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REPORT
on
PRELIMINARY CONTAMINATION ASSESSMENT

PROPOSED COMMERCIAL DEVELOPMENT
17 O'RIORDAN STREET
ALEXANDRIA

Prepared for
GOODMAN PROPERTY SERVICES (AUST) PTY LTD

Project 45586
July 2008

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REPORT ON PRELIMINARY CONTAMINATION ASSESSMENT
PROPOSED COMMERCIAL DEVELOPMENT
17 O'RIORDAN STREET, ALEXANDRIA

1. INTRODUCTION

This report details the results of a preliminary contamination assessment undertaken for a proposed commercial development at 17 O'Riordan Street, Alexandria. The work was commissioned by Goodman Property Services (Aust) Pty Ltd, developers of the site.

The project involves the construction of a five storey commercial building over a single level basement. The existing buildings and pavements on the site will be demolished as part of the redevelopment works. It is expected that there will be minimal access to soil on the site once the development has been completed.

The preliminary contamination assessment was undertaken to:

- Provide a preliminary assessment of the general levels of contamination resulting from past and present activities on the site;
- Assess the potential for migration of contamination from the site;
- Assess the likely suitability of the site for the intended commercial land use; and
- Provide recommendations for further investigation and assessment if required.

The overall approach for preliminary contamination assessment included a review of available site records including historical title deed information, aerial photographs and existing groundwater bore records, drilling test bores, subsurface sampling, installation of groundwater monitoring wells, groundwater sampling, laboratory analysis and interpretation of the results. Details of the field work and laboratory testing are given in this report, as well as comments on the issues outlined above.

2. SITE DESCRIPTION

The development site is rectangular and approximately 7,360 m^2 in area. It is bounded by vacant land to the north and west, O'Riordan Street to the east and commercial premises to the south. The airport railway tunnel is located near the north-western corner of the site although the invert levels of the tunnel are not known. The ground surface is relatively level and between about RL 11.5 and RL 12 relative to Australian Height Datum (AHD).

At the time of investigation a warehouse building with office and showroom space was located over most of the site. A concrete vehicle parking area and loading dock were located to the north of the building. Evidence of underground storage tanks (such as bowsers, fill/dip points and vent pipes) was not observed on the site.

The site is identified as Lot 4 DP 794095 in the Parish of Alexandria County of Cumberland. A site locality plan is shown in Drawing 1 in Appendix A.

3. REGIONAL GEOLOGY

Reference to the *Sydney 1:100 000 Geological Series Sheet* indicates that the site is underlain by Quaternary-aged sediments comprising medium to fine grained marine sands with podsols. Experience in the Alexandria area suggests these sediments are underlain by alluvial sands and clays, residual clay soils and shale or sandstone bedrock.

4. REGIONAL HYDROGEOLOGY

The *Botany Sand Beds, Botany Basin, NSW Northern, Southern and Western Zones Status Report No.2* (Department of Land and Water Conservation, GWMA018, March 2000) provides an overview of the Botany sand beds. The report indicates that there are two groundwater systems operating in the region, one being a deeper confined aquifer system in the fractured Triassic bedrock and a shallower unconfined to semi-confined system which is present within the unconsolidated sediments of the Botany sand beds. The saturated portion of the Botany sand beds is known as the Botany Sands Aquifer.

The average saturated thickness of the Botany Sands Aquifer is 15 – 20 m. Hydraulic conductivity within the sand beds is highly variable and is typically around 20 m/day in clean sand. This value decreases to 5 – 10 m/day in silty or peaty sands and to less than 4 m/day in sandy peat or clay.

Groundwater flow directions are typically towards the main surface water systems (Alexandra Canal situated to the south-west of the site being the closest) with gradients variable but in the order 1 in 120.

Water quality in the Botany Sand Aquifer is typically of low salinity (less than 150 µS/m) and with pH values between about 4 and 9.

5. SCOPE OF WORKS

The scope of the preliminary contamination assessment was as follows:

- Obtain and review site history information including historical title deeds, historical aerial photographs and existing groundwater bore records;
- Drill five test bores using a Bobcat-mounted drilling rig. The bores were to be drilled to a depth of about 0.5 m into natural soil or prior refusal;

- Collect soil samples from the filling and natural material in the bores, and upon observed signs of contamination;
- Screen soil samples with a calibrated photoionisation detector (PID) to detect the likely presence of volatile organic compounds;
- Conduct laboratory analysis on selected soil samples in a NATA accredited analytical laboratory for the following range of potential contaminants:
    - Priority heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni & Zn);
    - Total Petroleum Hydrocarbons (TPH);
    - Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene and Xylene – BTEX);
    - Polycyclic Aromatic Hydrocarbons (PAH);
    - Organochlorine Pesticides (OCP);
    - Organophosphorus Pesticides (OPP);
    - Polychlorinated Biphenyls (PCB);
    - Phenols; and
    - Asbestos.
- Convert two of the bores into groundwater monitoring wells;
- Collect groundwater samples from the wells;
- Conduct laboratory analysis on the groundwater samples in a NATA accredited analytical laboratory for the following range of potential contaminants:
    - Priority heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni & Zn);
    - Total Petroleum Hydrocarbons (TPH);
    - Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene and Xylene – BTEX);
    - Polycyclic Aromatic Hydrocarbons (PAH);
    - Organochlorine Pesticides (OCP);
    - Organophosphorus Pesticides (OPP);

- Polychlorinated Biphenyls (PCB); and
- Phenols.

- Provide a preliminary contamination assessment report which comments on the recorded levels of contamination in the soils and groundwater on the site, the potential for contamination migration, the suitability of the site for the proposed development, and recommended follow up action; and
- Store remaining soil samples not analysed for a period of one month pending the need for further analysis.

6. SITE HISTORY

6.1 Historical Land Uses

The title deed records indicate that the site was owned by a number of parties since 1918. Ownership details are provided in Table 1.

Table 1 – Summary of Previous Land Owners

Date of Ownership	Registered Owner
12 December 1918	Austral Bronze Company Pty Ltd
21 September 1970	Austral Bronze Copper Ltd
26 September 1989	Leda Holdings Pty Ltd
28 February 1990	Court Developments Pty Ltd
6 March 1995	Prudential Assurance Company Ltd
19 March 1997	Prudential Corporation Australia Ltd
16 March 1999	Permanent Trustee Australia Ltd
27 October 2000	Perpetual Nominees Ltd

It appears that the site was used for the processing of metals between 1918 and 1989. Ownership between 1989 and the present date has been with investment or development companies and hence land use cannot be determined from the land title records. Extracts from the title deed records are provided in Appendix E.

6.2 Aerial Photographs

A review of available aerial photographs from 1951, 1965, 1970, 1978, 1986 and 2004 was undertaken to evaluate the land-use patterns on the site. Site details observed from the aerial photographs are provided in Table 2.

Table 2 – Site Details from Aerial Photographs

Year	Details
1951	Office-type buildings along the O'Riordan Street boundary. Industrial-type warehouse buildings on the remainder of the site. Internal road between office buildings and warehouse parallel to O'Riordan Street. Industrial-type buildings to the north, west and south of the site. This site layout is different from the current layout.
1965	No discernable changes evident since 1951 photograph.
1970	No discernable changes evident since 1951 photograph.
1978	No discernable changes evident since 1951 photograph.
1986	No discernable changes evident since 1951 photograph.
2004	All buildings seen in earlier photographs on the site and immediately to the north, west and south have been demolished. The current building and carpark are present. The current building to the south is present. The sites to the north and west are vacant as is currently the case.

It appears that the metal processing facility was demolished sometime between 1986 and 2004. Scanned images of the aerial photographs are shown in Appendix E.

6.3 Existing Groundwater Bores

A search of licensed groundwater bores in the Alexandria area indicated there are at least fourteen licensed bores within about 1 km of the development site. These bores are licensed for domestic, industrial and monitoring purposes. The nearest bore is located about 50 m to the east of the site at the vehicle repair facility on the corner of O'Riordan and Johnson Streets.

The site falls within the Botany Groundwater Management – Zone 2 area in which groundwater extraction for domestic purposes have been banned due to the presence of contaminated groundwater in the area.

6.4 Contaminated Land Public Register

A search indicated that the development site is not on the Contaminated Land Public Register.

7. SELECTED COMPARATIVE GUIDELINES

The proposed development is for commercial purposes. A single level basement will be constructed beneath the building and concrete pavements will be placed around the building which will limit access to soil on the site. The relevant assessment criteria for commercial premises are the Health-based Investigation Levels for commercial and industrial premises (Column 4) as specified in *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme,* (Department of Environment and Conservation NSW, 2006).

Assessment criteria for total petroleum hydrocarbons and monocyclic aromatic hydrocarbons are the Threshold Concentration for Sensitive Site Land Use – Soils, specified in *Contaminated Sites: Guidelines for Assessing Service Station Sites,* (NSW EPA, 1994).

The assessment criteria for groundwater have been adopted from the protection of 95% of fresh water species outlined in the *Australian Water Quality Guidelines* (ANZECC, 2000). The quantitative site assessment criteria are shown in the summary table in Appendix C.

8. INVESTIGATION PROCEDURES

8.1 Data Quality Objectives

The investigation procedures have been devised in general accordance with the seven-step data quality objective (DQO) process outlined in Australian Standard AS 4482.1 – 2005 *Guide to the investigation and sampling of sites with potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds*. The DQO process is outlined below.

(a) State the Problem

The site is to be redeveloped for commercial purposes. The aim of the current preliminary assessment is to provide a preliminary indication of the suitability of the site for the proposed development and, on the basis of the investigation findings, provide advice on what future works may be required.

(b) Identify the Decision

Five boreholes were drilled to collect soil samples from accessible areas of the site. Bores were not drilled in the warehouse building due to access and operational constraints at the time of the investigation. The sampling locations were to be selected based on a visual inspection of the site.

This suite of contaminants analysed was devised to detect the presence of heavy metals, hydrocarbons, polychlorinated biphenyls and phenol which could be present due to the previous industrial activities on the site. Analysis for pesticides was undertaken due to the presence of filling and the possible use of such chemicals on the site. Analysis for asbestos was undertaken due to the presence of filling and the possibility of asbestos materials in the now-demolished industrial buildings, asbestos debris may remain on the site. The suite of contaminants to be tested is outlined in Section 5 of this report.

The selected comparative guidelines were selected on the basis of the proposed land use and are outlined in Section 7 of this report.

(c) Identify Inputs to the Decision

The primary inputs in assessing the presence of contamination in soil are:

- Areas of potential contamination based on historical uses of the site;
- Field observations;
- Laboratory test results; and
- Published guidelines appropriate for the proposed commercial land use.

(d) Define the Boundary of the Assessment

The boundary of the assessment is defined by the boundary of the subject site identified as Lot 4 DP 794095 in the Parish of Alexandria County of Cumberland as shown in Drawing 1 in Appendix A.

(e) Develop a Decision Rule

The decision rule is based on the relevant site criteria outlined in Section 7 of this report.

(f) Specify Acceptable Limits on Decision Errors

Appropriate quality assurance and quality control measures were incorporated into the sampling and testing regime to ensure the quality of the contaminant data. These measures are outlined in Sections 9.4 and 9.5 of this report.

(g) Optimise the Design for Obtaining Data

The sampling locations were to be selected to obtain data from accessible areas of the site and are shown in Drawing 1 in Appendix A. The procedures for collecting samples are described in Section 8.2 of this report and are in general accordance with DECC guidelines and industry best practice. A NATA accredited analytical laboratory was used to analyse the samples.

A number of data quality indicators (DQIs) were established to verify that the quality of the investigation data is acceptable. Table 3 summarises how the DQIs are assessed.

Table 3 – Data Quality Indicators and Evaluation Procedures

Data Quality Indicator	Evaluation Procedure
Documentation completeness	Completion of field and laboratory documentation including chain of custody sheets and borehole logs.
Data completeness	A review of site history to support the current analytical regime. Analysis of appropriate contaminants. Analysis of appropriate soil horizons. Analysis of appropriate samples for QA/QC purposes.
Data comparability	Use of NATA accredited analytical methods. Use of consistent sampling techniques. Use of disposable sampling equipment. Use of field sample storage techniques.
Data representativeness	Sampling from locations spaced at accessible areas on the site in order to obtain an objective measure of contamination on the site.
Precision and accuracy for sampling and analysis	Use of NATA accredited analytical methods. Achievement of suitable results in QA/QC criteria.

The DQIs for sampling and analysis were achieved and the quality of the data satisfactorily meets the objectives of the current assessment.

8.2 Field Work Procedures

According to *Contaminated Sites: Sampling Design Guidelines* (NSW EPA, 1995), the minimum number of sampling points recommended for the 'characterisation' of an area of 7,360 m^2 is about eighteen (18). The preliminary assessment was undertaken using five sampling points (i.e. about 25% of the recommended number of sampling points for a more detailed assessment) as only about 25% of the site area was accessible. The sampling density is considered appropriate for a preliminary contamination assessment.

The field work comprised five test bores (E1 to E5) drilled at the locations shown on Drawing 1 in Appendix A. Bore E3 was moved slightly and re-drilled twice due to premature refusal on obstructions and bore E3B is the relevant bore at this test location. The bores were drilled to depths of 1.6 – 6.0 m using a Bobcat-mounted drilling rig. Soil samples were collected from the tip of the auger at regular depth intervals. Bores E1 and E5 were converted into groundwater monitoring wells at the completion of drilling. Details of well construction are provided on the relevant borehole logs. The remaining bores were reinstated at the completion of drilling.

Environmental soil sampling was performed in general accordance with the standard sampling procedures outlined in the *DP Field Procedures Manual*. All sampling data was recorded on chain of custody information sheets. The soil sampling generally included:

- Soil sampling using disposable equipment;
- Placement of samples into laboratory prepared jars and immediate capping;
- Labelling of sample containers with individual and unique markings including project number, sample location, sample depth and date of sampling; and
- Storage of sample containers in a cooled, insulated and sealed container for transport to the laboratory.

The wells were constructed using 50 mm diameter Class 18 uPVC machine-slotted screen and blank casing with screw-threaded joints. Gravel was placed around the screened section followed by a bentonite plug of about 0.5 m thickness. End-caps were used to seal each well. A steel gatic lid was concreted flush with the pavement surface. The groundwater sampling generally included:

- Purging of the wells using a baler and allowing the water level to recover prior to sampling;
- Sampling using disposable baling equipment;
- Filtering of samples collected for heavy metal analysis prior to placement in laboratory prepared jars containing nitric acid and immediate capping;
- Placement of samples collected for volatile petroleum hydrocarbon analysis into laboratory prepared jars containing hydrochloric acid and immediate capping;
- Placement of samples for analysis of remaining contaminants into unpreserved laboratory prepared jars and immediate capping;
- Labelling of sample containers with individual and unique markings including project number, sample location and date of sampling; and
- Storage of sample containers in a cooled, insulated and sealed container for transport to the laboratory.

9. RESULTS OF ASSESSMENT

9.1 Field Observations

A visual inspection of the site was undertaken to determine suitable locations for the proposed bores. Obvious signs of contamination were not observed on the site and the boreholes were set-out in the currently accessible areas. The footprint of the building was not accessible at the time of the field work.

The subsurface conditions encountered in the test bores are presented in the borehole logs in Appendix B, together with notes defining descriptive terms and classification methods used in their preparation.

The bores encountered concrete pavement to depths of 0.12 – 0.19 m, underlain by filling comprising sand and gravel with some silt, clay, concrete and brick rubble to 2.3 – 3.4 m depth.

Natural sand soil was encountered below the filling at all test locations except for bore E4 which refused on a buried obstruction at 1.6 m depth prior to encountering natural material. Refusal on concrete objects at shallow depths was experienced in the vicinity of BHE3, suggesting the possible presence of buried objects or demolition rubble in the filling.

Free groundwater was observed at depths of 3.6 – 4.2 m (RL 7.6 to RL 7.9) during drilling and at similar levels during groundwater sampling at a later date.

9.2 Total Photoionisable Compounds Results

Replicate soil samples collected from the boreholes were allowed to equilibrate under ambient temperatures before screening for Total Photoionisable Compounds (TOPIC) using a calibrated Photoionisation Detector (PID). The results of the screening are shown on the borehole logs in Appendix B. The PID readings were all very low.

9.3 Analytical Results for Soil Samples

Envirolab Services Pty Ltd (Envirolab) was commissioned to undertake analysis of the soil samples. A summary of the results is provided in Appendix C. The detailed analytical results, sample receipts and chain of custody information are included in Appendix D.

9.4 Field Quality Control Procedures

Field replicate samples were collected throughout the sampling process. One sample (FR5) was analysed at the same time as the other samples and compared with the results of the primary sample (E3B/0.5 m). The laboratory results were similar for both samples of the replicate pair.

9.5 Laboratory Quality Control Procedures

Envirolab is certified by the National Association of Testing Authorities (NATA) and is required to conduct in-house quality control procedures. All quality control results are included in the detailed laboratory reports in Appendix D.

Quality control procedures used during analysis include:

Reagent Blank

A reagent blank sample is prepared and analysed at the beginning of every analytical run, following calibration of the analytical apparatus. The laboratory results for reagent blanks for soil analyses indicated that concentrations of all analytes were below respective laboratory practical quantitation limits.

Duplicate

This is the complete duplicate of a sample from the process batch. The results of the two samples are compared to laboratory acceptance criteria and exceedances highlighted. No exceedances were detected.

Matrix Spike

A portion of a 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 determine whether matrix interference exists. The matrix spike recovery is compared to laboratory acceptance criteria. No exceedances were noted.

Laboratory Control Sample

This is a standard reference sample or control matrix used to check the analytical process. The results were within acceptable limits.

Surrogate Spike

Surrogates are known additions of known compounds to each sample, blank, matrix spike and laboratory control sample. The surrogates are similar to the analyte of interest, however are not expected to be detected in real samples. The results were acceptable.

10. DISCUSSION OF RESULTS

The analytical results indicate that one sample (E2 at 0.5 m) had total PAH and Benzo(a)pyrene concentrations slightly above the adopted assessment criteria for commercial sites. Another sample (E1 at 0.2 m) had a lead concentration in excess of the adopted assessment criteria for commercial sites. These exceedences were in samples taken from depths of 0.2 – 0.5 m which were assessed as being filling. The lead exceedence in particular was more than 2.5 times the site assessment criteria and this area of the site will therefore require remediation..

Although building rubble was noted in the filling in bore E5, asbestos material was not observed at the time of the field work and was not detected in the samples screened in the laboratory. Having said this, as test bores are not an efficient method for assessing asbestos contamination in soil and given the observed building rubble inclusions in the filling, the potential for the presence of asbestos warrants further investigation during the detailed assessment stage.

The two groundwater samples analysed had concentrations of all fractions of TPH (i.e. volatile, semi-volatile and non-volatile fractions) above the adopted assessment criteria indicating some form of petroleum product is present in the groundwater on the site. BTEX compounds were found to be present in the samples although these were below the adopted assessment criteria. It is possible that the elevated levels of volatile TPH were due to the presence of BTEX although this could not be confirmed from the current analytical regime. One sample also had slightly elevated concentrations of zinc.

Although an accurate direction of groundwater flow could not be determined from the two monitoring wells installed as part of the preliminary assessment, the wells do represent the contaminant concentrations at both the north-eastern and north-western boundaries of the site. The presence of hydrocarbon contamination in both samples suggests the origin of the contaminants may be off-site and up-gradient. It should be noted, however, that the current preliminary assessment has only covered the accessible northern portion of the site and hence the nature, extent and source of the TPH/BTEX could not be confirmed.

On the basis of the preliminary contamination assessment of the soils on the site it is likely that the site will require some form of remediation to render it suitable for the proposed commercial development. A significant portion of the filling will be removed from the site for the purposes of basement construction and this excavation will form a remediation measure in itself. The full extent of remediation required should be confirmed during the detailed assessment stage and its effectiveness confirmed by implementing an appropriate validation programme.

TPH and BTEX contaminated groundwater was found in both groundwater wells confirming the presence of a groundwater contamination plume beneath the site. The source, nature and extent of the impact have not been defined in the current assessment. There is also a potential for off-site contaminant migration due to the presence of relatively permeable soils on the site and a relatively shallow groundwater table.

Further detailed assessment of contamination levels on the site will be required to better assess the contaminant concentrations in areas that were inaccessible during the preliminary assessment and to develop appropriate remediation measures for the site.

Further detailed assessment of the groundwater regime on the site will also be required to determine whether the presence of contaminants is due to an off-site source and whether the contaminants are likely to have an impact on the development or the surrounding environment. This should involve the installation of groundwater monitoring wells in areas of the site that were inaccessible during the preliminary assessment to allow sampling of the groundwater and estimation of its direction of flow.

11. CONCLUSIONS AND RECOMMENDATIONS

Eleven soils samples (including one QA/QC replicate) were selectively analysed from five test bores drilled in the accessible portion of the site. One soil sample had elevated levels of total PAH and Benzo(a)pyrene above the adopted assessment criteria. Another sample identified a lead contamination hotspot above the adopted assessment criteria. The contaminant levels in all other soil samples were within the site assessment criteria.

Two groundwater samples were collected from the groundwater wells constructed at the site. Both groundwater samples contained substantially elevated concentrations of TPH above the adopted screening levels for groundwater. The elevated levels of TPH may be due in part to the presence of BTEX compounds in the groundwater. The detected BTEX levels fell within the adopted assessment criteria but the full extent of the TPH and BTEX contamination has not been defined in the current assessment.

One groundwater sample also had a marginally elevated concentration of zinc. The detected zinc level is, however, typical of industrial areas and does not constitute an unacceptable risk of harm.

Based on the results of the preliminary contamination assessment, some form of remediation will be required to render the site suitable for commercial development. The extent of the required remediation should be confirmed during the detailed assessment stage and its effectiveness confirmed by implementing an appropriate validation programme.

Further assessment of groundwater contamination is warranted to determine the nature, extent and impact of the contaminants and whether the elevated levels of hydrocarbons in the samples analysed for the preliminary assessment are due to the presence of on-site contaminant sources or are due to off-site sources. The result is critical in the formation of the site remediation strategy.

A more detailed contamination assessment involving additional boreholes and laboratory analysis will need to be undertaken to fully ‘characterise’ the site. The detailed assessment will verify the findings of the preliminary investigation and assess the levels of contamination in areas that were not accessible during the preliminary investigation. The additional investigation

should ideally be targeted at assessing contaminant levels in filling and soil that will remain on the site following development as well as the groundwater quality across the entire site.

Further assessment of contaminant levels within the zone of the proposed basement excavation will be required to classify the excavated materials for disposal purposes.

12. LIMITATIONS OF THIS REPORT

The scope of the site assessment activities and consulting services performed by DP were limited to those outlined in our proposal dated 3 April 2008 that was accepted by Goodman Property Services (Aust) Pty Ltd.

DPs assessment is based upon the results of a limited site investigation and the restricted program of surface and subsurface sampling, screening and laboratory testing which was undertaken. DP cannot provide unqualified warranties nor assumes any liability for site conditions not observed, or accessible, during the time of the investigations.

Despite all reasonable care and diligence, the ground conditions encountered and concentrations of contaminants measured may not be representative of conditions between the sample locations. In addition, site characteristics may change at any time in response to variations in natural conditions and other events such as spillages of contaminating substances. These changes may occur subsequent to DPs investigation and assessment.

This report, its associated documentation and the information herein have been prepared solely for the use of Goodman Property Services (Aust) Pty Ltd. Any reliance assumed by third parties on this report shall be at such parties' own risk. Any ensuing liability resulting from use of the report by third parties cannot be transferred to DP.

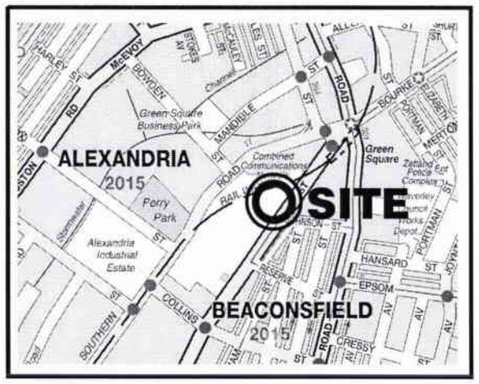
DOUGLAS PARTNERS PTY LTD

Reviewed by

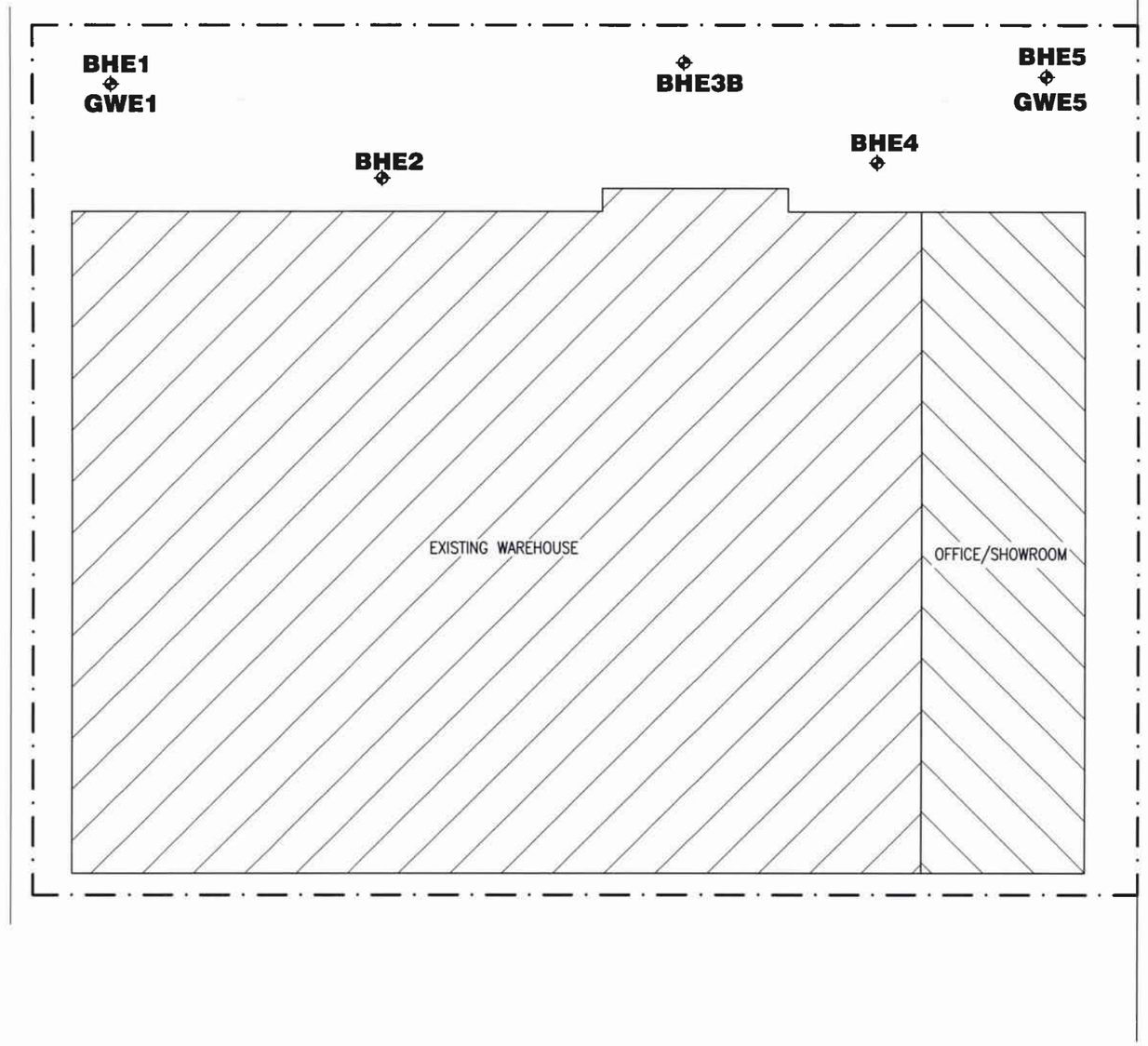
Peter Oitmaa
Associate

Ronnie Tong
Principal

APPENDIX A
Drawing 1 – Location of Boreholes



LOCALITY PLAN



O'RIORDAN STREET

LEGEND

⌖ TEST BORE LOCATION

SCALE
0 10 20 30 40 50m
1:500

Douglas Partners *Geotechnics · Environment · Groundwater*	CLIENT: Goodman Property Services (Aust) Pty Ltd	OFFICE: SYDNEY	TITLE: **Location of Boreholes Proposed Commercial Development 17 O'Riordan Street ALEXANDRIA**
	PROJECT No: 45586	DRAWN BY: PSCH	
	DATE: 29.5.2008 SCALE: As shown	APPROVED BY:	DRAWING No: 1

P:\45586 ALEXANDRIA, 17 O'Riordan Street Preliminary inv PMO\Drawings\45586-1 Enviro Report ONLY.dwg, 6/10/2008 3:45:02 PM

APPENDIX B
Notes Relating to this Report
Field Work Results

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NOTES RELATING TO THIS REPORT

Introduction

These notes have been provided to amplify the geotechnical report in regard to classification methods, specialist field procedures and certain matters relating to the Discussion and Comments section. Not all, of course, are necessarily relevant to all reports.

Geotechnical reports are based on information gained from limited subsurface test boring and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726, Geotechnical Site Investigations Code. In general, descriptions cover the following properties - strength or density, colour, structure, soil or rock type and inclusions.

Soil types are described according to the predominating particle size, qualified by the grading of other particles present (eg. sandy clay) on the following bases:

Soil Classification	Particle Size
Clay	less than 0.002 mm
Silt	0.002 to 0.06 mm
Sand	0.06 to 2.00 mm
Gravel	2.00 to 60.00 mm

Cohesive soils are classified on the basis of strength either by laboratory testing or engineering examination. The strength terms are defined as follows.

Classification	Undrained Shear Strength kPa
Very soft	less than 12
Soft	12—25
Firm	25—50
Stiff	50—100
Very stiff	100—200
Hard	Greater than 200

Non-cohesive soils are classified on the basis of relative density, generally from the results of standard penetration tests (SPT) or Dutch cone penetrometer tests (CPT) as below:

Relative Density	SPT "N" Value (blows/300 mm)	CPT Cone Value (q_c — MPa)
Very loose	less than 5	less than 2
Loose	5—10	2—5
Medium dense	10—30	5—15
Dense	30—50	15—25
Very dense	greater than 50	greater than 25

Rock types are classified by their geological names. Where relevant, further information regarding rock classification is given on the following sheet.

Sampling

Sampling is carried out during drilling to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing with a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Details of the type and method of sampling are given in the report.

Drilling Methods.

The following is a brief summary of drilling methods currently adopted by the Company and some comments on their use and application.

Test Pits — these are excavated with a backhoe or a tracked excavator, allowing close examination of the in-situ soils if it is safe to descent into the pit. The depth of penetration is limited to about 3 m for a backhoe and up to 6 m for an excavator. A potential disadvantage is the disturbance caused by the excavation.

Large Diameter Auger (eg. Pengo) — the hole is advanced by a rotating plate or short spiral auger, generally 300 mm or larger in diameter. The cuttings are returned to the surface at intervals (generally of not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube sampling.

Continuous Sample Drilling — the hole is advanced by pushing a 100 mm diameter socket into the ground and withdrawing it at intervals to extrude the sample. This is the most reliable method of drilling in soils, since moisture content is unchanged and soil structure, strength, etc. is only marginally affected.

Continuous Spiral Flight Augers — the hole is advanced using 90—115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow

sampling or in-situ testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are very disturbed and may be contaminated. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively lower reliability, due to remoulding, contamination or softening of samples by ground water.

Non-core Rotary Drilling — the hole is advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from 'feel' and rate of penetration.

Rotary Mud Drilling — similar to rotary drilling, but using drilling mud as a circulating fluid. The mud tends to mask the cuttings and reliable identification is again only possible from separate intact sampling (eg. from SPT).

Continuous Core Drilling — a continuous core sample is obtained using a diamond-tipped core barrel, usually 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in very weak rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation.

Standard Penetration Tests

Standard penetration tests (abbreviated as SPT) are used mainly in non-cohesive soils, but occasionally also in cohesive soils as a means of determining density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, "Methods of Testing Soils for Engineering Purposes" — Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of say 4, 6 and 7

  as 4, 6, 7
  N = 13

- In the case where the test is discontinued short of full penetration, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm

  as 15, 30/40 mm.

The results of the tests can be related empirically to the engineering properties of the soil.

Occasionally, the test method is used to obtain samples in 50 mm diameter thin walled sample tubes in clays. In such circumstances, the test results are shown on the borelogs in brackets.

Cone Penetrometer Testing and Interpretation

Cone penetrometer testing (sometimes referred to as Dutch cone — abbreviated as CPT) described in this report has been carried out using an electrical friction cone penetrometer. The test is described in Australian Standard 1289, Test 6.4.1.

In the tests, a 35 mm diameter rod with a cone-tipped end is pushed continuously into the soil, the reaction being provided by a specially designed truck or rig which is fitted with an hydraulic ram system. Measurements are made of the end bearing resistance on the cone and the friction resistance on a separate 130 mm long sleeve, immediately behind the cone. Transducers in the tip of the assembly are connected by electrical wires passing through the centre of the push rods to an amplifier and recorder unit mounted on the control truck.

As penetration occurs (at a rate of approximately 20 mm per second) the information is plotted on a computer screen and at the end of the test is stored on the computer for later plotting of the results.

The information provided on the plotted results comprises: —

- Cone resistance — the actual end bearing force divided by the cross sectional area of the cone — expressed in MPa.
- Sleeve friction — the frictional force on the sleeve divided by the surface area — expressed in kPa.
- Friction ratio — the ratio of sleeve friction to cone resistance, expressed in percent.

There are two scales available for measurement of cone resistance. The lower scale (0—5 MPa) is used in very soft soils where increased sensitivity is required and is shown in the graphs as a dotted line. The main scale (0—50 MPa) is less sensitive and is shown as a full line.

The ratios of the sleeve friction to cone resistance will vary with the type of soil encountered, with higher relative friction in clays than in sands. Friction ratios of 1%—2% are commonly encountered in sands and very soft clays rising to 4%—10% in stiff clays.

In sands, the relationship between cone resistance and SPT value is commonly in the range:—

q_c (MPa) = (0.4 to 0.6) N (blows per 300 mm)

In clays, the relationship between undrained shear strength and cone resistance is commonly in the range:—

q_c = (12 to 18) c_u

Interpretation of CPT values can also be made to allow estimation of modulus or compressibility values to allow calculation of foundation settlements.

Inferred stratification as shown on the attached reports is assessed from the cone and friction traces and from experience and information from nearby boreholes, etc. This information is presented for general guidance, but must be regarded as being to some extent interpretive. The test method provides a continuous profile of engineering properties, and where precise information on

soil classification is required, direct drilling and sampling may be preferable.

Hand Penetrometers

Hand penetrometer tests are carried out by driving a rod into the ground with a falling weight hammer and measuring the blows for successive 150 mm increments of penetration. Normally, there is a depth limitation of 1.2 m but this may be extended in certain conditions by the use of extension rods.

Two relatively similar tests are used.

- Perth sand penetrometer — a 16 mm diameter flat-ended rod is driven with a 9 kg hammer, dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands (originating in Perth) and is mainly used in granular soils and filling.
- Cone penetrometer (sometimes known as the Scala Penetrometer) — a 16 mm rod with a 20 mm diameter cone end is driven with a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). The test was developed initially for pavement subgrade investigations, and published correlations of the test results with California bearing ratio have been published by various Road Authorities.

Laboratory Testing

Laboratory testing is carried out in accordance with Australian Standard 1289 "Methods of Testing Soil for Engineering Purposes". Details of the test procedure used are given on the individual report forms.

Bore Logs

The bore logs presented herein are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable, or possible to justify on economic grounds. In any case, the boreholes represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes, the frequency of sampling and the possibility of other than 'straight line' variations between the boreholes.

Ground Water

Where ground water levels are measured in boreholes, there are several potential problems;

- In low permeability soils, ground water although present, may enter the hole slowly or perhaps not at all during the time it is left open.
- A localised perched water table may lead to an erroneous indication of the true water table.
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report.
- The use of water or mud as a drilling fluid will mask any ground water inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water observations are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Engineering Reports

Engineering reports are prepared by qualified personnel and are based on the information obtained and on current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal (eg. a three storey building), the information and interpretation may not be relevant if the design proposal is changed (eg. to a twenty storey building). If this happens, the Company will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface condition, discussion of geotechnical aspects and recommendations or suggestions for design and construction. However, the Company cannot always anticipate or assume responsibility for:

- unexpected variations in ground conditions — the potential for this will depend partly on bore spacing and sampling frequency
- changes in policy or interpretation of policy by statutory authorities
- the actions of contractors responding to commercial pressures.

If these occur, the Company will be pleased to assist with investigation or advice to resolve the matter.

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, the Company requests that it immediately be notified. Most problems are much more readily resolved when conditions are exposed than at some later stage, well after the event.

Reproduction of Information for Contractual Purposes

Attention is drawn to the document "Guidelines for the Provision of Geotechnical Information in Tender Documents", published by the Institution of Engineers,

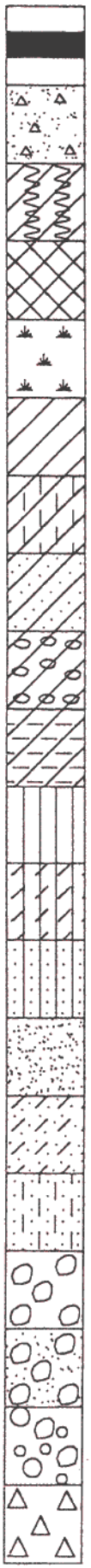
Australia. Where information obtained from this investigation is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. The Company would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The Company will always be pleased to provide engineering inspection services for geotechnical aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

GRAPHIC SYMBOLS FOR SOIL & ROCK

SOIL



BITUMINOUS CONCRETE

CONCRETE

TOPSOIL

FILLING

PEAT

CLAY

SILTY CLAY

SANDY CLAY

GRAVELLY CLAY

SHALY CLAY

SILT

CLAYEY SILT

SANDY SILT

SAND

CLAYEY SAND

SILTY SAND

GRAVEL

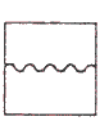
SANDY GRAVEL

COBBLES/BOULDERS

TALUS

SEAMS

SEAM >10mm



SEAM <10mm

SEDIMENTARY ROCK

BOULDER CONGLOMERATE

CONGLOMERATE

CONGLOMERATIC SANDSTONE

SANDSTONE FINE GRAINED

SANDSTONE COARSE GRAINED

SILTSTONE

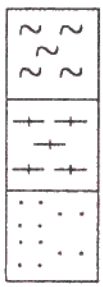
LAMINITE

MUDSTONE, CLAYSTONE, SHALE

COAL

LIMESTONE

METAMORPHIC ROCK

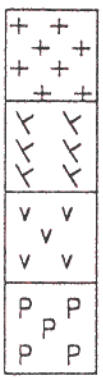


SLATE, PHYLLITE, SCHIST

GNEISS

QUARTZITE

IGNEOUS ROCK



GRANITE

DOLERITE, BASALT

TUFF

PORPHYRY

Douglas Partners

Geotechnics, Environment, Groundwater

BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.8 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E1
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.12	CONCRETE - with 8mm diameter reinforcement		E	0.2		PID<1ppm		Flush Gatic Cover; Concrete plug
	0.7	FILLING - brown, slightly gravelly, sand filling with a trace of silt, humid		E	0.5		PID<1ppm		Sand backfill
		FILLING - grey and brown, sand filling with some gravel, humid		E*	1.0		PID<1ppm		Bentonite Pellet Plug
				E	1.5		PID<1ppm		
				E	2.0		PID<1ppm		Backfilled with gravel
	2.3	SAND - orange brown and grey, medium grained sand with some clay, humid		E	2.5		PID<1ppm		
	2.7	SAND - orange brown and grey, medium grained sand with a trace of silt, humid		E	3.0		PID<1ppm		Machine slotted PVC screen
	4.2	SAND - dark brown, slightly silty, fine to medium grained sand, moist		E	4.5		PID<1ppm	▼	End cap
	5.0	SAND - yellow brown, medium grained sand with a trace of silt, moist to wet							
	6.0	Bore discontinued at 6.0m							

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 6.0m

WATER OBSERVATIONS: Free groundwater observed at 4.2m

REMARKS: E = Environmental sample; * Field Replicate FR1 collected at 1.0m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials: RLC
Date: 10.6.08

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BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.8 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E2
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.16	CONCRETE - with 8mm diameter reinforcement		E*	0.2		PID<1ppm		
		FILLING - brown and grey sand filling, with some gravel and a trace of clay, humid to damp		E	0.5		PID<1ppm		
				E	1.0		PID<1ppm		
	1.3	FILLING - brown and grey, sand filling with a trace of silt and gravel, humid to damp		E	1.5		PID<1ppm		
				E	2.0		PID<1ppm		
	2.3	FILLING - brown sand filling with some clay and gravel, damp		E*	2.5		PID<1ppm		
				E	3.0		PID<1ppm		
	3.4	SAND - brown medium grained sand with a trace of silt, damp to moist		E	3.5		PID<1ppm		
	4.0	Bore discontinued at 4.0m							

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 4.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = Environmental Sample;
*Field Replicate FR2 collected from 0.2m; *Field Replicate FR3 from 2.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials: AUO
Date: 10-6-08

Douglas Partners
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BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.7 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E3
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.16	CONCRETE							
		FILLING - grey and brown, slightly gravelly sand filling with some clay, damp		E	0.2		PID<1ppm		
				E*	0.5		PID<1ppm		
	1.0	Bore discontinued at 1.0m - refusal on concrete obstruction		E	1.0		PID<1ppm		

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 1.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = Environmental Sample; *Field Replicate FR4 collected from 0.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials: RLO
Date: 10-6-08

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BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.7 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E3A
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.16	CONCRETE							
		FILLING - grey and brown, slightly gravelly sand filling with some clay, damp							
	0.65	Bore discontinued at 0.65m - refusal on concrete obstruction							

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 0.65m

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials: RLO
Date: 10.6.08

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BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.7 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E3B
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.19	CONCRETE - with 8mm diameter reinforcement		E	0.2		PID<1ppm		
		FILLING - brown and grey, slightly gravelly sand filling with some clay, damp		E*	0.5		PID<1ppm		
		- some brick rubble at 1.2m		E	1.0		PID<1ppm		
	1.3	FILLING - brown and grey sand filling, with some gravel and a trace of clay, damp		E	1.5		PID<1ppm		
	1.7	FILLING - dark grey and brown, slightly clayey sand filling with a trace of gravel, damp		E	2.0		PID<1ppm		
		- some clay from 2.2m		E	2.5		PID<1ppm		
	2.8	SAND - grey, medium grained sand with a trace of silt, damp		E	3.0		PID<1ppm		
	3.0	Bore discontinued at 3.0m - target strata							

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 3.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = Environmental Sample; * Field replicate FR5 collected from 0.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ⫢ Water level

CHECKED
Initials: RLD
Date: 10.6.08

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BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.7 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E4
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.13	CONCRETE		E	0.2		PID<1ppm		
		FILLING - yellow brown and brown, sand filling with some gravel and a trace of silt, humid		E	0.5		PID<1ppm		
		- grading to orange brown and brown at 0.6m		E	1.0		PID<1ppm		
	1.3	FILLING - orange brown and grey, slightly clayey, sand filling with a trace of gravel, damp		E	1.5		PID<1ppm		
	1.6	Bore discontinued at 1.6m - refusal on buried obstruction							

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 1.6m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = Environmental Sample

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials: RLD
Date: 10.6.08

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BOREHOLE LOG

CLIENT: Goodman Property Services (Aust) Pty Ltd
PROJECT: Preliminary Contamination Assessment
LOCATION: 17 O'Riordan Street, Alexandria

SURFACE LEVEL: 11.5 AHD
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: E5
PROJECT No: 45586
DATE: 19 May 08
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.14	CONCRETE - with 8mm diameter reinforcement		E	0.2		PID<1ppm		Flush Gatic Cover Concrete plug Sand backfill
		FILLING - orange brown and brown, sand filling with some gravel and a trace of silt, humid to damp		E*	0.5		PID<1ppm		Bentonite Pellet Plug
				E	1.0		PID<1ppm		
				E	1.5		PID<1ppm		
		- some brick rubble at 2.0m		E	2.0		PID<1ppm		Backfilled with gravel
		- grading to damp to moist at 2.3m		E	2.5		PID<1ppm		
	2.6	FILLING - orange brown and brown, slightly clayey, sand filling with a trace of gravel, damp to moist							
				E	3.0		PID<1ppm		Machine slotted PVC screen
	3.1	SAND - yellow brown and grey, medium grained sand with a trace of silt		E	3.5		PID<1ppm	▼	
		- grading to yellow brown at 3.8m							End cap Hole Collapse
	4.5	Bore discontinued at 4.5m - target depth							

RIG: Bobcat **DRILLER:** Gregor **LOGGED:** Mikhail **CASING:** Uncased

TYPE OF BORING: 100mm diameter solid flight auger with TC-bit to 4.5m

WATER OBSERVATIONS: Free groundwater observed at 3.6m

REMARKS: E = Environmental Sample; *Field replicate FR6 collected from 0.5m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U,	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep ▼ Water level

CHECKED
Initials: RLO
Date: 10·6·08

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APPENDIX C
Summary of Analytical Results for Soil Samples

SOIL SAMPLES

Sample	Depth (m)	Total Concentrations																					
		B	T	E	X	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total PAH	B(a)P	OCP	OPP	PCB	Phenol	Asbestos	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
		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	(Y/N)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Preliminary Contamination Assessment																								
E1	0.2	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	4.4	0.4	<0.1	<0.1	<0.1	<5.0	N	23	<1.0	5.5	3100	5900	0.15	25	800
E1	1.5	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	5.8	0.5	<0.1	<0.1	<0.1	<5.0	N	50	1.3	4.4	3600	1200	0.32	35	1700
E2	0.5	<0.5	<0.5	<1.0	<2.0	<25	<50	670	240	101.5	6.6	<0.1	<0.1	<0.1	<5.0	N	7.0	<1.0	15	940	260	0.15	12.0	540
E2	2.5	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	19.7	1.6	<0.1	<0.1	<0.1	<5.0	N	<4.0	<1.0	6.9	260	200	0.17	2.2	33
E2	3.5	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	<0.2	<0.05	<0.1	<0.1	<0.1	<5.0	N	<4.0	<1.0	1.3	140	2.2	<0.10	<1.0	16
E3B	0.5	<0.5	<0.5	<1.0	<2.0	<25	<50	150	<100	9.7	0.9	<0.1	<0.1	<0.1	<5.0	N	8.2	1.1	10	3300	250	0.26	15.0	780
E3B	2.0	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	41.9	3.2	<0.1	<0.1	<0.1	<5.0	N	<4.0	<1.0	13	170	110	0.37	41	99
E4	1.0	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	0.1	<0.05	<0.1	<0.1	<0.1	<5.0	N	<4.0	<1.0	2.3	47	15	<0.10	2.2	48
E5	0.2	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	5.6	0.6	<0.1	<0.1	<0.1	<5.0	N	5	<1.0	9.4	560	500	0.47	11	430
E5	2.0	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	30.8	3.1	<0.1	<0.1	<0.1	<5.0	N	<4.0	<1.0	4.3	13	21	<0.10	2.1	17.0
FR5	E3B/0.5	<0.5	<0.5	<1.0	<2.0	<25	<50	<100	<100	7.4	0.7	<0.1	<0.1	<0.1	<5.0	N	6.0	<1.0	16	520	230	0.3	15	600
Guideline																								
HIL Commercial/Industrial[1]		-	-	-	-	-	-			100	5	-	-	50	42500	-	500	100	500	5000	1500	75	3000	35000
Sensitive Land Use[2]		1	1.4	3.1	14	65	1000			-	-	-	-	-	-	-	-	-	-	-		-		-

Notes:
[1] Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition, 2006)
[2] Contaminated Sites: Guidelines for Assessing Service Station Sites (1994)
B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene; PAH = Polycyclic Aromatic Hydrocarbons; B(a)P = Benzo(a)pyrene; OCP = Organochlorine pesticides; OPP = Organophosphorus Pesticides; PCB = Polychlorinated biphenyls; As = Arsenic; Cd = Cadmium; Cr = Chromium;
Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc

GROUNDWATER SAMPLES

Sample	Depth (m)	Total Concentrations																					
		B	T	E	X	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total PAH	B(a)P	OCP	OPP	PCB	Phenol		As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Preliminary Contamination Assessment																							
E1	N/A	96	53	18	113	390	870	360	490	34.0	<1.0	<0.2	<0.2	<2	<50		<1.0	<0.1	<1.0	<1.0	<1.0	<0.50	4.5	8.8
E5	N/A	69	58	12	79	300	1000	480	440	35.0	<1.0	<0.2	<0.2	<2	<50		<1.0	<0.1	<1.0	<1.0	<1.0	<0.50	3.7	5.8
Guideline																							
ANZECC (95%)[3]		950	300	140	550	150	600			-	0.2	-	-	-	320		13	0.2	4.4	1.4	3.4	0.6	11	8

Notes:
[3] Trigger values for 95% protection of freshwater species (ANZECC, 2000)
B = Benzene; T = Toluene; E = Ethylbenzene; X = Xylene; PAH = Polycyclic Aromatic Hydrocarbons; B(a)P = Benzo(a)pyrene; OCP = Organochlorine pesticides; OPP = Organophosphorus Pesticides; PCB = Polychlorinated biphenyls; As = Arsenic; Cd = Cadmium; Cr = Chromium;
Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc

APPENDIX D
Detailed Analytical Results for Soil Samples

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

CERTIFICATE OF ANALYSIS 19484

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: Peter Oitmaa

Sample log in details:

Your Reference:	**45586, Alexandria**
No. of samples:	11 Soils
Date samples received:	20/05/08
Date completed instructions received:	20/05/08

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:	27/05/08
Date of Preliminary Report:	Not Issued
Issue Date:	27/05/08

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Accredited for compliance with ISO/IEC 17025.
Tests not covered by NATA are denoted with *.

Results Approved By:

Jacinta Hurst
Operations Manager

Joshua Lim
Chemist

ACCREDITED FOR TECHNICAL COMPETENCE

vTPH & BTEX in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-1 E1/0.2 19/05/2008 Soil	19484-2 E1/1.5 19/05/2008 Soil	19484-3 E2/0.5 19/05/2008 Soil	19484-4 E2/2.5 19/05/2008 Soil	19484-5 E2/3.5 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
vTPH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
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
Surrogate aaa-Trifluorotoluene	%	95	110	94	106	71

vTPH & BTEX in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-6 E3B/0.5 19/05/2008 Soil	19484-7 E3B/2.0 19/05/2008 Soil	19484-8 E4/1.0 19/05/2008 Soil	19484-9 E5/0.2 19/05/2008 Soil	19484-10 E5/2.0 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
vTPH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
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
Surrogate aaa-Trifluorotoluene	%	95	88	91	95	120

vTPH & BTEX in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-11 FR5 19/05/2008 Soil
Date extracted	-	21/05/2008
Date analysed	-	21/05/2008
vTPH C_6 - C_9	mg/kg	<25
Benzene	mg/kg	<0.5
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1.0
m+p-xylene	mg/kg	<2.0
o-Xylene	mg/kg	<1.0
Surrogate aaa-Trifluorotoluene	%	100

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
TPH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	<100	670	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	<100	240	<100	<100
Surrogate o-Terphenyl	%	84	82	118	84	80

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	19484-6	19484-7	19484-8	19484-9	19484-10
Your Reference	----------	E3B/0.5	E3B/2.0	E4/1.0	E5/0.2	E5/2.0
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
TPH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	150	<100	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	86	81	81	85

sTPH in Soil (C10-C36)		
Our Reference:	UNITS	19484-11
Your Reference	----------	FR5
Date Sampled	----------	19/05/2008
Type of sample		Soil
Date extracted	-	21/05/2008
Date analysed	-	21/05/2008
TPH C_{10} - C_{14}	mg/kg	<50
TPH C_{15} - C_{28}	mg/kg	<100
TPH C_{29} - C_{36}	mg/kg	<100
Surrogate o-Terphenyl	%	83

PAHs in Soil						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	22/05/2008	22/05/2008	22/05/2008	22/05/2008	22/05/2008
Naphthalene	mg/kg	<0.1	<0.1	0.5	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	3.6	0.4	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	0.5	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	2.6	0.1	<0.1
Phenanthrene	mg/kg	0.3	0.5	18	2.2	<0.1
Anthracene	mg/kg	<0.1	0.1	4.0	0.3	<0.1
Fluoranthene	mg/kg	0.7	1.1	18	3.5	<0.1
Pyrene	mg/kg	0.7	1.0	16	3.5	<0.1
Benzo(a)anthracene	mg/kg	0.3	0.5	7.2	1.5	<0.1
Chrysene	mg/kg	0.5	0.6	6.9	1.8	<0.1
Benzo(b+k)fluoranthene	mg/kg	0.8	0.8	10	2.7	<0.2
Benzo(a)pyrene	mg/kg	0.4	0.5	6.6	1.6	<0.05
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.8	0.2	<0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	0.3	3.5	1.0	<0.1
Benzo(g,h,i)perylene	mg/kg	0.4	0.4	3.3	0.9	<0.1
Surrogate p-Terphenyl-d_{14}	%	110	110	133	107	109

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-6 E3B/0.5 19/05/2008 Soil	19484-7 E3B/2.0 19/05/2008 Soil	19484-8 E4/1.0 19/05/2008 Soil	19484-9 E5/0.2 19/05/2008 Soil	19484-10 E5/2.0 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	22/05/2008	22/05/2008	22/05/2008	22/05/2008	22/05/2008
Naphthalene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	0.5	<0.1	<0.1	0.4
Acenaphthene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	0.7	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.7	5.0	<0.1	0.3	1.4
Anthracene	mg/kg	0.2	1.2	<0.1	<0.1	0.4
Fluoranthene	mg/kg	1.5	7.9	<0.1	0.9	5.2
Pyrene	mg/kg	1.7	7.4	<0.1	1.0	5.8
Benzo(a)anthracene	mg/kg	0.8	3.2	<0.1	0.5	2.8
Chrysene	mg/kg	1.0	3.5	<0.1	0.6	3.1
Benzo(b+k)fluoranthene	mg/kg	1.5	4.9	<0.2	0.9	4.6
Benzo(a)pyrene	mg/kg	0.9	3.2	<0.05	0.6	3.1
Dibenzo(a,h)anthracene	mg/kg	0.1	0.4	<0.1	<0.1	0.4
Indeno(1,2,3-c,d)pyrene	mg/kg	0.6	1.9	<0.1	0.4	1.9
Benzo(g,h,i)perylene	mg/kg	0.6	1.8	0.1	0.4	1.7
Surrogate p-Terphenyl-d_{14}	%	109	100	106	110	108

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-11 FR5 19/05/2008 Soil
Date extracted	-	21/05/2008
Date analysed	-	22/05/2008
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.6
Anthracene	mg/kg	0.2
Fluoranthene	mg/kg	1.2
Pyrene	mg/kg	1.2
Benzo(a)anthracene	mg/kg	0.6
Chrysene	mg/kg	0.7
Benzo(b+k)fluoranthene	mg/kg	1.1
Benzo(a)pyrene	mg/kg	0.7
Dibenzo(a,h)anthracene	mg/kg	<0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5
Benzo(g,h,i)perylene	mg/kg	0.5
Surrogate p-Terphenyl-d_{14}	%	108

Organochlorine Pesticides in soil						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	80	74	76	79	72

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-6 E3B/0.5 19/05/2008 Soil	19484-7 E3B/2.0 19/05/2008 Soil	19484-8 E4/1.0 19/05/2008 Soil	19484-9 E5/0.2 19/05/2008 Soil	19484-10 E5/2.0 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	77	81	73	75	79

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-11 FR5 19/05/2008 Soil
Date extracted	-	21/05/2008
Date analysed	-	24/05/2008
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCLMX	%	75

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-1 E1/0.2 19/05/2008 Soil	19484-2 E1/1.5 19/05/2008 Soil	19484-3 E2/0.5 19/05/2008 Soil	19484-4 E2/2.5 19/05/2008 Soil	19484-5 E2/3.5 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	80	74	76	79	72

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-6 E3B/0.5 19/05/2008 Soil	19484-7 E3B/2.0 19/05/2008 Soil	19484-8 E4/1.0 19/05/2008 Soil	19484-9 E5/0.2 19/05/2008 Soil	19484-10 E5/2.0 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	77	81	73	75	79

Organophosphorus Pesticides **Our Reference:** **Your Reference** **Date Sampled** **Type of sample**	**UNITS** ---------- ----------	**19484-11** **FR5** **19/05/2008** **Soil**
Date extracted	-	21/05/2008
Date analysed	-	24/05/2008
Diazinon	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Ethion	mg/kg	<0.1
Surrogate TCLMX	%	75

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-1 E1/0.2 19/05/2008 Soil	19484-2 E1/1.5 19/05/2008 Soil	19484-3 E2/0.5 19/05/2008 Soil	19484-4 E2/2.5 19/05/2008 Soil	19484-5 E2/3.5 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	80	74	76	79	72

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-6 E3B/0.5 19/05/2008 Soil	19484-7 E3B/2.0 19/05/2008 Soil	19484-8 E4/1.0 19/05/2008 Soil	19484-9 E5/0.2 19/05/2008 Soil	19484-10 E5/2.0 19/05/2008 Soil
Date extracted	-	21/05/2008	21/05/2008	21/05/2008	21/05/2008	21/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	77	81	73	75	79

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-11 FR5 19/05/2008 Soil
Date extracted	-	21/05/2008
Date analysed	-	24/05/2008
Arochlor 1016	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	75

Total Phenolics in Soil						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/05/2008	22/05/2008	22/05/2008	22/05/2008	22/05/2008
Date analysed	-	23/05/2008	23/05/2008	23/05/2008	23/05/2008	23/05/2008
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0

Total Phenolics in Soil						
Our Reference:	UNITS	19484-6	19484-7	19484-8	19484-9	19484-10
Your Reference	----------	E3B/0.5	E3B/2.0	E4/1.0	E5/0.2	E5/2.0
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/05/2008	22/05/2008	22/05/2008	22/05/2008	22/05/2008
Date analysed	-	23/05/2008	23/05/2008	23/05/2008	23/05/2008	23/05/2008
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0

Total Phenolics in Soil		
Our Reference:	UNITS	19484-11
Your Reference	----------	FR5
Date Sampled	----------	19/05/2008
Type of sample		Soil
Date extracted	-	22/05/2008
Date analysed	-	23/05/2008
Total Phenolics (as Phenol)	mg/kg	<5.0

Acid Extractable metals in soil						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	22/05/2008	22/05/2008	22/05/2008	22/05/2008	22/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
Arsenic	mg/kg	23	50	7.0	<4.0	<4.0
Cadmium	mg/kg	<1.0	1.3	<1.0	<1.0	<1.0
Chromium	mg/kg	5.5	4.4	15	6.9	1.3
Copper	mg/kg	3,100	3,600	940	260	140
Lead	mg/kg	5,900	1,200	260	200	2.2
Mercury	mg/kg	0.15	0.32	0.15	0.17	<0.10
Nickel	mg/kg	25	35	12	2.2	<1.0
Zinc	mg/kg	800	1,700	540	33	16

Acid Extractable metals in soil						
Our Reference:	UNITS	19484-6	19484-7	19484-8	19484-9	19484-10
Your Reference	----------	E3B/0.5	E3B/2.0	E4/1.0	E5/0.2	E5/2.0
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	22/05/2008	22/05/2008	22/05/2008	22/05/2008	22/05/2008
Date analysed	-	24/05/2008	24/05/2008	24/05/2008	24/05/2008	24/05/2008
Arsenic	mg/kg	8.2	<4.0	<4.0	5.0	<4.0
Cadmium	mg/kg	1.1	<1.0	<1.0	<1.0	<1.0
Chromium	mg/kg	20	13	2.3	9.4	4.3
Copper	mg/kg	3,300	170	47	560	13
Lead	mg/kg	250	110	15	500	21
Mercury	mg/kg	0.26	0.37	<0.10	0.47	<0.10
Nickel	mg/kg	15	41	2.2	11	2.1
Zinc	mg/kg	780	99	48	430	17

Acid Extractable metals in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19484-11 FR5 19/05/2008 Soil
Date digested	-	22/05/2008
Date analysed	-	24/05/2008
Arsenic	mg/kg	6.0
Cadmium	mg/kg	<1.0
Chromium	mg/kg	16
Copper	mg/kg	520
Lead	mg/kg	230
Mercury	mg/kg	0.30
Nickel	mg/kg	15
Zinc	mg/kg	600

Moisture						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/5/08	21/5/08	21/5/08	21/5/08	21/5/08
Date analysed	-	21/5/08	21/5/08	21/5/08	21/5/08	21/5/08
Moisture	%	8.4	7.9	7.2	10	13

Moisture						
Our Reference:	UNITS	19484-6	19484-7	19484-8	19484-9	19484-10
Your Reference	----------	E3B/0.5	E3B/2.0	E4/1.0	E5/0.2	E5/2.0
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/5/08	21/5/08	21/5/08	21/5/08	21/5/08
Date analysed	-	21/5/08	21/5/08	21/5/08	21/5/08	21/5/08
Moisture	%	9.8	14	7.6	12	5.5

Moisture		
Our Reference:	UNITS	19484-11
Your Reference	----------	FR5
Date Sampled	----------	19/05/2008
Type of sample		Soil
Date prepared	-	21/5/08
Date analysed	-	21/5/08
Moisture	%	8.4

Asbestos ID - soils						
Our Reference:	UNITS	19484-1	19484-2	19484-3	19484-4	19484-5
Your Reference	----------	E1/0.2	E1/1.5	E2/0.5	E2/2.5	E2/3.5
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Sample Description	-	30g soil	30g soil	30g soil	30g soil	30g soil
Asbestos ID in soil	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils						
Our Reference:	UNITS	19484-6	19484-7	19484-8	19484-9	19484-10
Your Reference	----------	E3B/0.5	E3B/2.0	E4/1.0	E5/0.2	E5/2.0
Date Sampled	----------	19/05/2008	19/05/2008	19/05/2008	19/05/2008	19/05/2008
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	26/05/2008	26/05/2008	26/05/2008	26/05/2008	26/05/2008
Sample Description	-	30g soil	30g soil	30g soil	30g soil	30g soil
Asbestos ID in soil	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils		
Our Reference:	UNITS	19484-11
Your Reference	----------	FR5
Date Sampled	----------	19/05/2008
Type of sample		Soil
Date analysed	-	26/05/2008
Sample Description	-	30g soil
Asbestos ID in soil	-	No asbestos detected
Trace Analysis	-	Respirable fibres not detected

Method ID	Methodology Summary
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.14	Soil samples extracted with methanol and spiked into water prior to analysing 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.8	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.
LAB.30	Total Phenolics - determined colorimetrically following disitillation.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
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.

QUALITY CONTROL vTPH & BTEX in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-6	21/5/08%
Date analysed	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-6	21/5/08%
vTPH C_6 - C_9	mg/kg	25	GC.16	<25	19484-1	<25 || <25	LCS-6	131%
Benzene	mg/kg	0.5	GC.14	<0.5	19484-1	<0.5 || <0.5	LCS-6	122%
Toluene	mg/kg	0.5	GC.14	<0.5	19484-1	<0.5 || <0.5	LCS-6	133%
Ethylbenzene	mg/kg	1	GC.14	<1.0	19484-1	<1.0 || <1.0	LCS-6	130%
m+p-xylene	mg/kg	2	GC.14	<2.0	19484-1	<2.0 || <2.0	LCS-6	137%
o-Xylene	mg/kg	1	GC.14	<1.0	19484-1	<1.0 || <1.0	LCS-6	134%
Surrogate aaa-Trifluorotoluene	%		GC.14	96	19484-1	95 || 111 || RPD: 16	LCS-6	131%
QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-6	21/5/08%
Date analysed	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-6	21/5/08%
TPH C_{10} - C_{14}	mg/kg	50	GC.3	<50	19484-1	<50 || <50	LCS-6	85%
TPH C_{15} - C_{28}	mg/kg	100	GC.3	<100	19484-1	<100 || 120	LCS-6	82%
TPH C_{29} - C_{36}	mg/kg	100	GC.3	<100	19484-1	<100 || <100	LCS-6	95%
Surrogate o-Terphenyl	%		GC.3	83	19484-1	84 || 86 || RPD: 2	LCS-6	83%
QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-6	21/5/08%
Date analysed	-			22/5/08	19484-1	22/05/2008 || 22/05/2008	LCS-6	22/5/08%
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	<0.1 || <0.1	LCS-6	103%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	<0.1 || <0.1	LCS-6	99%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.3 || 0.6 || RPD: 67	LCS-6	97%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	<0.1 || 0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.7 || 1.0 || RPD: 35	LCS-6	97%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.7 || 1.0 || RPD: 35	LCS-6	99%
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.3 || 0.5 || RPD: 50	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.5 || 0.6 || RPD: 18	LCS-6	120%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	19484-1	0.8 || 0.9 || RPD: 12	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	19484-1	0.4 || 0.6 || RPD: 40	LCS-6	90%
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.3 || 0.4 || RPD: 29	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	19484-1	0.4 || 0.5 || RPD: 22	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		GC.12 subset	111	19484-1	110 || 106 || RPD: 4	LCS-6	105%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-3	21/5/08%
Date analysed	-			24/5/08	19484-1	24/05/2008 || 24/05/2008	LCS-3	24/5/08%
HCB	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	94%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	109%
Heptachlor	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	108%
delta-BHC	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	101%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	105%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	106%
Dieldrin	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	107%
Endrin	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	103%
pp-DDD	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	105%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	LCS-3	106%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	75	19484-1	80 || 73 || RPD: 9	LCS-3	80%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-3	21/5/08%
Date analysed	-			24/5/08	19484-1	24/05/2008 || 24/05/2008	LCS-3	24/5/08%
Diazinon	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	LCS-3	94%
Fenitrothion	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	LCS-3	79%
Bromophos-ethyl	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	GC.8	<0.1	19484-1	<0.1 || <0.1	LCS-3	111%
Surrogate TCLMX	%		GC.8	75	19484-1	80 || 73 || RPD: 9	LCS-3	77%
QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/5/08	19484-1	21/05/2008 || 21/05/2008	LCS-3	21/5/08%
Date analysed	-			24/5/08	19484-1	24/05/2008 || 24/05/2008	LCS-3	24/5/08%
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	19484-1	<0.1 || <0.1	LCS-3	85%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	19484-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-6	75	19484-1	80 || 73 || RPD: 9	LCS-3	128%
QUALITY CONTROL Total Phenolics in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/5/08	19484-9	22/05/2008 || 22/05/2008	LCS-1	22/5/08%
Date analysed	-			23/5/08	19484-9	23/05/2008 || 23/05/2008	LCS-1	23/5/08%
Total Phenolics (as Phenol)	mg/kg	5	LAB.30	<5.0	19484-9	<5.0 || <5.0	LCS-1	96%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			22/5/08	19484-1	22/05/2008 || 22/05/2008	[NR]	[NR]
Date analysed	-			24/5/08	19484-1	24/05/2008 || 24/05/2008	[NR]	[NR]
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4.0	19484-1	23 || 40 || RPD: 54	[NR]	[NR]
Cadmium	mg/kg	1	Metals.20 ICP-AES	<1.0	19484-1	<1.0 || 1.5	[NR]	[NR]
Chromium	mg/kg	1	Metals.20 ICP-AES	<1.0	19484-1	5.5 || 6.5 || RPD: 17	[NR]	[NR]
Copper	mg/kg	1	Metals.20 ICP-AES	<1.0	19484-1	3100 || 3200 || RPD: 3	[NR]	[NR]

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Lead	mg/kg	1	Metals.20 ICP-AES	<1.0	19484-1	5900 || 7200 || RPD: 20	[NR]	[NR]
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.10	19484-1	0.15 || 0.23 || RPD: 42	[NR]	[NR]
Nickel	mg/kg	1	Metals.20 ICP-AES	<1.0	19484-1	25 || 42 || RPD: 51	[NR]	[NR]
Zinc	mg/kg	1	Metals.20 ICP-AES	<1.0	19484-1	800 || 1600 || RPD: 67	[NR]	[NR]

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD
Date prepared	-			21/5/08	19484-1	21/5/08 || 21/5/08
Date analysed	-			21/5/08	19484-1	21/5/08 || 21/5/08
Moisture	%	0.1	LAB.8	<0.10	19484-1	8.4 || 8.4 || RPD: 0

QUALITY CONTROL Asbestos ID - soils	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL vTPH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	19484-2	21/5/08%
Date analysed	-	[NT]	[NT]	19484-2	21/5/08%
vTPH C_6 - C_9	mg/kg	[NT]	[NT]	19484-2	120%
Benzene	mg/kg	[NT]	[NT]	19484-2	125%
Toluene	mg/kg	[NT]	[NT]	19484-2	125%
Ethylbenzene	mg/kg	[NT]	[NT]	19484-2	110%
m+p-xylene	mg/kg	[NT]	[NT]	19484-2	120%
o-Xylene	mg/kg	[NT]	[NT]	19484-2	125%
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	19484-2	98%

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	19484-2	21/5/08%
Date analysed	-	[NT]	[NT]	19484-2	21/5/08%
TPH C_{10} - C_{14}	mg/kg	[NT]	[NT]	19484-2	84%
TPH C_{15} - C_{28}	mg/kg	[NT]	[NT]	19484-2	138%
TPH C_{29} - C_{36}	mg/kg	[NT]	[NT]	19484-2	#
Surrogate o-Terphenyl	%	[NT]	[NT]	19484-2	70%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	19484-2	21/5/08%
Date analysed	-	[NT]	[NT]	19484-2	22/5/08%
Naphthalene	mg/kg	[NT]	[NT]	19484-2	99%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	19484-2	96%
Phenanthrene	mg/kg	[NT]	[NT]	19484-2	90%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	19484-2	85%
Pyrene	mg/kg	[NT]	[NT]	19484-2	91%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	19484-2	113%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	19484-2	136%
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	[NT]	[NT]	19484-2	97%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	19484-11	21/05/2008 || 21/05/2008	19484-2	21/5/08%
Date analysed	-	19484-11	24/05/2008 || 24/05/2008	19484-2	24/5/08%
HCB	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	19484-11	<0.1 || <0.1	19484-2	85%
gamma-BHC	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	19484-11	<0.1 || <0.1	19484-2	98%
Heptachlor	mg/kg	19484-11	<0.1 || <0.1	19484-2	99%
delta-BHC	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	19484-11	<0.1 || <0.1	19484-2	75%
Heptachlor Epoxide	mg/kg	19484-11	<0.1 || <0.1	19484-2	97%
gamma-Chlordane	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	19484-11	<0.1 || <0.1	19484-2	96%
Dieldrin	mg/kg	19484-11	<0.1 || <0.1	19484-2	98%
Endrin	mg/kg	19484-11	<0.1 || <0.1	19484-2	96%
pp-DDD	mg/kg	19484-11	<0.1 || <0.1	19484-2	98%
Endosulfan II	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	19484-11	<0.1 || <0.1	19484-2	96%
Methoxychlor	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	19484-11	75 || 75 || RPD: 0	19484-2	75%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	19484-11	21/05/2008 || 21/05/2008	19484-2	21/5/08%
Date analysed	-	19484-11	24/05/2008 || 24/05/2008	19484-2	24/5/08%
Diazinon	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	19484-11	<0.1 || <0.1	19484-2	83%
Fenitrothion	mg/kg	19484-11	<0.1 || <0.1	19484-2	71%
Bromophos-ethyl	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	19484-11	<0.1 || <0.1	19484-2	106%
Surrogate TCLMX	%	19484-11	75 || 75 || RPD: 0	19484-2	85%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	19484-11	21/05/2008 || 21/05/2008	19484-2	21/5/08%
Date analysed	-	19484-11	24/05/2008 || 24/05/2008	19484-2	24/5/08%
Arochlor 1016	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	19484-11	<0.1 || <0.1	19484-2	84%
Arochlor 1260	mg/kg	19484-11	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	19484-11	75 || 75 || RPD: 0	19484-2	118%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	19484-2	22/5/08%
Date analysed	-	[NT]	[NT]	19484-2	24/5/08%
Arsenic	mg/kg	[NT]	[NT]	19484-2	77%
Cadmium	mg/kg	[NT]	[NT]	19484-2	100%
Chromium	mg/kg	[NT]	[NT]	19484-2	103%
Copper	mg/kg	[NT]	[NT]	19484-2	#
Lead	mg/kg	[NT]	[NT]	19484-2	#
Mercury	mg/kg	[NT]	[NT]	19484-2	97%
Nickel	mg/kg	[NT]	[NT]	19484-2	85%
Zinc	mg/kg	[NT]	[NT]	19484-2	#

QUALITY CONTROL Moisture	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date prepared	-	19484-11	21/5/08 || 21/5/08
Date analysed	-	19484-11	21/5/08 || 21/5/08
Moisture	%	19484-11	8.4 || 8.4 || RPD: 0

Report Comments:

Total Petroleum Hydrocarbons in water: Spike 2 - # Percent recovery not available due to sample matrix.

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.

Trace Elements: the hiigh %RPD of the duplicate results obtained for some elements sample 1 is due to the non homogeneous nature of the sample.
#: spike recovery could not be calculated due to a high level of the analytes present in the sample. However, acceptable recoveries have been obtained for the laboratory Control Sample.
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.

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

SAMPLE RECEIPT ADVICE

Client:

Douglas Partners
96 Hermitage Rd
West Ryde NSW 2114

ph: 02 9809 0666
Fax: 02 9809 4095

Attention: Peter Oitmaa

Sample log in details:

Your reference:	**45586, Alexandria**
Envirolab Reference:	**19484**
Date received:	20/05/08
Date results expected to be reported:	**27/05/08**

Samples received in appropriate condition for analysis:	YES
Turnaround time requested:	Standard
Temperature on receipt	Cool
Cooling Method:	Ice Pack
Completed documentation received:	YES

Comments:

Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

CHAIN OF CUSTODY

Douglas Partners
Geotechnics · Environment · Groundwater

Project Name: Alexandria
Project No: 45586 Sampler: MM
Project Mgr: Peter Oitmaa Mob. Phone: 0412 574 518
Email: oitmaap@douglaspartners.com.au
Date Required: Std Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2067
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Sample Depth	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type	Analytes: 8 Metals (As, Cd, Cr, Cu, Pb, Hg, Zn, Ni)	BTEX/ TPH	PAH	OCP/ OPP	PCB	Phenols	Asbestos	TCLP	Notes
E1	0.2	1	19/5	S	Jar									
E1	1.5	2												
E2	0.5	3												
E2	2.5	4												
E2	3.5	5												
E3B	0.5	6												
E3B	2.0	7												
E4	1.0	8												
E5	0.2	9												
E5	2.0	10												
FR 5	N/A	11												

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114
Relinquished by: P. Oitmaa Signed: Date & Time: 20/5/08 Received By: Date & Time:
Relinquished by: Signed: Date & Time: Received By: Date & Time:

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200
Phone: 02) 9809 0666
(02) 9809 4095

Job No: 19484
Date received: 20/5/08
Time received: 12 pm
Received by:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

All Jobs are BH

Page ___ of ___

Form COC Rev0/November 2006

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

CERTIFICATE OF ANALYSIS 19793

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: Peter Oitmaa

Sample log in details:

Your Reference:	**45586, Alexandria**
No. of samples:	2 Waters
Date samples received:	29/05/08
Date completed instructions received:	29/05/08

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

vTPH & BTEX in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19793-1 BHE1 29/05/2008 Water	19793-2 BHE5 29/05/2008 Water
Date extracted	-	31/05/2008	31/05/2008
Date analysed	-	31/05/2008	31/05/2008
TPH C_6 - C_9	µg/L	390	300
Benzene	µg/L	96	69
Toluene	µg/L	53	38
Ethylbenzene	µg/L	18	12
m+p-xylene	µg/L	92	64
o-xylene	µg/L	21	15
Surrogate Dibromofluoromethane	%	113	115
Surrogate toluene-d8	%	100	99
Surrogate 4-BFB	%	106	105

sTPH in Water (C10-C36) Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19793-1 BHE1 29/05/2008 Water	19793-2 BHE5 29/05/2008 Water
Date extracted	-	30/05/2008	30/05/2008
Date analysed	-	31/05/2008	31/05/2008
TPH C_{10} - C_{14}	µg/L	870	1,000
TPH C_{15} - C_{28}	µg/L	360	480
TPH C_{29} - C_{36}	µg/L	490	440
Surrogate o-Terphenyl	%	123	77

PAHs in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19793-1 BHE1 29/05/2008 Water	19793-2 BHE5 29/05/2008 Water
Date extracted	-	30/05/2008	30/05/2008
Date analysed	-	30/05/2008	30/05/2008
Naphthalene	µg/L	34	35
Acenaphthylene	µg/L	<1	<1
Acenaphthene	µg/L	<1	<1
Fluorene	µg/L	<1	<1
Phenanthrene	µg/L	<1	<1
Anthracene	µg/L	<1	<1
Fluoranthene	µg/L	<1	<1
Pyrene	µg/L	<1	<1
Benzo(a)anthracene	µg/L	<1	<1
Chrysene	µg/L	<1	<1
Benzo(b+k)fluoranthene	µg/L	<2	<2
Benzo(a)pyrene	µg/L	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1
Surrogate p-Terphenyl-d_{14}	%	88	98

OCP in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19793-1 BHE1 29/05/2008 Water	19793-2 BHE5 29/05/2008 Water
Date extracted	-	30/05/2008	30/05/2008
Date analysed	-	31/05/2008	31/05/2008
HCB	µg/L	<0.2	<0.2
alpha-BHC	µg/L	<0.2	<0.2
gamma-BHC	µg/L	<0.2	<0.2
beta-BHC	µg/L	<0.2	<0.2
Heptachlor	µg/L	<0.2	<0.2
delta-BHC	µg/L	<0.2	<0.2
Aldrin	µg/L	<0.2	<0.2
Heptachlor Epoxide	µg/L	<0.2	<0.2
gamma-Chlordane	µg/L	<0.2	<0.2
alpha-Chlordane	µg/L	<0.2	<0.2
Endosulfan I	µg/L	<0.2	<0.2
pp-DDE	µg/L	<0.2	<0.2
Dieldrin	µg/L	<0.2	<0.2
Endrin	µg/L	<0.2	<0.2
pp-DDD	µg/L	<0.2	<0.2
Endosulfan II	µg/L	<0.2	<0.2
DDT	µg/L	<0.2	<0.2
Endrin Aldehyde	µg/L	<0.2	<0.2
Endosulfan Sulphate	µg/L	<0.2	<0.2
Methoxychlor	µg/L	<0.2	<0.2
Surrogate TCLMX	%	97	76

OP Pesticides in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19793-1 BHE1 29/05/2008 Water	19793-2 BHE5 29/05/2008 Water
Date extracted	-	30/05/2008	30/05/2008
Date analysed	-	31/05/2008	31/05/2008
Diazinon	µg/L	<0.2	<0.2
Dimethoate	µg/L	<0.2	<0.2
Chlorpyriphos-methyl	µg/L	<0.2	<0.2
Ronnel	µg/L	<0.2	<0.2
Chlorpyriphos	µg/L	<0.2	<0.2
Fenitrothion	µg/L	<0.2	<0.2
Bromophos ethyl	µg/L	<0.2	<0.2
Ethion	µg/L	<0.2	<0.2
Surrogate TCLMX	%	97	76

PCBs in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	19793-1 BHE1 29/05/2008 Water	19793-2 BHE5 29/05/2008 Water
Date extracted	-	30/05/2008	30/05/2008
Date analysed	-	31/05/2008	31/05/2008
Arochlor 1016	µg/L	<2	<2
Arochlor 1232	µg/L	<2	<2
Arochlor 1242	µg/L	<2	<2
Arochlor 1248	µg/L	<2	<2
Arochlor 1254	µg/L	<2	<2
Arochlor 1260	µg/L	<2	<2
Surrogate TCLMX	%	97	76

Total Phenolics in Water			
Our Reference:	UNITS	19793-1	19793-2
Your Reference	----------	BHE1	BHE5
Date Sampled	----------	29/05/2008	29/05/2008
Type of sample		Water	Water
Date extracted	-	30/05/2008	30/05/2008
Date analysed	-	2/06/2008	2/06/2008
Total Phenolics (as Phenol)	mg/L	<0.050	<0.050

HM in water - dissolved			
Our Reference:	UNITS	19793-1	19793-2
Your Reference	----------	BHE1	BHE5
Date Sampled	----------	29/05/2008	29/05/2008
Type of sample		Water	Water
Date prepared	-	2/06/2008	2/06/2008
Date analysed	-	2/06/2008	2/06/2008
Arsenic-Dissolved	µg/L	<1.0	<1.0
Cadmium-Dissolved	µg/L	<0.10	<0.10
Chromium-Dissolved	µg/L	<1.0	<1.0
Copper-Dissolved	µg/L	<1.0	<1.0
Lead-Dissolved	µg/L	<1.0	<1.0
Mercury-Dissolved	µg/L	<0.50	<0.50
Nickel-Dissolved	µg/L	4.5	3.7
Zinc-Dissolved	µg/L	8.8	5.8

Method ID	Methodology Summary
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.13	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.8	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.
LAB.30	Total Phenolics - determined colorimetrically following disitillation.
Metals.22 ICP-MS	Determination of various metals by ICP-MS.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL vTPH & BTEX in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			31/5/08	[NT]	[NT]	LCS-W1	31/5/08%
Date analysed	-			31/5/08	[NT]	[NT]	LCS-W1	31/5/08%
TPH C_6 - C_9	µg/L	10	GC.16	<10	[NT]	[NT]	LCS-W1	109%
Benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	107%
Toluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	110%
Ethylbenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	108%
m+p-xylene	µg/L	2	GC.13	<2.0	[NT]	[NT]	LCS-W1	109%
o-xylene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	107%
Surrogate Dibromofluoromethane	%		GC.13	130	[NT]	[NT]	LCS-W1	102%
Surrogate toluene-d8	%		GC.13	106	[NT]	[NT]	LCS-W1	99%
Surrogate 4-BFB	%		GC.13	93	[NT]	[NT]	LCS-W1	98%
QUALITY CONTROL sTPH in Water (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/5/08	[NT]	[NT]	LCS-W1	30/5/08%
Date analysed	-			31/5/08	[NT]	[NT]	LCS-W1	31/5/08%
TPH C_{10} - C_{14}	µg/L	50	GC.3	<50	[NT]	[NT]	LCS-W1	91%
TPH C_{15} - C_{28}	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W1	90%
TPH C_{29} - C_{36}	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W1	100%
Surrogate o-Terphenyl	%		GC.3	136	[NT]	[NT]	LCS-W1	138%
QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/5/08	[NT]	[NT]	LCS-W1	30/5/08%
Date analysed	-			30/5/08	[NT]	[NT]	LCS-W1	30/5/08%
Naphthalene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	88%
Acenaphthylene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	85%
Phenanthrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	84%
Anthracene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	83%
Pyrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	86%
Benzo(a)anthracene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Chrysene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	101%
Benzo(b+k)fluoranthene	µg/L	2	GC.12 subset	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	80%
Indeno(1,2,3-c,d)pyrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		GC.12 subset	120	[NT]	[NT]	LCS-W1	120%
QUALITY CONTROL OCP in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/5/08	[NT]	[NT]	LCS-W1	30/5/08%
Date analysed	-			31/5/08	[NT]	[NT]	LCS-W1	1/6/08%
HCB	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
alpha-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	140%
gamma-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
beta-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	127%
Heptachlor	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	118%
delta-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Aldrin	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	104%
Heptachlor Epoxide	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	118%
gamma-Chlordane	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
alpha-Chlordane	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Endosulfan I	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
pp-DDE	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	128%
Dieldrin	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	122%
Endrin	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	123%
pp-DDD	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	120%
Endosulfan II	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
DDT	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	132%
Methoxychlor	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		GC-5	100	[NT]	[NT]	LCS-W1	97%

QUALITY CONTROL OP Pesticides in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/5/08	[NT]	[NT]	LCS-W1	30/5/08%
Date analysed	-			31/5/08	[NT]	[NT]	LCS-W1	1/6/08%
Diazinon	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Dimethoate	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos-methyl	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Ronnel	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	µg/L	0.2	GC.8	96	[NT]	[NT]	LCS-W1	96%
Fenitrothion	µg/L	0.2	GC.8	83	[NT]	[NT]	LCS-W1	83%
Bromophos ethyl	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Ethion	µg/L	0.2	GC.8	130	[NT]	[NT]	LCS-W1	130%
Surrogate TCLMX	%		GC.8	100	[NT]	[NT]	LCS-W1	100%
QUALITY CONTROL PCBs in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/5/08	[NT]	[NT]	LCS-W1	30/5/08%
Date analysed	-			31/5/08	[NT]	[NT]	LCS-W1	1/6/08%
Arochlor 1016	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	µg/L	2	GC-6	89	[NT]	[NT]	LCS-W1	89%
Arochlor 1260	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		GC-6	119	[NT]	[NT]	LCS-W1	119%
QUALITY CONTROL Total Phenolics in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			30/5/08	[NT]	[NT]	LCS-1	30/5/08%
Date analysed	-			2/6/08	[NT]	[NT]	LCS-1	2/6/08%
Total Phenolics (as Phenol)	mg/L	0.05	LAB.30	<0.050	[NT]	[NT]	LCS-1	95%
QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			2/6/08	19793-1	2/06/2008 || 2/06/2008	LCS-W1	2/6/08%
Date analysed	-			2/6/08	19793-1	2/06/2008 || 2/06/2008	LCS-W1	2/6/08%
Arsenic-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	19793-1	<1.0 || <1.0	LCS-W1	105%
Cadmium-Dissolved	µg/L	0.1	Metals.22 ICP-MS	<0.10	19793-1	<0.10 || <0.10	LCS-W1	89%
Chromium-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	19793-1	<1.0 || <1.0	LCS-W1	98%
Copper-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	19793-1	<1.0 || <1.0	LCS-W1	102%

QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Lead-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	19793-1	<1.0 || <1.0	LCS-W1	92%
Mercury-Dissolved	µg/L	0.5	Metals.21 CV-AAS	<0.50	19793-1	<0.50 || <0.50	LCS-W1	95%
Nickel-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	19793-1	4.5 || 4.8 || RPD: 6	LCS-W1	100%
Zinc-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	19793-1	8.8 || 6.6 || RPD: 29	LCS-W1	96%

QUALITY CONTROL HM in water - dissolved	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	19793-2	2/6/08%
Date analysed	-	[NT]	[NT]	19793-2	2/6/08%
Arsenic-Dissolved	µg/L	[NT]	[NT]	19793-2	102%
Cadmium-Dissolved	µg/L	[NT]	[NT]	19793-2	86%
Chromium-Dissolved	µg/L	[NT]	[NT]	19793-2	100%
Copper-Dissolved	µg/L	[NT]	[NT]	19793-2	98%
Lead-Dissolved	µg/L	[NT]	[NT]	19793-2	90%
Mercury-Dissolved	µg/L	[NT]	[NT]	19793-2	102%
Nickel-Dissolved	µg/L	[NT]	[NT]	19793-2	99%
Zinc-Dissolved	µg/L	[NT]	[NT]	19793-2	92%

Report Comments:

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.

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

SAMPLE RECEIPT ADVICE

Client:

Douglas Partners
96 Hermitage Rd
West Ryde NSW 2114

ph: 02 9809 0666
Fax: 02 9809 4095

Attention: Peter Oitmaa

Sample log in details:

Your reference:	**45586, Alexandria**
Envirolab Reference:	**19793**
Date received:	29/05/08
Date results expected to be reported:	**2/06/08**

Samples received in appropriate condition for analysis:	YES
Turnaround time requested:	48hr
Temperature on receipt	Cool
Cooling Method:	Ice Pack
Completed documentation received:	YES

Comments:

Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Alexandra
Project No: 45586 Sampler: PMO
Project Mgr: Peter Oitmaa Mob. Phone: 0412 574 518
Email: peter.oitmaa@douglaspartners.com.au
Date Required: As soon as possible (≈ 48hrs) i.e. Monday Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2067
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Sample Depth	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type	Analytes: 8 Metals (As, Cd, Cr, Cu, Pb, Hg, Zn, Ni)	BTEX/ TPH	PAH	OCP/ OPP	PCB	Phenols	Asbestos	TCLP (Metals/ PAH)	Notes
BHE1	–	(1)	29/5	W	Jars									
BHE5	–	(2)	"	"	"									

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

Job No: 19793
Date received: 29/5/08
Time received: 4:30 pm
Received By: HM
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114 Phone: (02) 9809 0666 Fax: (02) 9809 4095

Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:
P. Oitmaa		29/5/08		
Relinquished by:	Signed:	Date & Time:	Received By:	Date & Time:

APPENDIX E
Aerial Photographs and Historical Information

Photo 1: Aerial Photograph 1951

Photo 2: Aerial Photograph 1965

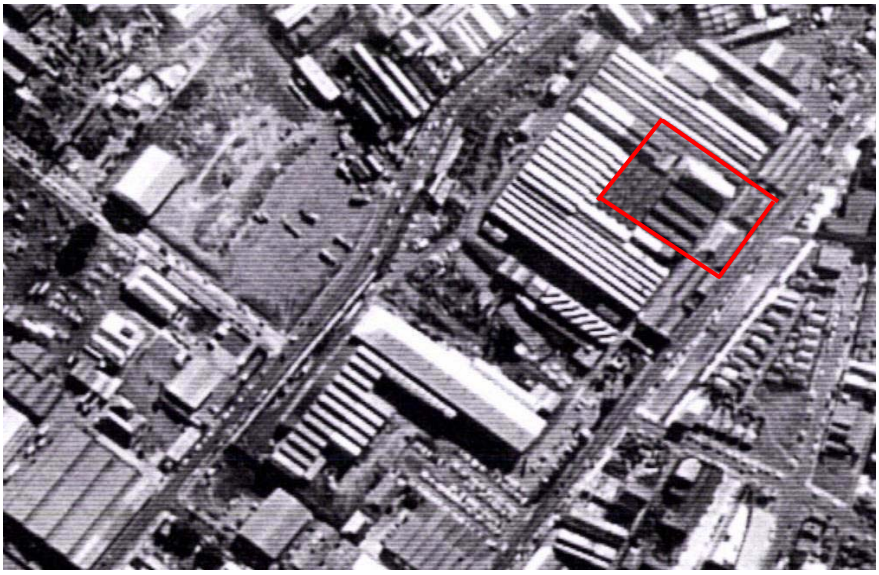


Photo 3: Aerial Photograph 1970

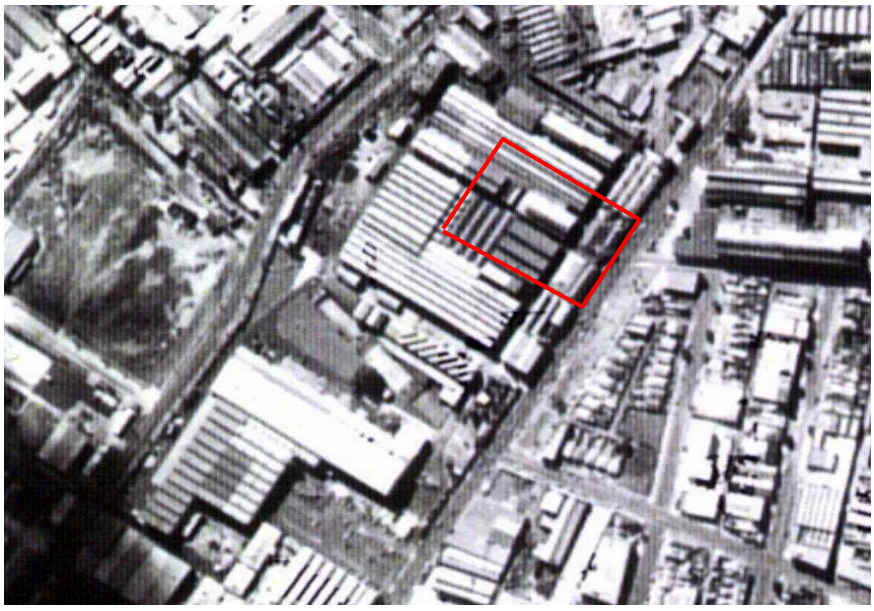


Photo 4: Aerial Photograph 1978

Photo 5: Aerial Photograph 1986

Photo 6: Aerial Photograph 1994

ACN: 093 412 474
ABN: 61 093 412 474

Peter S. Hopley Pty Limited
Legal Searchers

1 Boronia Avenue
Mount Annan , NSW , 2567
Mobile: 0412 199 304
Fax 9233 4590 (Attn Box 29)

SUMMARY AS TO OWNERS.

Property: 17 O'Riordan Street, Alexandria

Description: - Lot 4 D.P. 794095

12.12.1918	Austral Bronze Company Pty Limited	Vol 6852 Fol 103
21.09.1970	Austral Bronze Copper Limited	Vol 6852 Fol 103
26.09.1989	Leda Holdings Pty Limited	4/794095
28.02.1990	Court Developments Pty Limited	4/794095
06.03.1995	Prudential Assurance Company Limited	4/794095
19.03.1997	Prudential Corporation Australia Limited	4/794095
16.03.1999	Permanent Trustee Australia Limited	4/794095
27.10.2000	# Perpetual Nominees Limited	4/794095

 # Current Registered Proprietor

email: grolly1@bigpond.net.au

22/5/08

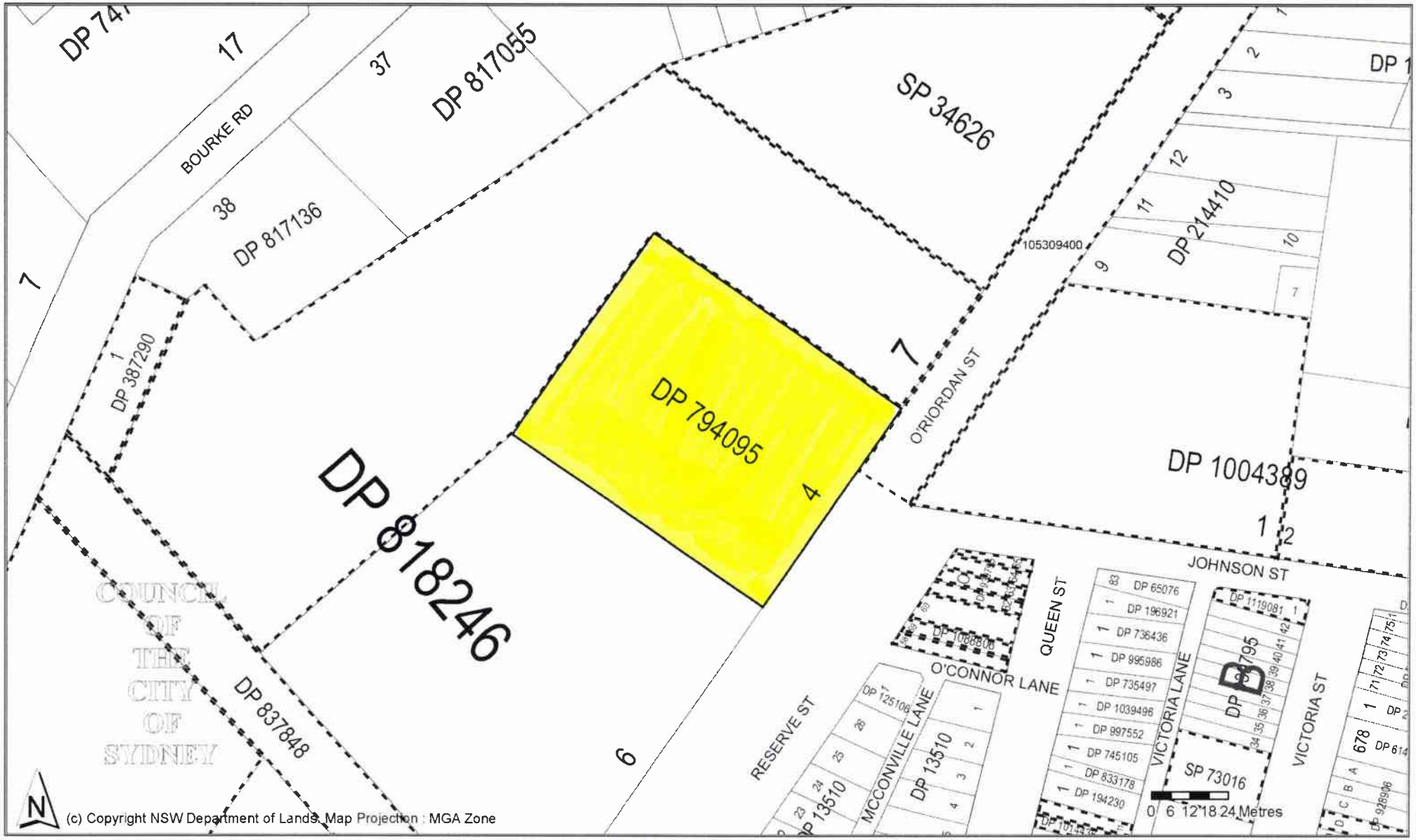
Department of Lands
Reliable from the ground up

Cadastral Records Enquiry Report

Ref : surv:scim-grollm

Requested Parcel : Lot 4 DP 794095 **Identified Parcel :** Lot 4 DP 794095

Locality : ALEXANDRIA **LGA :** SYDNEY **Parish :** ALEXANDRIA **County :** CUMBERLAND



PLAN FORM 2

Plan Drawing only to appear in this space

*OFFICE USE ONLY

DP 794095

SIGNATURE AND SEALS ONLY.

The Common Seal of Leda Holdings Pty. Limited was duly affixed pursuant to a resolution of the Board in the presence of:

A. Taylor
Secretary

Director

LEDA HOLDINGS PTY. LIMITED
Common Seal

Registered 19-12-1989

C.A. N° 41/89 OF 26-7-1989

Title System TORRENS

Purpose SUBDIVISION

Ref Map SOUTH SYDNEY SH. 8

Last Plan DP 84117, DP 83768

PLAN OF SUBDIVISION OF LOTS A, B & C D.P. 84117 AND PT. LOT 1 D.P. 83768

Lengths are in metres. Reduction Ratio 1:1000

Mun./Shire City SOUTH SYDNEY

Locality ALEXANDRIA

Parish ALEXANDRIA

County CUMBERLAND

(Delete if inapplicable)

I, PAUL NORMAN SWAN

of AUSTIN SWAN CONROY P.O. BOX 1245 BANKSTOWN

a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in the plan is accurate and has been made in accordance with the Survey Practice Regulations, 1933 and any relevant requirements of the Department of Lands, and was completed on 7th November 1989

Signature [signature] Surveyor registered under Surveyors Act, 1929, as amended. Datum Line of Azimuth: X-Y Bearing scale of Azimuth

Plans used in preparation of survey/compilation

D.P. 84117	D.P. 225391
D.P. 83768	D.P. 573529
D.P. 387290	D.P. 612682
D.P. 79530	D.P. 39201
D.P. 574455	D.P. 448379

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants

PURSUANT TO SEC 88B OF THE CONVEYANCING ACT 1919 AS AMENDED, IT IS INTENDED TO CREATE IN THE TERMS OF THE ACCOMPANYING INSTRUMENT: ~~SIGNED BY THE COUNCIL CLERK~~

1. EASEMENT TO DRAIN WATER 1-2 WIDE
2. RESTRICTION AS TO USER
3. RESTRICTION AS TO USER

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....

Paper No. .....

Field Book ..... pages .....

Council Clerk's Certificate

I hereby certify that —

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

~~(b) the requirements of section 240 of the Metropolitan Water, Sewerage and Drainage Act, 1924, as amended / Hunter District Water, Sewerage and Drainage Act, 1938, as amended~~

have been complied with by the applicant in relation to the proposed "Subdivision" (insert "new road", "subdivision" or "consolidated lot") set out herein.

Subdivision No 41/89

Date 27th September, 1988 & 26th July, 1989.

(Signature) Deputy Town ~~Council~~ Clerk

Council File No. 508-00052 & 508-00025

~~* This part of certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board.~~

~~† Delete if inapplicable.~~

SURVEYOR'S REFERENCE C587/E1553/170

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

AMENDMENTS AND/OR ADDITIONS MADE ON PLAN IN THE LAND TITLES OFFICE

10 20 30 40 50 60 70 Table of mm 110 120 130 140

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day. 11th JANUARY, 1990

Amended in Office of Surveyor-General 4.1.1990

Y 0 0 3 A 1 A

Req:R366286 /Doc:DP 0794095 P /Rev:14-Jun-1992 /Sts:OK.OK /Prt:21-May-2008 21:33 /Pgs:ALL /Seq:1 of 1
Ref:OITMAA /Src:B

LegalStream Australia Pty Ltd

ABN: 80 002 801 498
Level 10, 135 King Street, SYDNEY NSW 2000, AUSTRALIA * DX654, SYDNEY
Tel: (02) 9231 0122 Fax: (02) 9233 6411 www.legalstream.com.au

An Approved
LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
21/5/2008 9:32PM

FOLIO: 4/794095

First Title(s): OLD SYSTEM
Prior Title(s): VOL 6858 FOL 203

Recorded	Number	Type of Instrument	C.T. Issue
19/12/1989	DP794095	DEPOSITED PLAN	FOLIO CREATED EDITION 1
28/2/1990	Y863360	TRANSFER	EDITION 2
13/11/1990	Z327739	CAVEAT	
21/5/1992	E472710	CAVEAT	
13/7/1992	E603680	WITHDRAWAL OF CAVEAT	
13/10/1992	E821777	CAVEAT	
4/8/1994	U502651	WITHDRAWAL OF CAVEAT	
15/12/1994	U873068	CAVEAT	
3/1/1995	U910861	WITHDRAWAL OF CAVEAT	
6/3/1995	O45145	WITHDRAWAL OF CAVEAT	
6/3/1995	O45146	REQUEST	
6/3/1995	O45147	TRANSFER	EDITION 3
17/5/1996	2084896	LEASE	EDITION 4
19/3/1997	2913811	TRANSFER	EDITION 5
4/9/1997		AMENDMENT: LOCAL GOVT AREA	
6/1/1999	5510444	CAVEAT	
16/3/1999	5676877	TRANSFER	EDITION 6
27/10/2000	7161747	APPLICATION	
27/10/2000	7161748	TRANSFER	EDITION 7
17/7/2003	9798611	MORTGAGE	EDITION 8
14/3/2004	AA472866	DEPARTMENTAL DEALING	

END OF PAGE 1 - CONTINUED OVER

oitmaa

PRINTED ON 21/5/2008

97-01T

TRANSFER

Real Property Act, 1900

0
045147 N

B10
/Reg: R366288
/Doc: DL 0045147
/Prt: 21-May-2008

42

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

FOLIO IDENTIFIER 4/794095

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
599D	MINTER ELLISON DX 117 SYDNEY 210 4817 REFERENCE (max. 15 characters): DEM 1032191

(C) **TRANSFEROR** COURT DEVELOPMENTS PTY LIMITED ACN 003 464 033

(D) acknowledges receipt of the consideration of $2,100,000.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

(G) T

THE PRUDENTIAL ASSURANCE COMPANY LIMITED
ARBN 000 001 561

TENANCY:

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** 23.2.1995

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

THE COMMON SEAL OF
COURT DEVELOPMENTS PTY LTD ACN 003
WAS HEREUNTO AFFIXED BY
AUTHORITY OF THE BOARD OF
DIRECTORS IN THE PRESENCE OF

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

SECRETARY DIRECTOR/S

COURT DEVELOPMENTS PTY LTD A.C.N. 003 464 033
THE COMMON SEAL OF

(Director)

Signature of Transferor

Signed in my presence by the Transferee who is personally known to

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

D. McElhone

David McElhone
~~Signature of Transferee~~
Solicitor for the Transferee

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

CHECKED BY (office use only)

Form: 97-01T
Licence: 026CN/0526/96

TRANSFER

New South Wales

Real Property Act 1900

30166717C

Instructions for filling out this form are available from the Land Titles Office

Office of State Revenue use only

N.S.W. STAMP DUTY
$2.00
12039? 1421 04 20155983?/03

(A) **LAND TRANSFERRED**
Show no more than 20 titles. If appropriate, specify the share or part transferred.

Folio identifier 4/794095

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone
41J	Mallesons Stephen Jaques DX 113 Sydney (02) 9296 2000 REFERENCE (15 character maximum): MLD 03-5006-4528 ~~0372885.01~~

(C) **TRANSFEROR** PRUDENTIAL CORPORATION AUSTRALIA LIMITED (ACN 066 649 241) of Level 19, The Prudential Building, 34-49 Martin Place, Sydney NSW

(D) acknowledges receipt of the consideration of $7,800,000.00
and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable) 1. 2084896 2. 3.

(F) **TRANSFEREE**

T TS (s713 LGA) TW (Sheriff)	PERMANENT TRUSTEE AUSTRALIA LIMITED (ACN 008 412 913) of 294-296 Collins Street, Melbourne VIC

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. DATE .....

~~Signed in my presence by the transferor who is personally known to me.~~
THE COMMON SEAL of PRUDENTIAL CORPORATION AUSTRALIA LIMITED IS DULY AFFIXED BY AUTHORITY OF THE DIRECTORS IN THE PRESENCE OF:

PRUDENTIAL CORPORATION AUSTRALIA LIMITED Common Seal ACN 066 649 241

~~Signature of Witness~~

~~Name of Witness (BLOCK LETTERS)~~

Address of Witness

C. SECRETARY MANDRAS T. JAY DIRECTOR
Signature of Transferor

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

PERMANENT TRUSTEE AUSTRALIA LIMITED ACN 008 412 913 by its Attorneys who state that they have no notice of revocation of the Power of Attorney dated 2nd June 1993, whereby they execute this deed document or instrument, Registered Number:

Group A Attorney	Group B Attorney
Signature	
Name S.C. [illegible]	Signature of Transferee R T MARTIN

Signature of Witness

ANDREW DOUGLAS
294-296 COLLINS STREET
MELBOURNE 3000
CLERICAL ASSISTANT

~~Name of Witness (BLOCK LETTERS)~~

Address of Witness

NB: if signed on the tranferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name in block letters.

Reg: 12513

CHECKED BY (LTO use) .....

OFFICE 5510444 Comments to

LegalStream Australia Pty Ltd

ABN: 80 002 801 498
Level 10, 135 King Street, SYDNEY NSW 2000, AUSTRALIA * DX654, SYDNEY
Tel: (02) 9231 0122 Fax: (02) 9233 6411 www.legalstream.com.au

An Approved
LPI NSW
Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 4/794095

SEARCH DATE	TIME	EDITION NO	DATE
21/5/2008	9:32 PM	11	13/12/2007

LAND

LOT 4 IN DEPOSITED PLAN 794095
AT ALEXANDRIA
LOCAL GOVERNMENT AREA SYDNEY
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP794095

FIRST SCHEDULE

PERPETUAL NOMINEES LIMITED (T 7161748)

SECOND SCHEDULE (4 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 EASEMENT(S) APPURTENANT TO THE LAND ABOVE DESCRIBED CREATED BY:
G83776 FOR SUPPORT
3 DP794095 RESTRICTION(S) ON THE USE OF LAND
O45146 VARIATION
4 AD630586 LEASE TO OVERSTOCKOUTLET PTY LIMITED OF GREEN SQUARE INDUSTRIAL ESTATE, 17 O'RIORDAN STREET, ALEXANDRIA. EXPIRES: 14/8/2011.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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