday – Friday
9am – 12pm, Saturday

Neighbourhood Service Centre Erskineville

104 Erskineville Road
Erskineville
9am – 5pm Monday - Friday

Neighbourhood Service Centre Redfern

158 Redfern Street
Redfern
9am-5pm Monday – Friday
9am – 12 Noon Saturday

State planning controls are available for inspection at the following locations:

Sydney Harbour Foreshore Authority (former Sydney Cove Authority and Darling Harbour Authority),
Level 6,
66 Harrington Street,
The Rocks.

Department of Planning Information Centre
20 Lee Street,
Henry Dean Plaza,
Sydney NSW 2000

Where planning certificate section 149 (5) matters are supplied, complete details are available by writing to:

*Chief Executive Officer,
City of Sydney,
G.P.O. Box 1591,
Sydney, NSW 2000*

End of Document

ENVIRONMENTAL PLANNING AND ASSESSMENT (SAVINGS AND TRANSITIONAL) REGULATION 1998 - SECT 29

Certain activities require development consent under amended EP&A Act 1979

29 Certain activities require development consent under amended EP&A Act 1979

- (1) This clause applies to development consisting of:
- (a) a prescribed activity proposed to be carried out within the area of a council, or
 - (b) the subdivision of land within the area of a council, including development proposed to be carried out in connection with an existing use, but not including development referred to in subclause (2).
- (2) This clause does not apply to development of the kind referred to in subclause (1) that consists of:
- (a) any activity that, immediately before the appointed day, was specified in item 6 of Part A of the Table to section 68 of the unamended LG Act 1993 (relating to the use and occupation of uncompleted buildings), or
 - (b) any prescribed activity (other than an activity referred to in paragraph (a)) that, immediately before the appointed day, was exempted, excluded or suspended from the requirement for approval under the unamended LG Act 1993:
 - (i) by the *Local Government (Approvals) Regulation 1993*, as in force immediately before the appointed day, or
 - (ii) by a local approvals policy in force under the unamended LG Act 1993 (being a local approvals policy that is still in force at the time the development application for development consent is made), or
 - (iii) by or under the provisions of any Act, including the provisions of an environmental planning instrument of a kind referred to in section 28 of the unamended EP&A Act 1979, or
 - (c) any subdivision of land that, immediately before the appointed day, was exempted from the requirements for approval under the repealed LG Act 1919 by or under the provisions of that or any other Act, including the provisions of an environmental planning instrument of a kind referred to in section 28 of the unamended EP&A Act 1979, or
 - (d) any development:
 - (i) carried out by the Crown, or
 - (ii) carried out by any person prescribed by the amended EP&A Regulation 1994 for the purposes of section 115M of that Act (as referred to in section 115H (a) of that Act) in relation to Crown building work, being development that, immediately before the appointed day, constituted an activity within the meaning of Part 5 of the unamended EP&A Act 1979,
 - (d1) any development consisting of the demolition of a building or work:
 - (i) carried out by the Crown, or
 - (ii) carried out by any person prescribed by the amended EP&A Regulation 1994 for the purposes of section 115M of that Act (as referred to in section 115H (a) of that Act) in relation to Crown building work,
 - (d2) any development consisting of subdivision:
 - (i) carried out by the Crown, or

- (ii) carried out by any person prescribed by the amended EP&A Regulation 1994 for the purposes of section 115M of that Act (as referred to in section 115H (a) of that Act) in relation to Crown building work,
- (d3) any non-structural alterations to a building:
- (i) carried out by the Crown, or
- (ii) carried out by any person prescribed by the amended EP&A Regulation 1994 for the purposes of section 115M of that Act (as referred to in section 115H (a) of that Act) in relation to Crown building work,
- (e) any prohibited development, or
- (f) (repealed)
- (g) any activity within the meaning of Part 5 of the Act:
- (i) in respect of which an application for approval to a determining authority within the meaning of that Part has been made, but not finally determined, immediately before the appointed day, or
- (ii) which was approved by a determining authority within the meaning of that Part before the appointed day and that commences pursuant to that approval not later than 3 years after the appointed day.
- (3) Development to which this clause applies may not be carried out except with development consent.
- (4) Development consent may not be granted in relation to development for a prescribed activity that involves the erection of a building unless the requirements of Division 4 of Part 1 of Chapter 7 of the unamended LG Act 1993 have been complied with.
- (5) The requirements relating to the notification of proposed development under the amended EP&A Act 1979 (including any requirements applied by clause 32 (1)) do not apply to a development application for development for which the requirements referred to in subclause (4) are required to be complied with.
- (6) Subclauses (4) and (5) apply only if a local approvals policy (being a local approvals policy with respect to the notification of applications for approvals) is in force under the unamended LG Act 1993 at the time the development application for development consent is made.
- (7) This clause has effect:
- (a) despite the existing provisions of an existing EPI, and
- (b) despite any rezoning of land (whether effected by existing or new provisions of an existing EPI or otherwise),
- but is otherwise subject to the provisions of any new EPI and to any new provisions of an existing EPI.
- (7A) Nothing in this clause requires development consent to be obtained for any development for which development consent is required to be obtained otherwise than by operation of this clause.
- (8) The consent authority for the purposes of development to which this clause applies is the council unless, by or under the Act, some other person is the consent authority for the purposes of that development.
- (9) Despite Part 9 of the amended EP&A Regulation 1994, the fee for an application to carry out development of the kind to which this clause applies, being the erection of a building within the meaning of the unamended LG Act 1993, is the fee determined in accordance with an order under clause 33.
- (11) This clause ceases to have effect on 1 July 2001.

EXPLANATORY NOTES FOR A SECTION 149 CERTIFICATE

These notes provide further explanation of the information provided within each sub-section of the certificate and whom to contact should you require further assistance. They do not legally form part of the certificate.

Planning certificate under Section 149(2) of the EP&A Act, 1979

Zoning

Zoning controls are used to regulate permissible and prohibited land uses within different localities of a local council area. The title of the zone applicable to the subject property is provided within this section of the certificate and the details of permissible land uses are either listed below the title or attached as Annexure A.

Local Planning Controls

Under the NSW planning system are three tiers of planning controls – State, Regional and Local. Local Planning Controls are those controls administered by a local council and are generally known as Local Environmental Plans and Development Control plans. These planning controls regulate issues such as property zoning, building height, development density, heritage, privacy, energy efficiency and urban design issues.

Copies of the local planning controls can either be downloaded from the City's website at www.cityofsydney.nsw.gov.au or purchased from the One Stop Shop at level 2, Town Hall House, 456 Kent Street, Sydney.

State Planning Controls

State Planning Controls are known as State Environmental Planning Policies. These can apply to either specific sites, specific regions or to the state as a whole. For some development, the consent of the Minister for Infrastructure and Planning may be required. A brief summary of all the State Environmental Planning Policies applying to the City of Sydney is provided within the certificate; however, not all of these will be relevant to every property within the council area. A full copy of any of the State Environmental Planning Policies listed can be downloaded from the Department of Infrastructure, Planning and Natural Resources at www.planning.nsw.gov.au or purchased in hard copy from the Planning Bookshop at 20 Lee Street, Sydney.

Regional Planning Controls

Regional Environmental Planning Controls are controls which apply to specific regions within Sydney. There are three Regional Environmental Planning Controls which affect the City of Sydney; these are *Sydney Regional Environmental Plan No. 16 – Walsh Bay*, *Sydney Regional Environmental Plan No. 23 – Sydney and Middle Harbours* and *Sydney Regional Environmental Plan No. 26 – City West*. In some cases, development consent of the Minister may be required. If a property is affected by one of these plans it will be listed within this subsection of the certificate. Full copies of the Regional Plans can be downloaded from www.planning.nsw.gov.au or purchased in hard copy from the Planning Bookshop at 20 Lee Street, Sydney.

State Significant Development

The Minister for Planning has declared certain developments as state significant. As these developments are important to the broader community, the Minister's consent is required before they can be built. Further details of what constitutes state significant development may be obtained from the Department of Infrastructure, Planning and Natural Resources at www.planning.nsw.gov.au

Coastal Protection Act

This legislation does not apply to any properties within the City of Sydney local area.

Mine Subsidence District

No properties within the City of Sydney are affected by mine subsidence.

Road Widening – Road Act 1993

If a property is affected by a road widening, details of the nature of the widening will be included in the certificate, eg for the purposes of a freeway. In most cases the property will not be affected by a road widening, however where the property is affected, further details can be obtained from Council by calling the Land Information Officer on 9265 9015.

Road Widening – Environmental Planning Instrument

Some properties transferred over from South Sydney City Council and Leichhardt Municipal Council are affected by a proposed road widening in a Local Environmental Plan. Where this is the case, details of the proposed widening can be obtained from the zoning map or alternatively please call Council's One Stop Shop on 1300 651 301.

Hazard Risk Restriction

Properties transferred over from South Sydney City Council and Leichhardt Municipal Council are subject to a Contaminated Land Development Control Plan which may restrict permissible development on the subject site. Where the subject property is subject to a policy adopted by Council a site assessment may be required before any works will be approved. Copies of either Contaminated Land Development Control Plan are available in hard copy from the One Stop Shop at level 2, Town Hall House, 456 Kent Street, Sydney.

Land reserved for Acquisition

Some properties transferred over from Leichhardt Municipal Council are reserved for land acquisition. These properties are noted on the Leichhardt Open Space and Recreation Contributions Plan. Where the subject property is affected by a Land Acquisition, please contact the Strategic Planning Department on 9265 9774.

Contributions Plans

Where new development is going to require the provision of, or increase the demand for, public amenities and public services a Section 94 contribution levy may be imposed on a developer. This is a levy charged by the consent authority to fund capital costs such as open space, child care facilities, landscaping traffic management measures and the like. Currently there are nine different contributions plans operating within the city of Sydney – One being a ministerial consent for Walsh Bay properties, one known as the Central Sydney Contributions (Amendment) Plan operating under the City of Sydney Act 1998 for CBD properties, one for the Pyrmont/Ultimo area and several different plans for the former South Sydney and Leichhardt Plans. The Plan/s applying to a property is nominated within this section of the certificate. Each different plan outlines how the contribution rate is calculated and what public works the contribution will be adding to. The Central Sydney Contributions (Amendment) Plan 2002 is available online at www.cityofsydney.nsw.gov.au all other contributions plans are available in hard copy at Council's One Stop Shop.

Contaminated Land Management Act, 1997

In most cases matters of contaminated land will be dealt with by a local council under State Environmental Planning Policy No. 55 – Contaminated Land. However in some cases where the Environmental Protection Authority (EPA) has reasonable grounds to believe that a site is contaminated and there is the potential for human harm it may become involved under the Contaminated Land Management Act, 1997.

Under the Contaminated Land Management Act, 1997 the Environmental Protection Authority (EPA) has the power to declare a piece of land an investigation area requiring an appropriate person or a public authority to investigate land and report on the nature and extent of the contamination. Where the land is found to be contaminated the EPA may declare the site to be a remediation site and thus order the appropriate person or authority to remediate the site. Further information on contaminated land issues can be obtained from the Environmental Protection Authority either online at www.epa.nsw.gov.au or by phone 9995 5000.

OTHER ADVICE FOR INTENDING PURCHASERS

This section of the 149 Certificate provides additional information which Council volunteers in good faith. Should you have any questions regarding the information provided please call the one Stop Shop on 1300 651 301.

Appendix F
Workcover Search Report



Our Ref: D08/051270
Your Ref: Danielle Ord

30 May 2008

Attention: Danielle Ord
JBS Environmental
128 O'Riordan Rd
MASCOT NSW 2020


Dear Danielle,

RE SITE: 157 Redfern St, Redfern

I refer to your search request of 20th May 2008 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 has not located any records pertaining to the above-mentioned premises.

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


Naomi James
A/Senior Licensing Officer
Dangerous Goods

WorkCover. **Watching out for you.**

WorkCover NSW ABN 77 682 742 966 92-100 Donnison Street Gosford NSW 2250 Locked Bag 2906 Lisarow NSW 2252
Telephone 02 4321 5000 Facsimile 02 4325 4145 WorkCover Assistance Service **13 10 50**
DX 731 Sydney Website www.workcover.nsw.gov.au

Appendix F
Laboratory Reports and Chain of Custody Documentation

3 June 2008

TEST REPORT

JBS Environmental Pty Ltd

PO Box 940
MASCOT
NSW 1460

Your Reference: 40565 - Redfern RSL
Report Number: 61262

Attention: Danielle Ord

Dear Danielle

The following samples were received from you on the date indicated.


Samples:	Qty.	1 Soil
Date of Receipt of Samples:		27/5/08
Date of Receipt of Instructions:		27/5/08
Date Preliminary Report Emailed:		Not Issued


These samples were analysed in accordance with your written instructions.
A copy of the instructions is attached with the analytical report.

The results and associated quality control are contained in the following pages of this report.
Unless otherwise stated, solid samples are expressed on a dry weight basis (moisture has been supplied for your information only), air and liquid samples as received.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully
SGS ENVIRONMENTAL SERVICES


Ly Kim Ha
Senior Organic Chemist


Edward Ibrahim
Laboratory Services Manager



This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562 (4354). This report must not be reproduced except in full.

Page 1 of 12

MAH in Soil Our Reference: Your Reference Sample Type Depth	UNITS ----- -----	61262-1 QA1A Soil
Date extracted		27/05/2008
Date analysed		28/05/2008
Benzene	mg/kg	<0.50
Toluene	mg/kg	<0.50
Ethyl benzene	mg/kg	<0.50
<i>m/p</i> -Xylenes	mg/kg	<1.0
Styrene	mg/kg	<0.50
<i>o</i> -Xylene	mg/kg	<0.50
Isopropylbenzene	mg/kg	<0.50
<i>n</i> -Propylbenzene	mg/kg	<0.50
1,3,5-Trimethylbenzene	mg/kg	<0.50
<i>tert</i> -Butylbenzene	mg/kg	<0.50
1,2,4-Trimethylbenzene	mg/kg	<0.50
<i>sec</i> -Butylbenzene	mg/kg	<0.50
<i>p</i> -Isopropyltoluene	mg/kg	<0.50
<i>n</i> -Butylbenzene	mg/kg	<0.50
Dibromofluoromethane	% Recovery	93
1,2-Dichloroethane-d4	% recovery	101
Toluene-d8 <i>Surrogate 2</i>	% recovery	100
4-Bromofluorobenzene <i>Surrogate 3</i>	% recovery	98

TRH in soil with C6-C9 by P/T Our Reference: Your Reference Sample Type Depth	UNITS ----- -----	61262-1 QA1A Soil
Date Extracted (TRH C6-C9 PT)		27/05/2008
Date Analysed (TRH C6-C9 PT)		29/05/2008
TRH C ₆ - C ₉ P&T	mg/kg	<20
Date Extracted (TRH C10-C36)		30/05/2008
Date Analysed (TRH C10-C36)		30/05/2008
TRH C ₁₀ - C ₁₄	mg/kg	<20
TRH C ₁₅ - C ₂₈	mg/kg	<50
TRH C ₂₉ - C ₃₆	mg/kg	<50

PAHs in Soil Our Reference: Your Reference Sample Type Depth	UNITS ----- -----	61262-1 QA1A Soil
Date Extracted		30/05/2008
Date Analysed		30/05/2008
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.2
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	0.3
Pyrene	mg/kg	0.2
Benzo[a]anthracene	mg/kg	0.1
Chrysene	mg/kg	0.1
Benzo[b,k]fluoranthene	mg/kg	0.2
Benzo[a]pyrene	mg/kg	0.12
Indeno[123-cd]pyrene	mg/kg	<0.1
Dibenzo[ah]anthracene	mg/kg	<0.1
Benzo[ghi]perylene	mg/kg	<0.1
Total PAHs	mg/kg	<2.02
Nitrobenzene-d5	%	92
2-Fluorobiphenyl	%	92
<i>p</i> -Terphenyl- <i>d</i> 14	%	91

Metals in Soil by ICP-OES Our Reference: Your Reference Sample Type Depth	UNITS ----- -----	61262-1 QA1A Soil
Date Extracted (Metals)		30/05/2008
Date Analysed (Metals)		30/05/2008
Arsenic	mg/kg	<3
Cadmium	mg/kg	<0.3
Chromium	mg/kg	6.7
Copper	mg/kg	38
Lead	mg/kg	87
Nickel	mg/kg	2.3
Zinc	mg/kg	41

Mercury Cold Vapor/Hg Analyser Our Reference: Your Reference Sample Type Depth	UNITS ----- -----	61262-1 QA1A Soil
Date Extracted (Mercury)		30/05/2008
Date Analysed (Mercury)		30/05/2008
Mercury	mg/kg	0.42

Moisture		
Our Reference:	UNITS	61262-1
Your Reference	-----	QA1A
Sample Type	-----	Soil
Depth		
Date Analysed (moisture)		28/05/2008
Moisture	%	16

Method ID	Methodology Summary
SEO-019	VOCs by P&T GC/MS- Determination of Volatile Organic Compounds by Purge and Trap then Gas Chromatography / Mass spectrometry following extraction with methanol for soils. Waters are introduced directly on the purge and trap.
SEO-017	BTEX/TRH C6-C9 - Determination by Purge and Trap Gas Chromatography with Flame Ionisation Detection (FID) and Photo Ionisation Detection (PID). The surrogate spike used is aaa-trifluorotoluene.
SEO-020	TRH - Determination of Total Recoverable Hydrocarbons by gas chromatography following extraction with DCM/Acetone for solids and DCM for liquids.
SEO-030	PAHs by GC/MS - Determination of Polynuclear Aromatic Hydrocarbons (PAH's) by Gas Chromatography / Mass Spectrometry following extraction with dichloromethane or dichloromethane/acetone. The surrogate spike used is p-Terphenyl-d14.
SEM-010	Metals - Determination of various metals by ICP-OES following appropriate sample preparation or digestion process.
SEM-005	Mercury - Determination of Mercury by Cold Vapour Generation Atomic Absorption Spectroscopy.
AN002	Preparation of soils, sediments and sludges undergo analysis by either air drying, compositing, subsampling and 1:5 soil water extraction where required. Moisture content is determined by drying the sample at 105 ± 5°C.

QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
MAH in Soil								
Date extracted				27/05/08	[NT]	[NT]	LCS	27/05/08%
Date analysed				28/05/08	[NT]	[NT]	LCS	28/05/08%
Benzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	LCS	88%
Toluene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	LCS	88%
Ethyl benzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	LCS	90%
<i>m/p</i> -Xylenes	mg/kg	1.0	SEO-019	<1.0	[NT]	[NT]	LCS	90%
Styrene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
<i>o</i> -Xylene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	LCS	86%
Isopropylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
<i>n</i> -Propylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
1,3,5-Trimethylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
<i>tert</i> -Butylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
1,2,4-Trimethylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
<i>sec</i> -Butylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
<i>p</i> -Isopropyltoluene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
<i>n</i> -Butylbenzene	mg/kg	0.5	SEO-019	<0.50	[NT]	[NT]	[NR]	[NR]
Dibromofluoromethane	% Recovery	0	SEO-019	99	[NT]	[NT]	LCS	99%
1,2-Dichloroethane-d4	% recovery	0	SEO-019	103	[NT]	[NT]	LCS	99%
Toluene- <i>d8</i> Surrogate 2	% recovery	0	SEO-019	100	[NT]	[NT]	LCS	100%
4-Bromofluorobenzene Surrogate 3	% recovery	0	SEO-019	97	[NT]	[NT]	LCS	98%

QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
TRH in soil with C6-C9 by P/T								
Date Extracted (TRH C6-C9 PT)				27/05/08	[NT]	[NT]	LCS	27/05/08%
Date Analysed (TRH C6-C9 PT)				29/05/08	[NT]	[NT]	LCS	29/05/08%
TRH C6 - C9 P&T	mg/kg	20	SEO-017	<20	[NT]	[NT]	LCS	99%
Date Extracted (TRH C10-C36)				30/05/08	[NT]	[NT]	LCS	30/05/08%
Date Analysed (TRH C10-C36)				30/05/08	[NT]	[NT]	LCS	30/05/08%
TRH C10 - C14	mg/kg	20	SEO-020	<20	[NT]	[NT]	LCS	115%
TRH C15 - C28	mg/kg	50	SEO-020	<50	[NT]	[NT]	LCS	118%
TRH C29 - C36	mg/kg	50	SEO-020	<50	[NT]	[NT]	LCS	125%
QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
PAHs in Soil								
Date Extracted				30/05/08	[NT]	[NT]	LCS	30/05/08%
Date Analysed				30/05/08	[NT]	[NT]	LCS	30/05/08%
Naphthalene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	81%
Acenaphthylene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	83%
Acenaphthene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	103%
Fluorene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	[NR]	[NR]
Phenanthrene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	94%
Anthracene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	99%
Fluoranthene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	96%
Pyrene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	LCS	99%
Benzo[a]anthracene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo[b,k]fluoranthene	mg/kg	0.2	SEO-030	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo[a]pyrene	mg/kg	0.05	SEO-030	<0.05	[NT]	[NT]	LCS	100%
Indeno[123-cd]pyrene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo[ah]anthracene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo[ghi]perylene	mg/kg	0.1	SEO-030	<0.1	[NT]	[NT]	[NR]	[NR]
Total PAHs	mg/kg	1.55	SEO-030	<1.55	[NT]	[NT]	[NR]	[NR]
Nitrobenzene-d5	%	0	SEO-030	105	[NT]	[NT]	LCS	105%
2-Fluorobiphenyl	%	0	SEO-030	103	[NT]	[NT]	LCS	103%
p -Terphenyl-d14	%	0	SEO-030	105	[NT]	[NT]	LCS	105%

QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Metals in Soil by ICP-OES								
Date Extracted (Metals)				30/05/08	[NT]	[NT]	LCS	30/05/08%
Date Analysed (Metals)				30/05/08	[NT]	[NT]	LCS	30/05/08%
Arsenic	mg/kg	3	SEM-010	<3	[NT]	[NT]	LCS	97%
Cadmium	mg/kg	0.3	SEM-010	<0.3	[NT]	[NT]	LCS	103%
Chromium	mg/kg	0.3	SEM-010	<0.3	[NT]	[NT]	LCS	96%
Copper	mg/kg	0.5	SEM-010	<0.5	[NT]	[NT]	LCS	100%
Lead	mg/kg	1	SEM-010	<1	[NT]	[NT]	LCS	101%
Nickel	mg/kg	0.5	SEM-010	<0.5	[NT]	[NT]	LCS	100%
Zinc	mg/kg	0.5	SEM-010	<0.5	[NT]	[NT]	LCS	99%
Mercury Cold Vapor/Hg Analyser								
Date Extracted (Mercury)				30/05/08	[NT]	[NT]	LCS	30/05/08%
Date Analysed (Mercury)				30/05/08	[NT]	[NT]	LCS	30/05/08%
Mercury	mg/kg	0.05	SEM-005	<0.05	[NT]	[NT]	LCS	107%
Moisture								
Date Analysed (moisture)				28/05/08				
Moisture	%	1	AN002	<1				

Result Codes

[INS] :	Insufficient Sample for this test	[RPD] :	Relative Percentage Difference
[NR] :	Not Requested	*	Not part of NATA Accreditation
[NT] :	Not tested	[N/A] :	Not Applicable

Report Comments

Date Organics extraction commenced: 27/05/08

NATA Corporate Accreditation No. 2562, Site No 4354

Note: Test results are not corrected for recovery (excluding Dioxins/Furans* and PAH in XAD and PUF).

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Quality Control Protocol

Method Blank: An analyte free matrix to which all reagents are added in the same volume or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. A method blank is prepared every 20 samples.

Duplicate: A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.

Surrogate Spike: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are added to samples before extraction to monitor extraction efficiency and percent recovery in each sample.

Internal Standard: Added to all samples requiring analysis for organics (where relevant) or metals by ICP after the extraction/digestion process; the compounds/elements serve to give a standard of retention time and/or response, which is invariant from run-to-run with the instruments.

Laboratory Control Sample: A known matrix spiked with compound(s) representative of the target analytes. It is used to document laboratory performance. When the results of the matrix spike analysis indicates a potential problem due to the sample matrix itself, the LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

Matrix Spike: An aliquot of sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Quality Acceptance Criteria

Unless otherwise specified in the test method, the following general acceptance criteria apply:

Method Blanks:	<LOR
Duplicates:	<5 x LOR: No RPD criteria applied. >5 x LOR: 0-30% RPD is accepted.
LCS's:	Determined by Control Charts. Where control charts have not been developed, the Matrix Spikes criteria apply.
Matrix Spikes:	70-130% recovery is accepted for metals / inorganics. 60-140% is accepted for organics.
Surrogates:	60-130% recovery is accepted for BTEX. 70-130% recovery is accepted for other organics.



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CERTIFICATE OF ANALYSIS 19679

Client:

JBS Environmental
P.O. Box 940
MASCOT
NSW 1460

Attention: Danielle Ord

Sample log in details:

Your Reference:	<u>40565, Redfern RSL</u>
No. of samples:	1 Water
Date samples received:	26/05/08
Date completed instructions received:	26/05/08

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:	2/06/08
Date of Preliminary Report:	Not Issued
Issue Date:	3/06/08

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Tests not covered by NATA are denoted with *.

Results Approved By:



Jacinta Hurst
Operations Manager

Envirolab Reference: 19679
Revision No: R 00

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VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	19679-1 RRSL-UST 26/05/2008 Water
Date extracted	-	2/06/2008
Date analysed	-	2/06/2008
Dichlorodifluoromethane	µg/L	<100
Chloromethane	µg/L	<100
Vinyl Chloride	µg/L	<100
Bromomethane	µg/L	<100
Chloroethane	µg/L	<100
Trichlorofluoromethane	µg/L	<100
1,1-Dichloroethene	µg/L	<10
Trans-1,2-dichloroethene	µg/L	<10
1,1-dichloroethane	µg/L	<10
Cis-1,2-dichloroethene	µg/L	<10
Bromochloromethane	µg/L	<10
Chloroform	µg/L	<10
2,2-dichloropropane	µg/L	<10
1,2-dichloroethane	µg/L	<10
1,1,1-trichloroethane	µg/L	<10
1,1-dichloropropene	µg/L	<10
Carbon tetrachloride	µg/L	<10
Benzene	µg/L	<10
Dibromomethane	µg/L	<10
1,2-dichloropropane	µg/L	<10
Trichloroethene	µg/L	<10
Bromodichloromethane	µg/L	<10
trans-1,3-dichloropropene	µg/L	<10
cis-1,3-dichloropropene	µg/L	<10
1,1,2-trichloroethane	µg/L	<10
Toluene	µg/L	<10
1,3-dichloropropane	µg/L	<10
Dibromochloromethane	µg/L	<10
1,2-dibromoethane	µg/L	<10
Tetrachloroethene	µg/L	<10
1,1,1,2-tetrachloroethane	µg/L	<10
Chlorobenzene	µg/L	<10
Ethylbenzene	µg/L	<10
Bromoform	µg/L	<10
m+p-xylene	µg/L	<20
Styrene	µg/L	<10
1,1,2,2-tetrachloroethane	µg/L	<10

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	19679-1 RRSL-UST 26/05/2008 Water
o-xylene	µg/L	<10
1,2,3-trichloropropane*	µg/L	<10
Isopropylbenzene	µg/L	<10
Bromobenzene	µg/L	<10
n-propyl benzene	µg/L	<10
2-chlorotoluene	µg/L	<10
4-chlorotoluene	µg/L	<10
1,3,5-trimethyl benzene	µg/L	15
Tert-butyl benzene	µg/L	<10
1,2,4-trimethyl benzene	µg/L	50
1,3-dichlorobenzene	µg/L	<10
Sec-butyl benzene	µg/L	<10
1,4-dichlorobenzene	µg/L	<10
4-isopropyl toluene	µg/L	<10
1,2-dichlorobenzene	µg/L	<10
n-butyl benzene	µg/L	<10
1,2-dibromo-3-chloropropane	µg/L	<10
1,2,4-trichlorobenzene	µg/L	<10
Hexachlorobutadiene	µg/L	<10
1,2,3-trichlorobenzene	µg/L	<10
Surrogate Dibromofluoromethane	%	76
Surrogate toluene-d8	%	83
Surrogate 4-BFB	%	92

vTPH in Water (C6-C9)		
Our Reference:	UNITS	19679-1
Your Reference	-----	RRSL-UST
Date Sampled	-----	26/05/2008
Type of sample		Water
Date extracted	-	2/06/2008
Date analysed	-	2/06/2008
TPH C ₆ - C ₉	µg/L	<100
Surrogate Dibromofluoromethane	%	76
Surrogate toluene-d ₈	%	83
Surrogate 4-BFB	%	92

sTPH in Water (C10-C36)		
Our Reference:	UNITS	19679-1
Your Reference	-----	RRSL-UST
Date Sampled	-----	26/05/2008
Type of sample		Water
Date extracted	-	27/05/2008
Date analysed	-	28/05/2008
TPH C ₁₀ - C ₁₄	µg/L	2,000
TPH C ₁₅ - C ₂₈	µg/L	7,500
TPH C ₂₉ - C ₃₆	µg/L	<100
Surrogate o-Terphenyl	%	#

Method ID	Methodology Summary
GC.13	Water samples are analysed directly by purge and trap GC-MS.
GC.16	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.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in water						Base II Duplicate II %RPD		
Date extracted	-			2/6/08	[NT]	[NT]	LCS-W1	2/6/08%
Date analysed	-			2/6/08	[NT]	[NT]	LCS-W1	2/6/08%
Dichlorodifluoromethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Chloromethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Bromomethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Chloroethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Trans-1,2-dichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	67%
Cis-1,2-dichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Bromochloromethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Chloroform	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	67%
2,2-dichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	73%
1,1,1-trichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	74%
1,1-dichloropropene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Carbon tetrachloride	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Dibromomethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Trichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	91%
Bromodichloromethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	92%
trans-1,3-dichloropropene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Toluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Dibromochloromethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	95%
1,2-dibromoethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Tetrachloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	98%
1,1,1,2-tetrachloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Chlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Bromoform	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
m+p-xylene	µg/L	2	GC.13	<2.0	[NT]	[NT]	[NR]	[NR]
Styrene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,1,1,2-tetrachloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in water						Base II Duplicate II %RPD		
o-xylene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane*	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Isopropylbenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Bromobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Tert-butyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Sec-butyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Hexachlorobutadiene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Surrogate	%		GC.13	111	[NT]	[NT]	LCS-W1	81%
Dibromofluoromethane								
Surrogate toluene-d8	%		GC.13	98	[NT]	[NT]	LCS-W1	102%
Surrogate 4-BFB	%		GC.13	90	[NT]	[NT]	LCS-W1	104%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH in Water (C6-C9)						Base II Duplicate II %RPD		
Date extracted	-			2/6/08	[NT]	[NT]	LCS-W1	2/6/08%
Date analysed	-			2/6/08	[NT]	[NT]	LCS-W1	2/6/08%
TPH C ₆ - C ₉	µg/L	10	GC.16	<10	[NT]	[NT]	LCS-W1	94%
Surrogate Dibromofluoromethane	%		GC.13	111	[NT]	[NT]	LCS-W1	78%
Surrogate toluene-d8	%		GC.13	98	[NT]	[NT]	LCS-W1	107%
Surrogate 4-BFB	%		GC.13	90	[NT]	[NT]	LCS-W1	99%
sTPH in Water (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			27/5/08	[NT]	[NT]	LCS-W2	27/5/08%
Date analysed	-			28/5/08	[NT]	[NT]	LCS-W2	28/5/08%
TPH C ₁₀ - C ₁₄	µg/L	50	GC.3	<50	[NT]	[NT]	LCS-W2	78%
TPH C ₁₅ - C ₂₈	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W2	100%
TPH C ₂₉ - C ₃₆	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W2	103%
Surrogate o-Terphenyl	%		GC.3	107	[NT]	[NT]	LCS-W2	112%

Report Comments:

Total Petroleum Hydrocarbons in water:# Percent recovery not available due to sample matrix.

VOC's in Water: PQL raised due to sample matrix.

Total Petroleum Hydrocarbons in water (volatile) :PQL raised due to sample matrix.

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

INS: Insufficient sample for this test

NT: Not tested

PQL: Practical Quantitation Limit

RPD: Relative Percent Difference

NA: Test not required

LCS: Laboratory Control Sample

NR: Not requested

<: Less than

>: Greater than

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:

Duplicates: <5xPQL - any RPD is acceptable;

>5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for

SVOC and speciated phenols is acceptable.

Surrogates: 60-140% is acceptable for general organics and 10-140% for

SVOC and speciated phenols.



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CERTIFICATE OF ANALYSIS 19678

Client:

JBS Environmental
P.O. Box 940
MASCOT
NSW 1460

Attention: Danielle Ord

Sample log in details:

Your Reference:	40565, Redfern RSL
No. of samples:	23 Soils, 3 Waters
Date samples received:	26/05/08
Date completed instructions received:	26/05/08

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:	2/06/08
Date of Preliminary Report:	Not issued
Issue Date:	2/06/08

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Tests not covered by NATA are denoted with *.

Results Approved By:

 Jacinta Hurst Operations Manager	 David Springer Business Development & Quality Manager
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 Joshua Lim Chemist
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Envirolab Reference: 19678
Revision No: R 00

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VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-7 RRSL3 0.3 26/05/2008 Soil	19678-13 RRSL6 0.4 26/05/2008 Soil	19678-20 RRSL10 0.15 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	30/05/2008	30/05/2008	30/05/2008
Dichlorodifluoromethane	mg/kg	<10	<10	<10
Chloromethane	mg/kg	<10	<10	<10
Vinyl Chloride	mg/kg	<10	<10	<10
Bromomethane	mg/kg	<10	<10	<10
Chloroethane	mg/kg	<10	<10	<10
Trichlorofluoromethane	mg/kg	<10	<10	<10
1,1-Dichloroethene	mg/kg	<1.0	<1.0	<1.0
trans-1,2-dichloroethene	mg/kg	<1.0	<1.0	<1.0
1,1-dichloroethane	mg/kg	<1.0	<1.0	<1.0
cis-1,2-dichloroethene	mg/kg	<1.0	<1.0	<1.0
bromochloromethane	mg/kg	<1.0	<1.0	<1.0
chloroform	mg/kg	<1.0	<1.0	<1.0
2,2-dichloropropane	mg/kg	<1.0	<1.0	<1.0
1,2-dichloroethane	mg/kg	<1.0	<1.0	<1.0
1,1,1-trichloroethane	mg/kg	<1.0	<1.0	<1.0
1,1-dichloropropene	mg/kg	<1.0	<1.0	<1.0
carbon tetrachloride	mg/kg	<1.0	<1.0	<1.0
Benzene	mg/kg	<0.5	<0.5	<0.5
dibromomethane	mg/kg	<1.0	<1.0	<1.0
1,2-dichloropropane	mg/kg	<1.0	<1.0	<1.0
trichloroethene	mg/kg	<1.0	<1.0	<1.0
bromodichloromethane	mg/kg	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	mg/kg	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	mg/kg	<1.0	<1.0	<1.0
1,1,2-trichloroethane	mg/kg	<1.0	<1.0	<1.0
Toluene	mg/kg	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1.0	<1.0	<1.0
dibromochloromethane	mg/kg	<1.0	<1.0	<1.0
1,2-dibromoethane	mg/kg	<1.0	<1.0	<1.0
tetrachloroethene	mg/kg	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	mg/kg	<1.0	<1.0	<1.0
chlorobenzene	mg/kg	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0
bromoform	mg/kg	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0
styrene	mg/kg	<1.0	<1.0	<1.0

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-7 RRSL3 0.3 26/05/2008 Soil	19678-13 RRSL6 0.4 26/05/2008 Soil	19678-20 RRSL10 0.15 26/05/2008 Soil
1,1,2,2-tetrachloroethane	mg/kg	<1.0	<1.0	<1.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0
1,2,3-trichloropropane*	mg/kg	<1.0	<1.0	<1.0
isopropylbenzene	mg/kg	<1.0	<1.0	<1.0
bromobenzene	mg/kg	<1.0	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0	<1.0
2-chlorotoluene	mg/kg	<1.0	<1.0	<1.0
4-chlorotoluene	mg/kg	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0
tert-butyl benzene	mg/kg	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0
1,3-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0
sec-butyl benzene	mg/kg	<1.0	<1.0	<1.0
1,4-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0
4-isopropyl toluene	mg/kg	<1.0	<1.0	<1.0
1,2-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0
n-butyl benzene	mg/kg	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	mg/kg	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	mg/kg	<1.0	<1.0	<1.0
hexachlorobutadiene	mg/kg	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	mg/kg	<1.0	<1.0	<1.0
Surrogate Dibromofluorometha	%	81	84	82
Surrogate aaa-Trifluorotoluene	%	123	118	119
Surrogate Toluene-d8	%	91	89	91
Surrogate 4-Bromofluorobenzene	%	78	79	78

MAH's in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-1 RRSL1 0.1 26/05/2008 Soil	19678-5 RRSL2 0.3 26/05/2008 Soil	19678-9 RRSL4 0.3 26/05/2008 Soil	19678-10 RRSL5 0.1 26/05/2008 Soil	19678-16 RRSL7 0.6 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	30/05/2008	30/05/2008	30/05/2008	30/05/2008	30/05/2008
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
styrene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyl toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate Dibromofluorometha	%	91	81	82	82	76
Surrogate aaa-Trifluorotoluene	%	114	124	125	124	129
Surrogate Toluene-d8	%	90	92	94	92	92
Surrogate 4-Bromofluorobenzene	%	84	82	74	81	83

MAH's in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-17 RRSL7 0.8 26/05/2008 Soil	19678-18 RRSL8 0.2 26/05/2008 Soil	19678-19 RRSL9 0.3 26/05/2008 Soil	19678-22 RRSL10 0.7 26/05/2008 Soil	19678-23 QA1 - 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	30/05/2008	30/05/2008	30/05/2008	30/05/2008	30/05/2008
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
styrene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyl toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate Dibromofluorometha	%	81	82	70	79	79
Surrogate aaa-Trifluorotoluene	%	122	122	131	114	125
Surrogate Toluene-d8	%	90	93	90	92	91
Surrogate 4-Bromofluorobenzene	%	81	80	74	78	78

TPH in Soil (C6-C9)						
Our Reference:	UNITS	19678-1	19678-5	19678-7	19678-9	19678-10
Your Reference	-----	RRSL1	RRSL2	RRSL3	RRSL4	RRSL5
Depth	-----	0.1	0.3	0.3	0.3	0.1
Date Sampled		26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	30/05/2008	30/05/2008	30/05/2008	30/05/2008	30/05/2008
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Surrogate aaa-Trifluorotoluene	%	114	124	123	125	124

TPH in Soil (C6-C9)						
Our Reference:	UNITS	19678-13	19678-16	19678-17	19678-18	19678-19
Your Reference	-----	RRSL6	RRSL7	RRSL7	RRSL8	RRSL9
Depth	-----	0.4	0.6	0.8	0.2	0.3
Date Sampled		26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	30/05/2008	30/05/2008	30/05/2008	30/05/2008	30/05/2008
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Surrogate aaa-Trifluorotoluene	%	118	129	122	122	131

TPH in Soil (C6-C9)				
Our Reference:	UNITS	19678-20	19678-22	19678-23
Your Reference	-----	RRSL10	RRSL10	QA1
Depth	-----	0.15	0.7	-
Date Sampled		26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	30/05/2008	30/05/2008	30/05/2008
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25
Surrogate aaa-Trifluorotoluene	%	119	114	125

sTPH in Soil (C10-C36)	UNITS	19678-1	19678-5	19678-7	19678-9	19678-10
Our Reference:	-----	RRSL1	RRSL2	RRSL3	RRSL4	RRSL5
Your Reference	-----	0.1	0.3	0.3	0.3	0.1
Depth	-----	26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	130	220	<100	<100
TPH C29 - C36	mg/kg	<100	110	<100	<100	<100
Surrogate o-Terphenyl	%	88	99	95	90	91

sTPH in Soil (C10-C36)	UNITS	19678-13	19678-16	19678-17	19678-18	19678-19
Our Reference:	-----	RRSL6	RRSL7	RRSL7	RRSL8	RRSL9
Your Reference	-----	0.4	0.6	0.8	0.2	0.3
Depth	-----	26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	540	570
TPH C29 - C36	mg/kg	<100	<100	<100	200	270
Surrogate o-Terphenyl	%	95	90	87	120	121

sTPH in Soil (C10-C36)	UNITS	19678-20	19678-22	19678-23
Our Reference:	-----	RRSL10	RRSL10	QA1
Your Reference	-----	0.15	0.7	-
Depth	-----	26/05/2008	26/05/2008	26/05/2008
Date Sampled		Soil	Soil	Soil
Type of sample				
Date extracted	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008
TPH C10 - C14	mg/kg	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100
Surrogate o-Terphenyl	%	93	90	86

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-1 RRSL1 0.1 26/05/2008 Soil	19678-5 RRSL2 0.3 26/05/2008 Soil	19678-7 RRSL3 0.3 26/05/2008 Soil	19678-9 RRSL4 0.3 26/05/2008 Soil	19678-10 RRSL5 0.1 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
Naphthalene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.9	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	1.0	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.4	12	0.2	0.1
Anthracene	mg/kg	<0.1	<0.1	2.8	<0.1	<0.1
Fluoranthene	mg/kg	0.2	0.8	13	0.3	<0.1
Pyrene	mg/kg	0.2	0.9	13	0.3	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.5	6.2	0.2	<0.1
Chrysene	mg/kg	0.1	0.5	6.3	0.2	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	0.8	8.6	0.4	<0.2
Benzo(a)pyrene	mg/kg	0.09	0.5	6.5	0.3	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.3	4.0	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.7	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.3	3.3	0.2	<0.1
Surrogate p-Terphenyl-d14	%	104	104	101	108	106

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-13 RRSL6 0.4 26/05/2008 Soil	19678-16 RRSL7 0.6 26/05/2008 Soil	19678-17 RRSL7 0.8 26/05/2008 Soil	19678-18 RRSL8 0.2 26/05/2008 Soil	19678-19 RRSL9 0.3 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
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	0.3	2.4
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.5
Fluoranthene	mg/kg	0.3	0.1	<0.1	0.5	4.7
Pyrene	mg/kg	0.3	0.1	<0.1	0.6	4.0
Benzo(a)anthracene	mg/kg	0.2	<0.1	<0.1	0.3	1.5
Chrysene	mg/kg	0.2	0.1	<0.1	0.3	1.6
Benzo(b+k)fluoranthene	mg/kg	0.4	<0.2	<0.2	0.5	2.4
Benzo(a)pyrene	mg/kg	0.2	0.08	<0.05	0.2	1.4
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	<0.1	0.2	1.0
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	0.2	0.8
Surrogate p-Terphenyl-d14	%	108	104	107	105	106

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-20 RRSL10 0.15 26/05/2008 Soil	19678-22 RRSL10 0.7 26/05/2008 Soil	19678-23 QA1 - 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008
Naphthalene	mg/kg	0.2	<0.1	<0.1
Acenaphthylene	mg/kg	0.6	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.5	<0.1	<0.1
Phenanthrene	mg/kg	3.9	<0.1	<0.1
Anthracene	mg/kg	1.0	<0.1	<0.1
Fluoranthene	mg/kg	5.5	<0.1	<0.1
Pyrene	mg/kg	4.9	<0.1	<0.1
Benzo(a)anthracene	mg/kg	2.6	<0.1	<0.1
Chrysene	mg/kg	2.4	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	3.9	<0.2	<0.2
Benzo(a)pyrene	mg/kg	2.6	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	1.5	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.3	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	1.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	104	105	102

Organochlorine Pesticides in soil		19678-7	19678-13	19678-20
Our Reference:	UNITS	19678-7	19678-13	19678-20
Your Reference	-----	RRSL3	RRSL6	RRSL10
Depth	-----	0.3	0.4	0.15
Date Sampled		26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	75	77	76

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-7 RRSL3 0.3 26/05/2008 Soil	19678-13 RRSL6 0.4 26/05/2008 Soil	19678-20 RRSL10 0.15 26/05/2008 Soil
Date extracted	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	75	77	76

Acid Extractable metals in soil						
Our Reference:	UNITS	19678-1	19678-5	19678-7	19678-9	19678-10
Your Reference	-----	RRSL1	RRSL2	RRSL3	RRSL4	RRSL5
Depth	-----	0.1	0.3	0.3	0.3	0.1
Date Sampled		26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
Arsenic	mg/kg	<4.0	17	6.0	17	<4.0
Cadmium	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	mg/kg	100	18	55	28	130
Copper	mg/kg	36	30	54	74	36
Lead	mg/kg	17	260	360	250	7.5
Mercury	mg/kg	<0.10	0.30	0.33	0.28	<0.10
Nickel	mg/kg	120	13	49	30	120
Zinc	mg/kg	82	370	680	72	53

Acid Extractable metals in soil						
Our Reference:	UNITS	19678-13	19678-16	19678-17	19678-18	19678-19
Your Reference	-----	RRSL6	RRSL7	RRSL7	RRSL8	RRSL9
Depth	-----	0.4	0.6	0.8	0.2	0.3
Date Sampled		26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008	29/05/2008	29/05/2008
Arsenic	mg/kg	6.8	<4.0	<4.0	8.5	12
Cadmium	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	mg/kg	20	7.2	12	14	12
Copper	mg/kg	37	46	2.1	38	39
Lead	mg/kg	160	130	16	840	570
Mercury	mg/kg	0.17	0.64	<0.10	0.55	0.56
Nickel	mg/kg	31	2.4	1.4	14	12
Zinc	mg/kg	230	60	3.7	130	290

Acid Extractable metals in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-20 RRSL10 0.15 26/05/2008 Soil	19678-22 RRSL10 0.7 26/05/2008 Soil	19678-23 QA1 - 26/05/2008 Soil
Date digested	-	29/05/2008	29/05/2008	29/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008
Arsenic	mg/kg	5.0	4.7	<4.0
Cadmium	mg/kg	<1.0	<1.0	<1.0
Chromium	mg/kg	7.4	16	8.6
Copper	mg/kg	130	3.4	62
Lead	mg/kg	440	20	150
Mercury	mg/kg	0.47	<0.10	1.2
Nickel	mg/kg	6.4	3.3	3.4
Zinc	mg/kg	420	33	58

Miscellaneous Inorg - soil				
Our Reference:	UNITS	19678-7	19678-13	19678-20
Your Reference	-----	RRSL3	RRSL6	RRSL10
Depth	-----	0.3	0.4	0.15
Date Sampled		26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil
Date prepared	-	29/05/2008	29/05/2008	29/05/2008
Date analysed	-	29/05/2008	29/05/2008	29/05/2008
Sulphate, SO4 1:5 soil:water	mg/kg	<25	<25	<25
Total Cyanide	mg/kg	0.7	<0.5	<0.5

Moisture						
Our Reference:	UNITS	19678-1	19678-5	19678-7	19678-9	19678-10
Your Reference	-----	RRSL1	RRSL2	RRSL3	RRSL4	RRSL5
Depth	-----	0.1	0.3	0.3	0.3	0.1
Date Sampled		26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Moisture	%	7.0	18	12	11	7.5

Moisture						
Our Reference:	UNITS	19678-13	19678-16	19678-17	19678-18	19678-19
Your Reference	-----	RRSL6	RRSL7	RRSL7	RRSL8	RRSL9
Depth	-----	0.4	0.6	0.8	0.2	0.3
Date Sampled		26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	28/05/2008	28/05/2008	28/05/2008	28/05/2008	28/05/2008
Moisture	%	13	18	20	11	12

Moisture				
Our Reference:	UNITS	19678-20	19678-22	19678-23
Your Reference	-----	RRSL10	RRSL10	QA1
Depth	-----	0.15	0.7	-
Date Sampled		26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil
Date prepared	-	28/05/2008	28/05/2008	28/05/2008
Date analysed	-	28/05/2008	28/05/2008	28/05/2008
Moisture	%	18	24	18

Asbestos ID - soils				
Our Reference:	UNITS	19678-7	19678-13	19678-20
Your Reference	-----	RRSL3	RRSL6	RRSL10
Depth	-----	0.3	0.4	0.15
Date Sampled		26/05/2008	26/05/2008	26/05/2008
Type of sample		Soil	Soil	Soil
Date analysed	-	30/05/2008	30/05/2008	30/05/2008
Sample Description	-	30g soil	30g soil	30g soil
Asbestos ID in soil	-	No asbestos detected	No asbestos detected	No asbestos detected
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

sPOCAS Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-14 RRSL7 0.1 26/05/2008 Soil
Date prepared	-	28/05/2008
Date analysed	-	28/05/2008
pH _{kcl}	pH units	7.3
TAA pH 6.5	moles H ⁺ / tonne	<5
s-TAA pH 6.5	%w/w S	<0.01
pH _{ox}	pH units	6.7
TPA pH 6.5	moles H ⁺ / tonne	20
s-TPA pH 6.5	%w/w S	0.030
TSA pH 6.5	moles H ⁺ / tonne	20
s-TSA pH 6.5	%w/w S	0.030
ANCE	% CaCO ₃	0.3
a-ANCE	moles H ⁺ / tonne	50
s-ANCE	%w/w S	0.08
SKCl	%w/w	0.005
SP	%w/w	0.016
SPOS	%w/w	0.011
a-SPOS	moles H ⁺ / tonne	6.8
CaKCl	%w/w	0.14
CaP	%w/w	0.18
CaA	%w/w	0.044
MgKCl	%w/w	<0.005
MgP	%w/w	0.006
MgA	%w/w	<0.005
SRAS	%w/w	<0.005
SHCl	%w/w	<0.005
SNAS	%w/w	<0.005
a-SNAS	moles H ⁺ / tonne	<5
s-SNAS	%w/w S	<0.01
a-Net Acidity	moles H ⁺ / tonne	#
Liming rate	kg CaCO ₃ /to nne	#

BTEX in Water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	19678-24 Trip Blank - 26/05/2008 Water	19678-25 Trip Spike - 26/05/2008 Water
Date extracted	-	27/05/2008	27/05/2008
Date analysed	-	27/05/2008	27/05/2008
Benzene	µg/L	<1.0	87%
Toluene	µg/L	<1.0	91%
Ethylbenzene	µg/L	<1.0	92%
m+p-xylene	µg/L	<2.0	88%
o-xylene	µg/L	<1.0	90%
Surrogate Dibromofluoromethane	%	92	108
Surrogate toluene-d8	%	98	99
Surrogate 4-BFB	%	78	103

Metals in Water - Dissolved		
Our Reference:	UNITS	19678-26
Your Reference	-----	Rinsate
Depth	-----	-
Date Sampled		26/05/2008
Type of sample		Water
Arsenic - Dissolved	mg/L	<0.05
Cadmium - Dissolved	mg/L	<0.01
Chromium - Dissolved	mg/L	<0.01
Copper - Dissolved	mg/L	<0.01
Lead - Dissolved	mg/L	<0.03
Mercury - Dissolved	mg/L	<0.0005
Nickel - Dissolved	mg/L	<0.02
Zinc - Dissolved	mg/L	<0.02

Method ID	Methodology Summary
GC.14	Soil samples extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
GC.16	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.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC-5	Soil samples are extracted with hexane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC-6	Soil samples are extracted with hexane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
LAB.9	Sulphate determined turbidimetrically.
LAB.13	Cyanide - determined colourimetrically, following distillation. Based on APHA 20th ED, 4500-CN_C,E.
LAB.8	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB.1	Qualitative identification of asbestos type fibres in bulk using Polarised Light Microscopy and Dispersion Staining Techniques.
LAB.64	sPOCAS determined using titrimetric and ICP-AES techniques. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.
GC.13	Water samples are analysed directly by purge and trap GC-MS.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	[NT]	[NT]	LCS-1	28/5/08%
Date analysed	-			30/5/08	[NT]	[NT]	LCS-1	30/5/08%
Dichlorodifluoromethane	mg/kg	10	GC.14	<10	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	10	GC.14	<10	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	10	GC.14	<10	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	10	GC.14	<10	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	10	GC.14	<10	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	10	GC.14	<10	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	125%
cis-1,2-dichloroethene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	106%
2,2-dichloropropane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	117%
1,1,1-trichloroethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	104%
1,1-dichloropropene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.5	GC.14	<0.5	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	99%
bromodichloromethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	97%
trans-1,3-dichloropropene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
Toluene	mg/kg	0.5	GC.14	<0.5	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	85%
1,2-dibromoethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	LCS-1	94%
1,1,1,2-tetrachloroethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	2	GC.14	<2.0	[NT]	[NT]	[NR]	[NR]
styrene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,1,1,2,2-tetrachloroethane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
o-Xylene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
1,2,3-trichloropropane*	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
isopropylbenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	GC.14	<1.0	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluorometha	%		GC.14	64	[NT]	[NT]	LCS-1	84%
Surrogate aaa-Trifluorotoluene	%		GC.14	96	[NT]	[NT]	LCS-1	91%
Surrogate Toluene-d8	%		GC.14	116	[NT]	[NT]	LCS-1	89%
Surrogate 4-Bromofluorobenzene	%		GC.14	95	[NT]	[NT]	LCS-1	82%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
MAH's in soil						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	19678-1	28/05/2008 28/05/2008	LCS-7	28/5/08%
Date analysed	-			30/5/08	19678-1	30/05/2008 30/05/2008	LCS-7	30/5/08%
Benzene	mg/kg	0.5	GC.14	<0.5	19678-1	<0.5 <0.5	LCS-7	71%
Toluene	mg/kg	0.5	GC.14	<0.5	19678-1	<0.5 <0.5	LCS-7	128%
Ethylbenzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	LCS-7	126%
m+p-xylene	mg/kg	2	GC.14	<2.0	19678-1	<2.0 <2.0	LCS-7	132%
o-Xylene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	LCS-7	136%
styrene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
isopropylbenzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
n-propyl benzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
tert-butyl benzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
sec-butyl benzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
n-butyl benzene	mg/kg	1	GC.14	<1.0	19678-1	<1.0 <1.0	[NR]	[NR]
Surrogate Dibromofluorometha	%		GC.14	64	19678-1	91 90 RPD: 1	LCS-7	60%
Surrogate aaa-Trifluorotoluene	%		GC.14	96	19678-1	114 111 RPD: 3	LCS-7	105%
Surrogate Toluene-d8	%		GC.14	116	19678-1	90 90 RPD: 0	LCS-7	109%
Surrogate 4-Bromofluorobenzene	%		GC.14	95	19678-1	84 83 RPD: 1	LCS-7	98%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
TPH in Soil (C6-C9)						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	19678-1	28/05/2008 28/05/2008	LCS-7	28/5/08%
Date analysed	-			30/5/08	19678-1	30/05/2008 30/05/2008	LCS-7	30/5/08%
vTPH C6 - C9	mg/kg	25	GC.16	<25	19678-1	<25 <25	LCS-7	118%
Surrogate aaa-Trifluorotoluene	%		GC.14	96	19678-1	114 111 RPD: 3	LCS-7	105%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Soil (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	19678-1	28/05/2008 28/05/2008	LCS-7	28/5/08%
Date analysed	-			29/5/08	19678-1	29/05/2008 29/05/2008	LCS-7	29/5/08%
TPH C10 - C14	mg/kg	50	GC.3	<50	19678-1	<50 <50	LCS-7	84%
TPH C15 - C28	mg/kg	100	GC.3	<100	19678-1	<100 <100	LCS-7	91%
TPH C29 - C36	mg/kg	100	GC.3	<100	19678-1	<100 <100	LCS-7	97%
Surrogate o-Terphenyl	%		GC.3	93	19678-1	88 86 RPD: 2	LCS-7	91%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	19678-1	28/05/2008 28/05/2008	LCS-7	28/5/08%
Date analysed	-			29/5/08	19678-1	29/05/2008 29/05/2008	LCS-7	29/5/08%
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	LCS-7	101%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	LCS-7	96%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	0.2 0.1 RPD: 67	LCS-7	98%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	0.2 <0.1	LCS-7	99%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	0.2 <0.1	LCS-7	102%
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	0.1 <0.1	LCS-7	122%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	19678-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	19678-1	0.09 <0.05	LCS-7	115%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	19678-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	107	19678-1	104 109 RPD: 5	LCS-7	104%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	[NT]	[NT]	LCS-7	28/5/08%
Date analysed	-			29/5/08	[NT]	[NT]	LCS-7	29/5/08%
HCB	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	95%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	113%
Heptachlor	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	101%
delta-BHC	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	102%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	105%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	111%
Dieldrin	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	109%
Endrin	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	123%
pp-DDD	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	116%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	LCS-7	110%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		GC-5	80	[NT]	[NT]	LCS-7	77%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			28/5/08	[NT]	[NT]	LCS-7	28/5/08%
Date analysed	-			29/5/08	[NT]	[NT]	LCS-7	29/5/08%
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	[NT]	[NT]	LCS-7	87%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		GC-6	80	[NT]	[NT]	LCS-7	121%
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			29/5/08	19678-1	29/05/2008 29/05/2008	LCS-5	29/5/08%
Date analysed	-			29/5/08	19678-1	29/05/2008 29/05/2008	LCS-5	29/5/08%
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4.0	19678-1	<4.0 <4.0	LCS-5	99%
Cadmium	mg/kg	1	Metals.20 ICP-AES	<1.0	19678-1	<1.0 <1.0	LCS-5	103%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1.0	19678-1	100 120 RPD: 18	LCS-5	102%
Copper	mg/kg	1	Metals.20 ICP-AES	<1.0	19678-1	36 37 RPD: 3	LCS-5	104%
Lead	mg/kg	1	Metals.20 ICP-AES	<1.0	19678-1	17 15 RPD: 12	LCS-5	99%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.10	19678-1	<0.10 <0.10	LCS-5	114%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1.0	19678-1	120 120 RPD: 0	LCS-5	101%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1.0	19678-1	82 72 RPD: 13	LCS-5	100%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Miscellaneous Inorg - soil						Base II Duplicate II %RPD		
Date prepared	-			29/5/08	[NT]	[NT]	LCS-1	29/5/08%
Date analysed	-			29/5/08	[NT]	[NT]	LCS-1	29/5/08%
Sulphate, SO4 1:5 soil:water	mg/kg	25	LAB.9	<25	[NT]	[NT]	LCS-1	89%
Total Cyanide	mg/kg	0.5	LAB.13	<0.5	[NT]	[NT]	LCS-1	93%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results		
Moisture						Base II Duplicate II %RPD		
Date prepared	-			28/5/08	19678-1	28/05/2008 28/05/2008		
Date analysed	-			28/5/08	19678-1	28/05/2008 28/05/2008		
Moisture	%	0.1	LAB.8	<0.10	19678-1	7.0 7.0 RPD: 0		
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Asbestos ID - soils								
Date analysed	-			[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sPOCAS						Base II Duplicate II %RPD		
Date prepared	-			[NT]	[NT]	[NT]	LCS	28/5/08%
Date analysed	-			[NT]	[NT]	[NT]	LCS	28/5/08%
pH _{kcl}	pH units		LAB.64	[NT]	[NT]	[NT]	LCS	98%
TAA pH 6.5	moles H ⁺ /tonne	5	LAB.64	<5	[NT]	[NT]	LCS	98%
s-TAA pH 6.5	%w/w S	0.01	LAB.64	<0.01	[NT]	[NT]	[NR]	[NR]
pH _{ox}	pH units		LAB.64	[NT]	[NT]	[NT]	LCS	96%
TPA pH 6.5	moles H ⁺ /tonne	5	LAB.64	<5.0	[NT]	[NT]	LCS	96%
s-TPA pH 6.5	%w/w S	0.01	LAB.64	<0.01	[NT]	[NT]	[NR]	[NR]
TSA pH 6.5	moles H ⁺ /tonne	5	LAB.64	<5.0	[NT]	[NT]	LCS	96%
s-TSA pH 6.5	%w/w S	0.01	LAB.64	<0.01	[NT]	[NT]	[NR]	[NR]
ANC _E	% CaCO ₃	0.05	LAB.64	<0.05	[NT]	[NT]	[NR]	[NR]
a-ANC _E	moles H ⁺ /tonne	5	LAB.64	<5	[NT]	[NT]	[NR]	[NR]
s-ANC _E	%w/w S	0.05	LAB.64	<0.05	[NT]	[NT]	[NR]	[NR]
SKCl	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	118%
SP	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	110%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sPOCAS						Base II Duplicate II %RPD		
SPOS	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	[NR]	[NR]
a-SPOS	moles H ⁺ /tonne	5	LAB.64	<5.0	[NT]	[NT]	[NR]	[NR]
CaKCl	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	112%
CaP	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	114%
CaA	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	[NR]	[NR]
MgKCl	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	105%
MgP	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	110%
MgA	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	[NR]	[NR]
SRAS	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	[NR]	[NR]
SHCl	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	LCS	107%
SNAS	%w/w	0.005	LAB.64	<0.005	[NT]	[NT]	[NR]	[NR]
a-SNAS	moles H ⁺ /tonne	5	LAB.64	<5	[NT]	[NT]	[NR]	[NR]
s-SNAS	%w/w S	0.01	LAB.64	<0.01	[NT]	[NT]	[NR]	[NR]
a-Net Acidity	moles H ⁺ /tonne	10	LAB.64	<10	[NT]	[NT]	LCS	107%
Liming rate	kg CaCO ₃ /tonne	0.75	LAB.64	<0.75	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
BTEX in Water						Base II Duplicate II %RPD		
Date extracted	-			27/5/08	[NT]	[NT]	LCS-W1	27/5/08%
Date analysed	-			27/5/08	[NT]	[NT]	LCS-W1	27/5/08%
Benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	82%
Toluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	118%
Ethylbenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	117%
m+p-xylene	µg/L	2	GC.13	<2.0	[NT]	[NT]	LCS-W1	120%
o-xylene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	119%
Surrogate	%		GC.13	102	[NT]	[NT]	LCS-W1	83%
Dibromofluoromethane								
Surrogate toluene-d8	%		GC.13	102	[NT]	[NT]	LCS-W1	96%
Surrogate 4-BFB	%		GC.13	89	[NT]	[NT]	LCS-W1	102%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Metals in Water - Dissolved								
Date digested	-			[NT]	[NT]	[NT]	[NR]	[NR]
Date analysed	-			[NT]	[NT]	[NT]	[NR]	[NR]
Arsenic - Dissolved	mg/L	0.05	Metals.20 ICP-AES	<0.05	[NT]	[NT]	LCS-W1	96%
Cadmium - Dissolved	mg/L	0.01	Metals.20 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	100%
Chromium - Dissolved	mg/L	0.01	Metals.20 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	102%
Copper - Dissolved	mg/L	0.01	Metals.20 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	101%
Lead - Dissolved	mg/L	0.03	Metals.20 ICP-AES	<0.03	[NT]	[NT]	LCS-W1	97%
Mercury - Dissolved	mg/L	0.0005	Metals.21 CV-AAS	<0.0005	[NT]	[NT]	LCS-W1	98%
Nickel - Dissolved	mg/L	0.02	Metals.20 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	102%
Zinc - Dissolved	mg/L	0.02	Metals.20 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	102%

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 30-40g of sample in it's own container.

Due to the positive acid neutralizing capacity, net acidity net calculated.
Asbestos was analysed by Approved Identifier: Joshua Lim

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

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:

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

CHAIN OF CUSTODY

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EnviroLab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200

Job No: **19618**

Time received: **26/5/08**

Time received: **1715**

Received by: **[Signature]**

Temp: **20** Ambient

Cooling: **Icepack**

Security: **Intact** Broken/None

RELINQUISHED BY:			METHOD OF SHIPMENT:			RECEIVED BY:			FOR RECEIVING LAB USE ONLY:		
NAME: Danielle Ord	DATE: 26/5/08	CONSIGNMENT NOTE NO.	NAME: [Signature]	DATE: 26/5/08	COOLER SEAL - Yes No Intact Broken	NAME: [Signature]	DATE: 26/5/08	COOLER SEAL - Yes No Intact Broken	COOLER TEMP: deg C	COOLER TEMP: deg C	
OF: JBS Env	DATE: 26/5/08	TRANSPORT CO.	NAME:	DATE:	COOLER SEAL - Yes No Intact Broken	OF:	DATE:	COOLER SEAL - Yes No Intact Broken	COOLER TEMP: deg C	COOLER TEMP: deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.	OF:	DATE:	COOLER SEAL - Yes No Intact Broken	NAME:	DATE:	COOLER SEAL - Yes No Intact Broken	COOLER TEMP: deg C	COOLER TEMP: deg C	
OF:	DATE:	TRANSPORT CO.	OF:	DATE:	COOLER SEAL - Yes No Intact Broken	OF:	DATE:	COOLER SEAL - Yes No Intact Broken	COOLER TEMP: deg C	COOLER TEMP: deg C	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd.; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

Suite 2, 595 Gardeners Road MASCOT NSW 2020
PO Box 940 MASCOT NSW 1460
www.jbsgroup.com.au

JBS Environmental Pty Ltd ABN 67 071 842 638
Phone: (02) 8338-1011
Fax: (02) 8338-1700

CHAIN OF CUSTODY

PROJECT NO.: 40565					LABORATORY BATCH NO:														
PROJECT NAME: Redfern RSL					SAMPLERS: Van O + Tim D														
SEND REPORT TO: Danielle Ord					SEND INVOICE TO: Amy Worth					PHONE: 83381011 or 0415611322					EMAIL: jbsgroup.com.au				
DATE NEEDED BY: STA					QC LEVEL: NEPM 1999 ()														
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																			
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Heavy Metals	TPH	MAH	PAH	VHC	Cyanide	OCP	PCB	Tol Sulfate	Asbestos	sPCAs	Co-Cg	NOTES	
RRSL9-0.3	Soil	26/5/08		Ice + J		X	X	X	X										
RRSL10-0.15	↓	↓		↓		X	X	X	X	X	X	X	X	X	X				
RRSL10 0.5	↓	↓		↓		X	X	X	X										
RRSL10 0.7	↓	↓		↓		X	X	X	X										
QAI	↓	↓		↓															
Trip blank	Water			Ice + various													X		
Trip spike	↓	↓		↓													X		
Rinsate	↓	↓		↓		X													
RELINQUISHED BY:					METHOD OF SHIPMENT:					RECEIVED BY:					FOR RECEIVING LAB USE ONLY:				
NAME: Danielle Ord		DATE: 26/5/08		CONSIGNMENT NOTE NO.					NAME:		DATE:			COOLER SEAL: Yes No Intact Broken					
OF: JBS Env				TRANSPORT CO.					OF:					COOLER TEMP: 489 C					
NAME:		DATE:		CONSIGNMENT NOTE NO.					NAME:		DATE:			COOLER SEAL: Yes No Intact Broken					
OF:				TRANSPORT CO.					OF:					COOLER TEMP: deg C					

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd.; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

Appendix G
Borehole Logs



Borehole No.: RRSL-1

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.5m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Asphalt					
		Fill Sandy road base, dark grey and dark brown, dry, gritty sand, concrete and gravel angular inclusions <60mm	RRSL1-0.1		7.3	No odour, no staining, no fibrous cement sheeting observed	
		Fill Dark brown silty soil, fine, heterogeneous particles, slightly damp, brick fragments throughout profile	RRSL1-0.3		8.7		
		Fill Dark brown gravelly silty soil, fine particles, slightly damp, predominantly black and grey angular gravel 10-40mm	RRSL1-0.4		1.4		
		EOH @ 0.5m Refusal					
1.0							
2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: RRSL-2

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.4m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Concrete					
		Fill Sandy road base, dark grey and dark brown, dry, gritty sand, concrete and gravel angular inclusions <20mm	RRSL2-0.1		4.6	No odour, no staining, no fibrous cement sheeting observed	
		Fill Bricks, red with yellow flecks, dry, compacted	RRSL2-0.3		6.9		
		Fill Dark brown/black gravelly silty soil, fine to medium particles, slightly damp, black and grey angular gravel inclusions (10-40mm)					
		EOH @ 0.4m Refusal					
1.0							
2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: RRSL-3

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.5m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					No odour, no staining, no fibrous cement sheeting observed
		Asphalt					
		Fill Sandy road base, dark grey and dark brown, damp, gritty sand, concrete and gravel angular inclusions <30mm	RRSL3-0.2		6.1		
		Fill Red and black gravelly silt, angular, <10mm particles, damp, brick and cement fragment inclusions <20mm	RRSL3-0.3		13.2		
		EOH @ 0.5m Refusal on brick					
1.0							
2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: RRSL-4

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.35m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners





Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					No odour, no staining, no fibrous cement sheeting observed
		Concrete					
		Fill Sandy road base, dark grey and dark brown, dry, gritty sand, concrete and gravel angular inclusions <20mm	RRSL4-0.1		8.6		
		Fill Sand, light brown, fine, heterogeneous particles, dry, ashy inclusions	RRSL4-0.3		1.4		
		EOH @ 0.35m Refusal on wood/metal plate (sounds hollow when tapped with crow bar)					
1.0							
2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: RRSL-5

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.35m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners





Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Concrete					
		Fill Sandy road base, dark grey and dark brown, dry, gritty sand, concrete and gravel angular inclusions <20mm	RRSL5-0.1		3.7	No odour, no staining, no fibrous cement sheeting observed	
		Fill Sand, light brown, fine, heterogenous particles, dry, ashy inclusions	RRSL5-0.3		12.1		
		EOH @ 0.35m Refusal on brick					
1.0							
2.0							

Sample Method	Sample Condition
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample



Borehole No.: RRSL-6

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.5m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Concrete					
		Fill Sandy road base, dark grey and dark brown, dry, gritty sand, concrete and gravel angular inclusions <20mm	RRSL6-0.1		21.4	No odour, no staining, no fibrous cement sheeting observed	
		Fill Dark brown silty soil, fine, heterogeneous, slightly damp particles, angular gravel inclusions 10-30mm	RRSL6-0.4		3.7		
		Fill Dark brown silty soil, fine, heterogeneous, slightly damp particles, brick, cement, glass plastic and tile fragments identified					
		EOH @ 0.5m Refusal on brick					
1.0							
2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: RRSL-7

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 1.0m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
	█	Concrete					
	▨	Fill Dark brown silty soil, medium, heterogeneous particles, slightly damp, no inclusions	RRSL7-0.3		4.1	No odour, no staining, no fibrous cement sheeting observed	
	▨	Fill Light brown, orange and dark brown mottled clays, high plasticity, high density, slightly damp, no inclusions	RRSL7-0.4		6.9		
	▨	Fill Dark brown clay, high plasticity, medium-high density, damp, no inclusions	RRSL7-0.6		1.4	Samples QA1 and QA1a collected	
	▨	Fill Dark brown silt, fine, heterogeneous particles, slightly damp, no inclusions	RRSL7-0.8		0		
1.0		Sand Light brown/yellow consolidated sands, fine, homogeneous particles, dry, no inclusions					
		Sandy Clay Light brown/yellow consolidated sand/clay, fine, homogeneous particles, dry, low plasticity, medium density, no inclusions					
		EOH @ 1.0m Refusal on brick					
-2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: RRSL-8

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.3m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Concrete				No odour, no staining, no fibrous cement sheeting observed	
		Sandy Clay Light brown, light pink and light grey sandy clay, fine, heterogeneous particles, dry, no inclusions	RRSL8-0.2		12.7		
		EOH @ 0.3m Refusal on brick					
1.0							
2.0							

Sample Method	Sample Condition
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample



Borehole No.: RRSL-9

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.45m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					No odour, no staining, no fibrous cement sheeting observed
		Concrete					
		Sandy Clay Light brown, light pink and light grey sandy clay, fine, heterogeneous particles, dry, no inclusions	RRSL9-0.3		13.4		
		EOH @ 0.45m Refusal on brick					
1.0							
2.0							

Sample Method	Sample Condition
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample



Borehole No.: RRSL-10

Location: 157 Redfern Street, Redfern

Project: Redfern RSL ESA

Total Hole Depth: 0.85m

Driller and Co.: DO and TD

Project No.: 40565

Longitude:

Drill Method: Hand Auger

Client: Fusion Property Partners

Latitude:

Log By: Danielle Ord

Project Manager: Matt Parkinson

Date: 26/05/2008

Bore Diameter: 100mm

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Concrete					
		Fill Light brown sand, fine, heterogeneous particles, wet, densely compacted, no inclusions	RRSL10-0.15		53.1	Slight PAH odour observed	
		Fill Dark brown clay, high plasticity, medium density, soft and pliable, damp, some angular gravel inclusions <15mm	RRSL10-0.5		17.1	No odour, no staining, no fibrous cement sheeting observed	
		Fill Medium brown and red mottled clay, low plasticity, low density, damp, no inclusions	RRSL10-0.7		5.2		
1.0		EOH @ 0.85m Refusal					
2.0							

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		

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Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
0	Danielle Ord	Matthew Parkinson	Matthew Parkinson	<i>M. Parkin</i>	10/6/08