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AUSTRALIA

Environmental - Remediation - Engineering - Laboratories - Drilling

PHASE II ENVIRONMENTAL SITE ASSESSMENT

2 Factory Street, Granville NSW

Prepared for

MDM Pty Ltd

May 2011

HEAD OFFICE: PO Box 398 Drummoyne NSW 1470
Telephone: 1300 137 038 Facsimile: 1300 136 038 Email: admin@aargus.net Website: www.aargus.net
Aargus Pty Ltd ACN 063 579 313 Aargus Engineering Pty Ltd ACN 050 212 710 Aargus Laboratories Pty Ltd ACN 086 993 937

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DOCUMENT HISTORY

Revision No.	Revision Date	Description
0	18/05/12	Initial Issue

Issued By: .....

Date: 18/05/12.....

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REFERENCES

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- Environmental Resources Management Pty Ltd (2001) - "Preliminary Environmental Site Assessment, 2 Factory Street, Granville NSW". (Report no. 101135RP1, dated May 2001).
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- NSW EPA "Guidelines for Assessing Service Station Sites" (1994). NSW Environment Protection Authority, Sydney.
- NSW EPA "Guidelines for the NSW Site Auditor Scheme" (2006). NSW Environment Protection Authority, Sydney.
- NSW EPA "Guidelines for Consultants Reporting on Contaminated Sites" (2011). NSW Environment Protection Authority, Sydney.
- National Environment Protection Council "Guideline on the Investigation Levels for Soil and Groundwater", NEPM, 1999.
- National Environmental Protection (Assessment of Site Contamination) Measure, NEPC Schedule B series, 1999.
- ANZECC National Water Quality Management Strategy "Australian Water Quality Guidelines for Fresh and Marine Waters", 1992.
- NSW DECC (2009) – *Waste Classification Guidelines, Part 1: Classifying Waste.*

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ABBREVIATIONS

- BTEX - Benzene, Toluene, Ethyl benzene and Xylene
- OCP - Organochlorin Pesticides
- OPP – Organo phosphorous Pesticides
- PAH - Polycyclic Aromatic Hydrocarbons
- TPH - Total Petroleum Hydrocarbons
- VHC – Volatile Halogenated Compounds
- VOC – Volatile Organic Compounds
- PID - Photo Ionisation Detector
- QA/QC - Quality Assurance, Quality Control
- RAP - Remediation Action Plan
- SAC - Site Assessment Criteria
- UCL - Upper Confidence Limit
- UST - Underground Storage Tank
- AST – Aboveground Storage Tank
- PQL – Practical Quantitation Limits
- RPD – Relative Percentage Difference
- DQOs – Data Quality Objectives
- HIL – NSW EPA Health-based Investigation Levels as per "Guidelines for the NSW Site Auditor Scheme"
- CoC – Chain of Custody
- SWL – Standing Water Level.
- DIPNR – Department of Infrastructure Planning and Natural Resources.
- NSL – No Set Limit.
- ND – Not Detected.
- PPM – Parts Per Million.
- NATA – National Australian Testing Authority.

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EXECUTIVE SUMMARY

Aargus Pty Ltd was appointed by MDM Pty Ltd to conduct a Phase II Environmental Site Assessment (ESA) of the property situated at 2 Factory Street, Granville NSW ('the site'). The northern portion of the site is proposed to be developed into a multi-storey commuter car park under a voluntary planning agreement. The southern portion of the site is proposed to be rezoned to R4 high density residential under the Parramatta LEP 2011 as to permit residential flat buildings.

The primary objective of this ESA was to assess the environmental suitability of the site in regards to the current usage and the potential for any contamination on site in relation to compliance with current NSW and Local Council environmental regulatory criteria.

One previous investigation has been undertaken within the site. A Preliminary Environmental Site Assessment was prepared by Environmental Resource Management (ERM) in May 2001. Information from the above report has been utilised within this Phase II ESA report.

The scope of work in preparing this ESA report included review of existing information, soil sampling and analysis, interpretation of results/findings and report preparation in general accordance with NSW EPA '*Guidelines for Consultants Reporting on Contaminated Sites', 2011*.

A number of potential areas of environmental concerns were identified at the site, particularly:

- Historical uses such as steel manufacturing and assembly, storage and distribution of goods etc;
- Current uses such as storage of metal fences, groceries, trucks etc;
- Whole site where uncontrolled fill was imported to level the site prior to the construction of the buildings and the filling of previous low lying areas;

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- Where pesticides were potentially utilised within the site for weed control or beneath buildings / floor slabs for termite control;
- Carpark areas where leaks and spills from cars may have occurred;
- Vicinity of metal features;
- Leakages from the former UST area;
- Bunded area;
- Storage of fuels and chemicals;
- Transformer;
- Railway areas; and
- Asbestos / Fibro features within the building structures.

Samples were recovered from twelve boreholes (BH1-BH12) during the original ERM investigation in 2001. The boreholes from the ERM assessment have been used to supplement the boreholes undertaken as part of the Aargus investigation. During the Aargus investigation (April 2012), soil samples were collected from eleven boreholes (BH13 to BH22 & S23) located on a semi regular grid over the site (modified to allow accesses to sample locations and in areas not previously sampled). All fieldwork and borehole logging was conducted by qualified environmental staff (refer Appendix H – Resumes of Client Team). Boreholes were drilled using a stainless steel hand auger. Sampling was conducted on the 12th April 2012.

To reach our stated objectives, a set of thirty-three (33) primary soil samples, twelve (12) as part of the ERM 2001 assessment and twenty-one (21) as part of the Aargus 2012 assessment, were submitted for analysis on the differing fill and natural soil profiles. Three (3) QA/QC intra-laboratory duplicate soil samples and one (1) rinsate sample were analysed by the NATA accredited laboratories of MGT LabMark and LabMark. Two (2) QA/QC inter-laboratory split soil samples were analysed by the NATA accredited laboratory of SGS Environmental.

Laboratory results and QA/QC data fulfil the DQOs. The results are therefore considered a reliable basis for the following conclusions and recommendations.

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Laboratory results for the soil samples analysed were lower than the relevant regulatory guideline criteria adopted, those being HIL 'D' and EPA Service Station guidelines with the exception of the following:

- 7,730mg/kg of TPH (C_{10}-C_{36}) in borehole BH2 (0.5m) which exceeded the EPA levels of 1,000mg/kg.
- 4,550mg/kg of TPH (C_{10}-C_{36}) in borehole BH10 (0.2m) which exceeded the EPA levels of 1,000mg/kg.
- 6mg/kg of benzo(a)pyrene in borehole BH1 (0.5m) which exceeded the HIL'D' criteria of 4mg/kg.
- 5.2mg/kg of benzo(a)pyrene in borehole BH8 (0.1m) which exceeded the HIL'D' criteria of 4mg/kg.

Asbestos fibres were detected in a number of soil samples analysed:

- Chrysotile asbestos was detected in the following boreholes BH15 (0.2m), BH16 (0.2m) & BH20 (0.2m).
- Chrysotile & Amosite asbestos was detected in borehole BH18 (0.2m).
- Chrysotile, Amosite & Crocidolite asbestos was detected in borehole BH14 (0.2m).

The above boreholes (BH1, BH2, BH8, BH10, BH14, BH15, BH16, BH18 & BH20) can be considered to be hotspots and require some form of remediation.

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In Summary

Based on the information collected during this investigation and in reference to Clause 6 *"Contamination and remediation to be considered in zoning or rezoning proposal"* of SEPP 55, the site will be suitable for the proposed rezoning of the site for high density residential and commercial land uses, subject to the completion of the following:

- It is recommended that an appropriate remedial / management strategy is developed, culminating in preparation of a Remedial Action Plan (RAP) in accordance with EPA guidelines, in regards to the former UST area and hotspot areas present within the site, once the proposed development area are finalised.
- Undertake additional soil sampling at depth in the vicinity of the former UST.
- Undertake a groundwater assessment; including the installation of at least three (3) groundwater monitoring wells.
- Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the "*Waste Classification Guidelines, Part 1: Classifying Waste" NSW* DECC (2009).

If during any potential site works, significant odours and / or evidence of gross contamination not previously detected are encountered, or any other significant unexpected occurrence, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence**.**

Reference should be made to the Limitations of Assessment at the end of the report and Appendix B, which set out details of the limitations of the assessment.

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1.0 INTRODUCTION

Aargus Pty Ltd was appointed by MDM Pty Ltd; to conduct an Environmental Site Assessment (ESA) of the property situated at 2 Factory Street, Granville NSW ('the site'). The northern portion of the site is proposed to be developed into a multi-storey commuter car park under a voluntary planning agreement. The southern portion of the site is proposed to be rezoned to R4 high density residential under the Parramatta LEP 2011 as to permit residential flat buildings.

One previous investigation has been undertaken within the site. A Preliminary Environmental Site Assessment was prepared by Environmental Resource Management (ERM) in May 2001. Information from the above report has been utilised within this Phase II ESA report.

This assessment was performed in accordance with the Aargus proposal and Aargus Environmental Protocols (refer Appendix F – Aargus Environmental Protocols), and in general accordance to relevant environmental regulatory criteria including the NSW EPA regulatory guidelines and National Environmental Protection (*Assessment of Site Contamination*) Measure, 1999.

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2.0 OBJECTIVES

The primary objective of this ESA was to assess the environmental suitability of the site for the proposed development in relation to compliance with current NSW and Local Council environmental regulatory criteria.

In accordance with our instructions, the purpose of this ESA is to:

- Identify the likelihood and/or extent of significant soil and groundwater contamination occurring from past and present practices on the site; and
- Recommend any further management strategies including any additional investigations and/or remediation; and

Specifically, the ESA will assess:

- Contaminant dispersal in soil and if an impact to groundwater occurs;
- The potential effects of contaminants on public health, the environment and building structures; and
- The adequacy and completeness of all information available to be used in making decisions on site suitability.

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3.0 SCOPE OF WORKS

In order to achieve the above objectives the following scope of work was carried out for the ESA:

- Collecting site information, review of historical information and past site practices, (site surveys, site records on waste management practices, NSW Land Titles Office records of ownership, aerial photographs obtained from the NSW Department of Lands, WorkCover NSW records and site interviews);
- A site inspection to identify areas of environmental concern, on-site waste disposal practices and location of sewers, drains, holding tanks, Underground Storage Tanks, Aboveground Storage Tanks and pits, spills and ground discolouration etc.;
- A targeted soil boring/sampling investigative study – formulating and conducting a sampling plan and borehole investigation; the soil samples are taken and submitted for analysis on particular contaminants;
- Laboratory analysis and results from sample analysis – findings and comparison to regulatory guidelines;
- Quality Assurance/Quality Control (QA/QC) – all QA/QC procedures were undertaken in accordance with the Aargus Quality Assurance/Quality Control manual;
- Interpretation of results and findings; and
- Recommendations and final conclusions drawn from interpretation of the results.

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4.0 SITE INFORMATION

4.1 Site Identification

The site is currently registered as Lot 22 in Deposited Plan 569501, and is located at 2 Factory Street, Granville NSW (refer Appendix A – Locality Map). Site identification information is summarised below:

Table 1 – Summary Site Details

Street Address	2 Factory Street, Granville NSW
Lot and DP Number	Lot 22 in DP569501
Local Government Area	Parramatta
Parish	Liberty Plains
County	Cumberland
Approx. Site Area	11,000m^2

4.2 Site Description

The site is located at 2 Factory Street, Granville NSW and is in the Parramatta Council region. At the time of the site inspection the following observations were made:

- The site currently comprises of two warehouse buildings, an office building and a gatehouse.
- The buildings are located on the southern side of the site while the northern side of the site is relatively open and serves as a parking area. An old rail line runs in an east to west direction through the northern part of the site.
- A former UST area was located in the central eastern portion of the site.
- A bunded area which formerly housed an AST was located in the south eastern corner of the site.
- Other features of note include an electrical transformer, scrap metal pile, skip bin and shipping container.

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- The surfaces of the site to the south of the railway line are all concrete sealed except for some minor garden areas. The surface of the site to the north of the rail line is covered in asphalt except for a small patch of grass on the western side.
- There were no other signs of soil staining, plant distress or any other visible indicators of potential contamination.
- There were no olfactory indicators of potential contamination.
- A hazardous building materials survey was not commissioned as part of this assessment, however there is potential for asbestos-containing materials within the buildings within the site.

The shape and layout of the site are shown on the Site Plan (Appendix A).

4.3 Topography and Surface Waters

The site is generally flat and is approximately 5m AHD. The regional topography comprises a gentle slope towards the east.

The closest water body is Duck River, located approximately 90m east of the site and flows in a north easterly direction into Parramatta River. All building roofs and concrete surfaces have storm water drainage in place. Stormwater from the local and surrounding areas are expected to flow towards Duck River in a north easterly direction. On and off site migration from surface areas are not considered to be of environmental concern.

4.4 Geology

The Geological Map of Sydney (Geological Series Sheet 9130, Scale 1:100,000, 1983), published by the Department of Mineral Resources indicates the residual soils within the site to be underlain by ‘Ashfield Shale’. The Ashfield shale group are generally underlain by Hawkesbury Sandstone which consists of medium to coarse grained quartz sandstone with minor shale and laminate lenses.

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Fieldwork observations indicated that underlying the sealed surfaces, the subsurface lithology of the site comprises of fill materials then natural clay.

Reference should be made to Section 9.2 for the soil profile within the site.

4.5 Hydrogeology

A groundwater bore search from the Department of Land and Water Conservation database revealed one registered bore within a 2km radius of the site. The bore GW024667 is located approximately 2km north of the site. The final depth of the bore is 4.57m with a standing water level of 2.4m. The bore is listed as being authorised and intended for general use.

4.6 Surrounding Land Use

Surrounding land use was identified as follows:

To the North	⇒ Clyde Railway Station and rail lines
To the South	⇒ Australia Post International Mail Centre
To the East	⇒ Australia Post International Mail Centre
To the West	⇒ Factory Street, then commercial & residential properties

The district consists of a mixture of commercial and residential uses land uses. Surrounding land use is unlikely to impact the site with respect to contamination.

4.7 Proposed Development

The northern portion of the site is proposed to be developed into a multi-storey commuter car park under a voluntary planning agreement. The southern portion of the site is proposed to be rezoned to R4 high density residential under the Parramatta LEP 2011 as to permit residential flat buildings.

Reference may be made to Appendix L – Proposed Development Plans.

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5.0 SITE HISTORY

5.1 Historical Aerial Photographs

Reference is made to the previous assessment undertaken on the site where a number of aerial photographs obtained from the NSW Department of Lands were reviewed. A discussion is provided below.

The *1951 Aerial photograph* shows that the site is mostly covered by buildings. It appears as though a rail line runs through the northern half of the site in a west to east direction. The area surrounding the rail line is vacant and it appears as though there are train carriages lying there. A series of what appears to be sheds or buildings are present between the rail line and Clyde Railway Station. A large rectangular building occupies the south eastern corner of the site. The south western corner of the site is occupied by another large rectangular building. An access way exists between the buildings in the south east and south west corners of the site. A shed appears on the southern side of the site entrance in the location of the former gatehouse.

The *1961 Aerial photograph* shows a number of changes to the site since the 1951 photograph. The buildings along the northern site boundary have been removed and the area remains vacant. The northern half of the building in the south eastern corner of the site has been pulled down and the area which it formerly occupied is vacant.

The *1970 Aerial photograph* shows a number of changes to the site since the 1961 photograph. The northern half of the site forms a car park and access way for the site. A large rectangular building with both flat and gabled roofing has been built in the south west corner of the site. A rectangular building has been built immediately north of the building in the south east corner. It appears to be an office building as plant is present on the roof.

The *1978 Aerial photograph* shows a number of changes to the site since the 1970 photograph. A new building is present in the south east corner of the site. This building no longer adjoins buildings to the south of the site. The car park area on the northern portion

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of the site appears to have islands of grass and trees bordering car parking spots.

The *1986 Aerial photograph* shows no changes to the site since the 1978 photograph.

The *1998 Aerial photograph* shows no changes to the site since the 1986 photograph.

In Summary, aerial photographs indicate that the site has been occupied by a changing number of commercial buildings since 1951 to date. Surrounding areas were predominantly a mixture of residential and commercial properties.

5.2 Historical Land Titles

Reference is made to the previous assessment undertaken where a review of historical documents held at the NSW Department of Lands offices was undertaken to characterise the previous land use and occupiers of the site.

As reported above, the site is made of Lot 22 in DP 569501. The results of the title search are summarised in the following tables.

Table 2 – Summary of Historical Land Titles

Year	Owners Lot 22 in DP 569501
2001-present	MDM Pty Ltd
2010	*Lease to Her Most Gracious Majesty Queen Elizabeth The Second (Minister of Police)*
2006	*Lease to Green Alliance*
2004	*Lease to Secta Pty Ltd*
1997	*Lease to Clyde Industries Ltd*
1995	*Lease to Clyde Industries Ltd*
1992	Barinu Pty Ltd- Steel Machinery Manufacture & Assembly
	Prior Title Volume :12553 Fol : 138
1988	PC Developments Pty Ltd - Steel Machinery Manufacture & Assembly Bayrill Corporation Pty Ltd
1895	Clyde Industries Limited- Steel Machinery Manufacture & Assembly
1882	Hudson Brothers Limited – Steel Machinery Manufacture & Assembly

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In summary, information provided suggests that the site was previously owned by commercial owners and lessees.

The following provides a summary of some of the details of the previous owners and what the site may have been used for during their ownership (based on a Google internet web based search):

- Green Alliance – Company involved in products to reduce greenhouse gas emissions.
- Secta Pty Ltd – Runs training courses like risk assessments
- Clyde Industries Ltd – company involved in engineering, motor and paint industry.

Copies of the Land Title Information are included in Appendix M - Land Title Information & Appendix N - Previous Report.

5.3 NSW EPA Records

The NSW EPA publishes records of contaminated sites under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act.

A search of the database revealed that the subject site is not listed; however there are two listed properties within the suburb of Granville with current notices listed on the database. The properties are not of a concern as they are located more than 500 metres away from the subject site.

The property Ajax Battery Factory at 2B Factory Street, Granville has one current notice listed on the website. It is located downgradient of the subject site and is therefore not considered a concern. The property Shore Petroleum at 2 Blaxcell Street, Granville has four current notices listed on the website. It is located upgradient of the subject site but is at least 500 metres from the subject site.

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It should be noted that the NSW EPA record of Notices for Contaminated Land does not provide a record of all contaminated land in NSW.

Copies of the records are included in Appendix J – NSW EPA Search.

5.4 WorkCover NSW Records

A search of the NSW WorkCover records was undertaken to determine whether there was any underground storage tanks located on the site. The search is currently underway and an addendum letter will be completed once results have been provided from WorkCover NSW.

5.5 Historical Land Use Summary

In summary:

- Land title information suggests that the site was owned and / or leased by a number of companies with a large majority involved in steel machinery manufacture and assembly.

- Aerial photographs indicate that the site has been occupied by a changing number of commercial buildings since 1951 to date. Surrounding areas were predominantly a mixture of residential and commercial properties.

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6.0 PREVIOUS ENVIRONMENTAL ASSESSMENTS

One previous environmental investigation was conducted on the site as shown below:

- Environmental Resources Management Pty Ltd (2001) - "*Preliminary Environmental Site Assessment, 2 Factory Street, Granville NSW*". (Report no. 101135RP1, dated May 2001).

The site investigation comprised of a site historical review, a site inspection, soil sampling program and reporting. The assessment criteria adopted were the available Health Investigation Levels (HIL's) of the above-mentioned guidelines for *commercial and industrial land use* (HIL 'F') and the suggested levels in the EPA service station guidelines. All soil samples were analysed for TPH, BTEX, OCP's, OPP's, PCB's, PAH's, cyanides and metals.

The results indicated that all soil samples analysed for BTEX, OCP's, OPP's, PCB's, PAH's, cyanides and metals had concentrations below either the assessment criteria or laboratory detection limits. Soil from BH2 & BH10 had concentrations of TPH that exceeded the NSW EPA Service Station guidelines. No further work was recommended by ERM.

This report has been used to supplement the current assessment being undertaken by Aargus within the site.

Reference may be made to Appendix N – Previous Report.

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7.0 SITE INSPECTION

The site inspection took into account the surrounding environment and aesthetic issues pertaining to the site.

7.1 Site Walkover

Before the Aargus project team (refer to Appendix H – Resumes of Client Team) engaged in borehole drilling and sampling, a site walkover was conducted and information pertinent to the environmental assessment was noted. Aargus took into consideration the following items where they were relevant:

- Description and quality of the building structures/footings;
- Adjoining operations;
- Prior functions and operations within the site;
- Surface water;
- Groundwater;
- Former industrial processes;
- Former raw materials;
- Former raw material transportation;
- Chemicals formerly used on the site;
- Trade waste;
- Hazardous operations;
- Waste Management Practices;
- Underground Storage Tanks;
- Above ground Storage Tanks;
- Review of former roof materials;
- Odour and noise quality; and
- Occupational health and safety.

The main features of the site are presented in the Site Plan (Refer to Appendix A) and site photographs are presented in Appendix G – Site Photographs.

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7.2 Chemical Storage

According to the site history, the site has been used for a variety of commercial land uses, such as steel manufacture and assembly, railway storage area, paint & engineering industry, truck parking, and distribution centre. These industries may have stored minor amounts of oils, lubricants, petrol, diesel, gas, paints and other chemicals which would have been used in day-to-day operations. In addition, the storage of petrol, diesel and /or oil products would have occurred in the former UST area, and other chemicals in the former product store located in the north western portion of the site.

7.3 Trade Waste

Based on the information gathered regarding the site it was considered unlikely that the site was not a scheduled premise under the Pollution Control and Waste regulations. No search was therefore undertaken.

7.4 Hazardous Materials

There was no hazardous material assessment carried out as part of this scope of works.

7.5 Areas of Environmental Concern

A number of potential areas of environmental concerns were identified at the site, particularly:

- Historical uses such as steel manufacturing and assembly, storage and distribution of goods etc;
- Current uses such as storage of metal fences, groceries, trucks etc;
- Whole site where uncontrolled fill was imported to level the site prior to the construction of the buildings and the filling of previous low lying areas;
- Where pesticides were potentially utilised within the site for weed control or beneath buildings / floor slabs for termite control;

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- Carpark areas where leaks and spills from cars may have occurred;
- Vicinity of metal features;
- Leakages from the former UST area;
- Bunded area;
- Storage of fuels and chemicals;
- Transformer;
- Railway areas; and
- Asbestos / Fibro features within the building structures.

Chemicals of concern associated with each of the identified areas are as follows:

- Previous & Current uses - general suite of chemicals including heavy metals, TPH, BTEX, PAH, OCP, PCB, Phenols and Cyanide.
- Fill material of unknown quality of origin – general suite of chemicals including heavy metals, TPH, BTEX, PAH, OCP, PCB, Phenols, Cyanide and asbestos.
- Possible pesticide treatments – OCP's.
- Carpark areas – metals, TPH, BTEX and PAH.
- Metal degradation – metals.
- Leaking of the fuels/chemicals from the former UST's, AST, product store and other containers – metals, TPH, BTEX, PAH and Phenols.
- Transformer – PCB.
- Railway areas – metals and asbestos.
- Asbestos / Fibro features – asbestos.

The areas of environmental concern are based upon site observations and anecdotal evidence as well as historical documentation. The evidence within boreholes taken around the site show fill material consisting mainly of Sand and Gravelly Sand possibly used to level the site. Foreign materials consisting of ash, gravel, bitumen and sandstone pieces were noted in a number of the boreholes.

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8.0 REVIEW OF QUALITY OF DATA

The DQOs were also prepared using Appendix IV of the Site Auditor Guidelines. These require 7 steps. The steps being:

a. State the problem
b. Identify the decisions
c. Identify inputs to decision
d. Define the study boundaries
e. Develop a decision rule
f. Specify limits on decision errors
g. Optimise the design for obtaining data

8.1 State the problem

The site requires to be confirmed suitable for the proposed development. The site is proposed to be rezoned & redeveloped and has had some areas of potential concern, those being imported fill of unknown origin, current and previous uses, the possible leaking of vehicles, leakages of former UST's, storage of fuels and chemicals, possible historical pesticide use, railway lines, metals features, transformer and asbestos.

8.2 Identify the decisions

The decisions made in completing this assessment are as follows:

- Does the site or is the site likely to present a risk of harm to humans or the environment
- Is the site currently suitable for the proposed land use being residential with minimal access to soils
- Is there a potential for soil and groundwater contamination
- Is there a potential for offsite migration issues
- Does the sampling results meet the site criteria proposed
- If not, does the site require remediation works

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8.3 Identify inputs to decision

Inputs to the decision include:

- Existing site information
- Site history
- Regional geology, topography and hydrogeology
- Potential contaminants
- Site assessment criteria
- Results as measured against criteria

8.4 Define the study boundaries

The site boundary is identified as the entire boundary of the subject site as shown on the site plan (Appendix A), currently registered as Lot 22 in DP569501, and located at 2 Factory Street, Granville NSW.

8.5 Develop a decision rule

The information obtained through this assessment will be used to characterise the soils on the site in terms of contamination issues and risks to human health and the environment. The decision rule in characterising the site will be as follows:

- Laboratory test results will be measured against the criteria provided within this report
- The site will be deemed not contaminated if the following criteria are fulfilled
    - Soil concentrations are within background levels
    - QA/QC shows data can be relied upon
    - Results generally meet regulatory criteria
    - Results are from NATA accredited laboratories
    - Detection limits are below assessment criteria

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8.6 Specify limits on decision errors

The limits on decision errors for this assessment are as follows:

- The assessment criteria adopted from the guidelines within this report have risk probabilities already incorporated.
- The acceptable limits for inter/intra laboratory duplicate sample comparisons are laid out within our protocols.
- The acceptable limits for laboratory QA/QC parameters are based upon the laboratory reported acceptable limits and those stated within the NEPM 1999 Guidelines.

8.7 Optimise the design for obtaining data

The design for optimising data was achieved by the location and the collection of soil samples. Boreholes (ERM and Aargus) were placed systematically and at targeted locations equal to the NSW EPA sampling density guidelines (EPA requires twenty-two locations – the site sampling was conducted at twenty-three (23) locations).

Samples were recovered from twelve boreholes (BH1-BH12) during the original ERM investigation in 2001. The boreholes from the ERM assessment have been used to supplement the boreholes undertaken as part of the Aargus investigation. During the Aargus investigation (April 2012), soil samples were collected from eleven boreholes (BH13 to BH22 & S23) located on a semi regular grid over the site (modified to allow accesses to sample locations and in areas not previously sampled).

Further to this, only laboratories accredited by NATA for the analysis undertaken were used. The laboratory data was assessed from quality data calculated during this assessment. Field QA/QC protocols adopted and listed within appendices incorporate traceable documentation of procedures used in the sampling and analytical program and in data verification procedures.

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9.0 SOIL BORING AND SAMPLING STRATEGY

9.1 Soil sampling

The NSW EPA "Sampling Design Guidelines" (September 1995) shows the minimum number of sampling points for a site of area 11,000 m^2 is twenty-two.

During this investigation, soil samples were recovered from twelve boreholes (BH1-BH12) during the original ERM investigation in 2001. The boreholes from the ERM assessment have been used to supplement the boreholes undertaken as part of the Aargus investigation. During the Aargus investigation (April 2012), soil samples were collected from eleven boreholes (BH13 to BH22 & S23) located on a semi regular grid over the site (modified to allow accesses to sample locations and in areas not previously sampled).

All fieldwork and borehole logging was conducted by qualified environmental staff (refer Appendix H – Resumes of Client Team). Boreholes were drilled using a stainless steel hand auger. Sampling was conducted on the 24th April 2001 for the ERM investigation and 12th April 2012 for the Aargus investigation.

To reach our stated objectives, a set of thirty-three (33) primary soil samples, twelve (12) as part of the ERM 2001 assessment and twenty-one (21) as part of the Aargus 2012 assessment, were submitted for analysis on the differing fill and natural soil profiles. Three (3) QA/QC intra-laboratory duplicate soil samples and one (1) rinsate sample were analysed by the NATA accredited laboratory of MGT LabMark (NATA accreditation number 1261) and Labmark (NATA accreditation number 13648). Two (2) QA/QC inter-laboratory split soil samples were analysed by the NATA accredited laboratory of SGS Environmental (NATA accreditation number 2562).

The rationale for sampling depths was based upon the targeting of fill and/or natural soils on site. Samples were targeted in the homogeneous fill material and then within the natural soil profile. Reference may be made to Table 4 in Section 9.3 – Laboratory Analysis for the soil analysis schedule of the recovered samples. The sample locations

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were chosen to provide site coverage and also target the most likely areas at which potential contamination could occur.

The approximate locations of the boreholes are shown on Figure 2b in Appendix A.

9.2 Surface and Subsurface Conditions

This section should be read in conjunction with site plan (Refer to Appendix A) and the borehole logs (Refer to Appendix D). No staining or hydrocarbon odours were encountered within any of the soil profile of the boreholes.

Based on information from all boreholes, the surface and sub-surface profile across the site is generalised as follows:

- FILL, Sand, fine grained, brown to light brown, ash.
- FILL, Sand, medium to fine grained, dark brown to grey with inclusions of ash, gravel & sandstone pieces.
- FILL, Gravelly Sand, fine grained, dark grey with inclusions of gravel & bitumen.
- NATURAL, comprising of Silty Clay, medium plasticity, orange, brown and red.

9.3 Laboratory analysis

The samples were selected for analysis based on a combination of sample location and field observations. The soil analysis schedule is shown in the following table.

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Table 3 – Schedule of Laboratory Analysis – Soils

Analyte / Analyte Group Sample	Depth (m)	TYPE	SAMPLING DATE	DUPLICATE	SPLIT	MET-8	TPH & BTEX	PAH	OCP	PCB	PHENOL	CYANIDE	ASBESTOS	OPP
ERM Australia P/L (2001)														
BH1	0.5	N	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH2	0.5	N	24.04.2001	A		✔	✔	✔	✔	✔		✔		✔
BH3	0.2	N	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH4	0	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH5	0.2	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH6	0.2	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH7	0.1	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH8	0.1	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH9	0.1	N	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH10	0.2	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH11	0.1	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
BH12	0.2	F	24.04.2001			✔	✔	✔	✔	✔		✔		✔
Aargus P/L (2012)														
BH13	0.2	F	12.04.2012		SS1	✔	✔	✔	✔	✔	✔	✔	✔	
BH13	0.7	N	12.04.2012			✔		✔						
BH14	0.2	F	12.04.2012	D1		✔	✔	✔	✔	✔	✔	✔	✔	
BH14	0.6	N	12.04.2012			✔								
BH15	0.2	F	12.04.2012			✔	✔	✔	✔	✔	✔	✔	✔	
BH15	0.6	N	12.04.2012			✔								
BH16	0.2	F	12.04.2012			✔	✔	✔	✔	✔	✔	✔	✔	
BH16	1	N	12.04.2012			✔		✔						
BH17	0.2	F	12.04.2012			✔	✔	✔	✔	✔	✔	✔	✔	
BH17	0.5	N	12.04.2012			✔		✔						
BH18	0.2	F	12.04.2012		SS2	✔	✔	✔	✔	✔	✔	✔	✔	
BH18	0.6	N	12.04.2012			✔								
BH19	0.2	F	12.04.2012			✔	✔	✔	✔	✔	✔	✔	✔	
BH19	0.6	N	12.04.2012			✔								
BH20	0.2	F	12.04.2012			✔	✔	✔	✔	✔	✔	✔	✔	
BH20	0.8	N	12.04.2012			✔								
BH21	0.2	F	12.04.2012	D2		✔	✔	✔	✔	✔	✔	✔	✔	
BH21	1	N	12.04.2012			✔		✔						
BH22	0.2	F	12.04.2012			✔	✔	✔	✔	✔	✔	✔	✔	
BH22	0.85	N	12.04.2012			✔								
S23	-	F	12.04.2012			✔				✔				
R1	-	W	12.04.2012			✔	✔	✔	✔	✔	✔			

Notes
MET-8: arsenic, cadmium, chromium, copper, lead, mercury, nickel,
OCP / OPP : Organochlorine Pesticides & Organophosphorus Pesticides
PCB : Polychlorinated Biphenyls
PAH: Polycyclic Aromatic Hydrocarbons
TPH: Total Petroleum Hydrcarbons
BTEX: Benzene, Toluene, Ethyl Benzene, Xylene
F,T,N,W: Fill, Topsoil, Natural, Water

9.4 DQO's for Sampling

The following table provides a list of the data quality objectives for the soil sampling and the methods adopted in ensuring that the data quality objectives were met.

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Table 4: DQO's for Soil Sampling

DATA QUALITY OBJECTIVE	METHODS OF ACHIEVEMENT
Documentation Completeness	Preparation of chain of custody records Laboratory sample receipt information NATA registered laboratory results certificates
Data Completeness	On site visual assessment of soils Analysis for all potential contaminants of concern
Data Comparability	Using appropriate techniques for sample recovery Experienced samplers used Using appropriate sample storage and transportation methods Use of a NATA registered laboratory
Data Representativeness	Reasonable sampling coverage Representative sampling Representative coverage of contaminants through analysis
Data Precision and Accuracy	Use of trained and qualified field staff Appropriately calibrated equipment used Appropriate industry standard sampling equipment and decontamination procedures Field duplicates and split samples prepared and analysed Acceptable RPD for duplicate and split sample comparisons Check of laboratory quality control methods and results

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10.0 QUALITY ASSURANCE / QUALITY CONTROL

10.1 Data Quality Objectives

Data Quality Objectives (DQOs) were created to produce quality assured, accurate and useful data for the sampling plan. Blind samples were split in the field for testing or at the laboratory. Other areas reviewed are:

- sampling methods;
- decontamination procedures;
- sample preservation;
- container type;
- headspace within containers;
- disturbed or undisturbed sampling for organics;
- PQL's;
- preparation of CoC forms;
- review of laboratory surrogate and spike % returns; and
- review of Laboratory duplicate results.

MGT LabMark & LabMark (primary laboratories) and SGS Environmental Laboratory (secondary laboratory) performed all analyses using test methods accredited by the National Association of Testing Authorities (NATA). All data quality objectives were reviewed and met and we therefore conclude that the DQOs were satisfactory for our stated objectives.

The Practical Quantitation Limits (PQLs) of the laboratory analyses were less than the threshold guidelines adopted for the purpose of this investigation, and therefore meet DQOs.

The results of all quality checking have been reviewed and are considered adequate in satisfying the reliability of the results and meet Data Quality Objectives (DQOs).

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10.2 Field QA/QC

10.2.1 Sampling Procedures

Aargus procedures followed throughout the field investigation are presented in Appendix F – Aargus fieldwork protocols, which are based on industry accepted standard practice. The work was undertaken by appropriately qualified personnel; see Appendix H – Resumes of Client Team.

Soil sampling was carried out using a stainless steel hang auger. The decontamination of sampling equipment was achieved by washing the equipment with phosphate-free detergent and tap water, followed by a final rinse with distilled water. Decontamination was conducted after the collection of samples at each sample location. Soil samples were placed in 250g clean glass jars, leaving no headspace, and closed using Teflon-coated lids. Samples were then stored in an ice brick-cooled esky and transported to the laboratory under chain of custody conditions.

Samples were taken at varying depths as shown in Appendix D – Borehole Logs, for the soil profile encountered during the Aargus investigation, and Appendix N – Previous Report, for the soil profile encountered during the ERM investigation.

10.2.2 Intra-laboratory Duplicates

Three (one from ERM and two from Aargus) intra-laboratory duplicate samples were collected and analysed in order to assess the variation in analyte concentration between samples collected from the same sampling point. The duplicate sample frequency was computed using the total number of samples analysed as part of this assessment.

The duplicate sample frequencies computed are presented in the following table.

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Table 5 – Discrete Soil – Duplicate Sample Analyses

Analyte – Discrete Soil	Samples Analysed	Duplicate Samples	Frequency
Heavy Metals	33	3	9%
TPH/BTEX	22	3	14%
PAH	26	3	12%
Phenol	10	2	20%
Cyanide	22	3	14%
OCP	22	3	14%
PCB	23	3	13%
OPP	12	1	8%

The duplicate frequency for the analytical suite adopted complies with the NEPM, which recommends a duplicate frequency of at least 5%.

It is considered that the number of duplicate samples collected is adequate to assess the variation in analyte concentration between samples collected from the same sampling point. A summary of the test results with the Relative Percentage Difference (RPD) is presented in the following tables. A discussion of the test data is also presented below.

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Table 6 – Duplicate D1 – Discrete Soil – RPD's

ANALYTE	BH14 0.2 mg/kg	DUPLICATE D1 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	51	56	9
Cadmium	1	1	0
Chromium	18	15	18
Copper	65	70	7
Nickel	15	14	7
Lead	580	780	29
Zinc	440	580	27
Mercury	0.17	0.10	**52**
TOTAL PETROLEUM HYDROCARBONS (TPH)			
C6 - C9	<10	<10	-
C10 - C14	<50	<50	-
C15 - C28	240	170	34
C29-C36	260	230	12
BTEX			
Benzene	<0.5	<0.5	-
Toluene	<0.5	<0.5	-
Ethyl Benzene	<0.5	<0.5	-
Total Xylenes	<1.5	<1.5	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
BENZO(a)PYRENE	<0.5	<0.5	-
Total PAH	<1	<1	-
ORGANOCHLORINE PESTICIDES (OCP)			
Heptachlor	<0.05	<0.05	-
Aldrin	<0.05	<0.05	-
Dieldrin	0.48	0.55	14
DDD	<0.05	<0.05	-
DDE	<0.05	<0.05	-
DDT	<0.2	<0.2	-
Chlordane (trans & cis)	0.56	0.27	**70**
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<0.5	<0.5	-
PHENOL & CYANIDES			
Phenol	<0.5	<0.5	
Cyanide	<1	<1	-
ASBESTOS			
Asbestos Detected	Yes	Yes	

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Table 7 – Duplicate D2 – Discrete Soil – RPD's

ANALYTE	BH21 0.2 mg/kg	DUPLICATE D2 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	7.4	5.7	26
Cadmium	80	35	**78**
Chromium	38	54	35
Copper	140	49	**96**
Nickel	10	10	0
Lead	120	170	34
Zinc	200	330	49
Mercury	0.08	0.10	22
TOTAL PETROLEUM HYDROCARBONS (TPH)			
C6 - C9	<10	<10	-
C10 - C14	<50	<50	-
C15 - C28	<100	<100	-
C29-C36	<100	260	-
BTEX			
Benzene	<0.5	<0.5	-
Toluene	<0.5	<0.5	-
Ethyl Benzene	<0.5	<0.5	-
Total Xylenes	<1.5	<1.5	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
BENZO(a)PYRENE	<0.5	<0.5	-
Total PAH	<1	<1	-
ORGANOCHLORINE PESTICIDES (OCP)			
Heptachlor	<0.05	<0.05	-
Aldrin	<0.05	<0.05	-
Dieldrin	<0.05	<0.05	-
DDD	<0.05	<0.05	-
DDE	<0.05	<0.05	-
DDT	<0.2	<0.2	-
Chlordane (trans & cis)	<0.1	<0.1	
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<0.5	<0.5	-
PHENOL & CYANIDES			
Phenol	<0.5	<0.5	
Cyanide	<1	<1	-
ASBESTOS			
Asbestos Detected	No	No	

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Table 8 – Duplicate A – Discrete Soil – RPD's

ANALYTE	BH2 0.5m mg/kg	DUPLICATE A mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	5.5	4	32
Cadmium	<0.5	<0.5	-
Chromium	7.5	11	38
Copper	38	23	49
Nickel	18	13	32
Lead	31	31	0
Zinc	52	33	45
Mercury	0.04	0.25	**145**
TOTAL PETROLEUM HYDROCARBONS (TPH)			
C6 - C9	50	20	-
C10 - C14	1690	1100	-
C15 - C28	5630	3460	48
C29-C36	360	200	57
BTEX			
Benzene	<0.2	<0.2	-
Toluene	<0.5	<0.5	-
Ethyl Benzene	<0.5	<0.5	-
Total Xylenes	1	<1	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
BENZO(a)PYRENE	<0.5	<0.5	-
Total PAH	9.9	11.2	12
ORGANOCHLORINE PESTICIDES (OCP)			
Heptachlor	<0.05	<0.05	-
Aldrin	<0.05	<0.05	-
Dieldrin	<0.05	<0.05	-
DDD	<0.05	<0.05	-
DDE	<0.05	<0.05	-
DDT	<0.2	<0.2	-
Chlordane (trans & cis)	<0.1	<0.1	-
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<0.5	<0.5	-
OPP & CYANIDES			
OPP	<PQL	<PQL	-
Cyanide	<PQL	<PQL	-

The comparisons between the intra-laboratory duplicates and corresponding original sample indicated generally acceptable RPD overall, except for the following:

- Mercury (52%) & Chlordane (70%) in Table 6
- Cadmium (78%) & Copper (98%) in Table 7
- Mercury (52%) & TPH (C_{29}-C_{36}) (57%) in Table 8

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The higher RPD's in Tables 6, 7 & 8 exceeded the DQOs for this project, however this exceedance is not considered to be significant as the concentrations of both samples are at generally low concentrations and/or the duplicates were prepared from fill materials indicating the inhomogeneous quality of the materials.

Overall, the duplicate sample comparisons indicate that the laboratory test data provided by MGT Labmark and LabMark are of adequate accuracy and reliability for this assessment.

10.2.3 Inter-laboratory Duplicates

Two (Aargus only) inter-laboratory soil samples were collected and analysed in order to assess the variation in analyte concentration between samples collected from the same sampling point. The inter-laboratory duplicate (split) sample frequency was computed using the total number of samples analysed as part of this assessment.

The split sample frequencies computed are presented in the following table.

Table 9 – Soil – Split Sample Analyses

Analyte – Discrete Soil	Samples Analysed	Split Sample	Frequency
Heavy Metals	21	2	10%
TPH/BTEX	10	2	20%
PAH	14	2	14%
OCP	10	2	20%
Phenols	10	2	20%
Cyanide	10	2	20%
PCB	11	2	18%

The split frequency for the analytical suite adopted generally complies with the NEPM, which recommends a frequency of at least 5%.

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It is considered that the number of split samples collected is adequate to assess the variation in analyte concentration between samples collected from the same sampling point. A summary of the test results with the Relative Percentage Difference (RPD) is presented in the following table. A discussion of the test data is also presented below.

Table 10 – Split SS1 – Discrete Soil – RPD's

ANALYTE	BH13 0.2 mg/kg	SPLIT SS1 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	2.4	<3	-
Cadmium	0.1	<0.3	-
Chromium	10	11	10
Copper	13	12	8
Nickel	5.1	5.2	2
Lead	56	53	6
Zinc	64	61	5
Mercury	<0.05	<0.05	-
TOTAL PETROLEUM HYDROCARBONS (TPH)			
C6 - C9	<10	<20	-
C10 - C14	<50	<20	-
C15 - C28	<100	<50	-
C29-C36	<100	<50	-
BTEX			
Benzene	<0.5	<0.1	-
Toluene	<0.5	<0.1	-
Ethyl Benzene	<0.5	<0.1	-
Total Xylenes	<1.5	<0.3	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
BENZO(a)PYRENE	<0.5	<0.1	-
Total PAH	<1	<0.8	-
ORGANOCHLORINE PESTICIDES (OCP)			
Heptachlor	<0.05	<0.1	-
Aldrin	<0.05	<0.1	-
Dieldrin	<0.05	<0.2	-
DDD	<0.05	<0.1	-
DDE	<0.05	<0.1	-
DDT	<0.2	<0.1	-
Chlordane (trans & cis)	<0.1	<0.1	
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<0.5	<1	-
PHENOL & CYANIDES			
Phenol	<0.5	0.3	
Cyanide	7.5	0.2	-
ASBESTOS			
Asbestos Detected	No	No	

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Table 11 – Split SS2 – Discrete Soil – RPD's

ANALYTE	BH18 0.2m mg/kg	SPLIT SS2 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
HEAVY METALS			
Arsenic	17	17	0
Cadmium	1.4	1.2	15
Chromium	34	24	34
Copper	85	61	33
Nickel	100	55	**58**
Lead	120	96	22
Zinc	300	270	11
Mercury	0.07	<0.05	-
TOTAL PETROLEUM HYDROCARBONS (TPH)			
C6 - C9	<10	<20	-
C10 - C14	<50	<20	-
C15 - C28	<100	<50	-
C29-C36	230	<50	-
BTEX			
Benzene	<0.5	<0.1	-
Toluene	<0.5	<0.1	-
Ethyl Benzene	<0.5	<0.1	-
Total Xylenes	<1.5	<0.3	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
BENZO(a)PYRENE	<5	0.2	-
Total PAH	<10	2.1	-
ORGANOCHLORINE PESTICIDES (OCP)			
Heptachlor	<0.05	<0.1	-
Aldrin	<0.05	<0.1	-
Dieldrin	<0.05	<0.2	-
DDD	<0.05	<0.2	-
DDE	<0.05	<0.2	-
DDT	<0.2	<0.2	-
Chlordane (trans & cis)	1.53	1	42
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<0.5	<1	-
PHENOL & CYANIDES			
Phenol	<5	0.2	
Cyanide	<1	0.4	-
ASBESTOS			
Asbestos Detected	Yes	Yes	

The comparisons between the inter-laboratory duplicates and corresponding original samples for soil indicated generally acceptable RPD overall, with the exception Nickel (58%) in Table 11.

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The higher RPD exceeded the DQOs for this project, however this exceedance is not considered to be significant as the concentrations of both samples are at generally low concentrations and/or the split was prepared from fill materials indicating the inhomogeneous quality of the materials.

Overall, the duplicate sample comparisons indicate that the laboratory test data provided by SGS Environmental are of adequate accuracy and reliability for this assessment.

10.2.4 Rinsate

One rinsate sample was recovered on the day of fieldwork (12th April 2012) in which sampling took place, in order to identify possible cross contamination between the sampling locations.

The laboratory results for the rinsate sample are presented in the following table.

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Table 12– Rinsate Sample

ANALYTE	RINSATE R1 (mg/L) 12.04.2012	Practical Quantitation Limits (PQL)
HEAVY METALS		
Arsenic	<0.001	0.001
Cadmium	<0.0001	0.0001
Chromium	<0.001	0.001
Copper	0.09	0.001
Nickel	<0.001	0.001
Lead	<0.001	0.001
Zinc	0.015	0.005
Mercury	<0.0001	0.0001
TOTAL PETROLEUM HYDROCARBONS (TPH)		
C6 - C9	0.05	0.02
C10 - C14	<0.05	0.05
C15 - C28	<0.1	0.1
C29-C36	<0.1	0.1
BTEX		
Benzene	<0.001	0.001
Toluene	<0.001	0.001
Ethyl Benzene	<0.001	0.001
Total Xylenes	<0.003	0.003
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)		
BENZO(a)PYRENE	<0.001	0.001
Total PAH	<0.002	0.002
POLYCHLORINATED BIPHENYLS (PCB)		
Total PCB	<0.005	0.005
SPECIATED PHENOLS		
Phenol	<0.002	0.002
ORGANOCHLORINE PESTICIDES (OCP)		
Heptachlor	<0.0005	0.0005
Aldrin	<0.0005	0.0005
Dieldrin	<0.0005	0.0005
DDD	<0.0005	0.0005
DDE	<0.0005	0.0005
DDT	<0.002	0.002
Chlordane (trans & cis)	<0.001	0.001

As indicated in Table 12 above, the concentrations of the analytes were found to be the same as or not significantly different to the PQL's, indicating that cross contamination did not take place.

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Overall, the cleaning and decontamination processes adopted in the field were found to be adequate.

10.3 Laboratory QA/QC

Collected soil samples were analysed by SGS Environmental, LabMark and MGT LabMark laboratories. Laboratories used within this study are accredited by the National Association of Testing Authorities (NATA) for the analyses undertaken.

The following table lists the allowable holding times, detailed in Schedule B(3) of The National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) prepared by the National Environment Protection Council (NEPC) and the *Standard Methods for the Examination of Water and Wastewater (APHA)* and the laboratories.

Table 13 – Analyte Holding Times

ANALYTE - SOIL	HOLDING TIME
Metals *	28 days
Mercury	28 days
Monocyclic Aromatic Hydrocarbons (MAH)	14 days
Total Petroleum Hydrocarbons (TPH)	14 days
Polycyclic Aromatic Hydrocarbons (PAH)	14 days
Organochlorine Pesticides (OCP)	14 days
Polychlorinated Biphenyls (PCB)	14 days
Phenolics	14 days
Cyanide	14 days

* Metals include arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni) and zinc (Zn)

The actual holding times of the laboratories (SGS Environmental and MGT LabMark only) used for this assessment are shown on the following table.

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Table 14 – Actual Sample Holding Times

Laboratory	Batch No	Sampling Dates	Sample Receipt	Extraction / Analysis Date	Holding Time
MGT LabMark	333969-S	12.04.2012	17.04.2012	24.04.2012	12 days
MGT LabMark	334142-W	12.04.2012	18.04.2012	18-26.04.2012	6-14 days
SGS	SE107278	12.04.2012	13.04.2012	17-24.04.2012	5-12 days

The tests were carried out within the relevant holding times.

Review of the QA/QC results provided with the laboratory reports by the laboratories indicated that the laboratory QAQC was satisfactory for the laboratory analyses undertaken, with the exception of:

- The result of the LabMark Spike Recovery soil sample of copper (sample ID S12-Ap09314) of 154% exceeded the Acceptance criteria. Some elements for this test have failed in the QC sample. However when at least 80% have passed the QC can be released. All other QC has passed in this test batch.
- The RPD of the LabMark duplicate soil sample of mercury (sample ID S12-Ap09311) of 34% which exceeded the Acceptance criteria. This result was due to the low concentrations of both results used to obtain the RPD. In addition, the RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 15.
- The RPD of the LabMark duplicate soil sample of arsenic & cadmium (sample ID S12-Ap09313) of 69% & 75% which exceeded the Acceptance criteria. This result was due to the low concentrations of both results used to obtain the RPD. In addition, the RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 15.
- The RPD of the LabMark duplicate soil sample of cadmium & nickel (sample ID S12-Ap09328) of 79% & 110% which exceeded the Acceptance criteria. This result was due to the low concentrations of both results used to obtain the

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RPD. In addition, the RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 15.

- The RPD of the LabMark duplicate water sample of mercury (sample ID S12-Ap10850) of 41% which exceeded the Acceptance criteria. This result was due to the low concentrations of both results used to obtain the RPD. In addition, the RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 15.
- The RPD of the SGS duplicate soil sample of PAH (original – SE107294.002 and duplicate – LB018382.015) of 71%, 84%, 109%, 133%, 109%, 102%, 76%, 69%, 67%, 68%, 69%, 54%, 64%, 59% and 78% respectively which exceeded the Acceptance criteria due to sample heterogeneity.

The Practical Quantitation Limits (PQLs) of the laboratory analyses were less than the threshold guidelines adopted for the purpose of this investigation, and therefore meet LABORATORY DQOs.

The results of all quality checking have been reviewed and are considered adequate in satisfying the reliability of the results and meet Data Quality Objectives (DQOs).

10.4 QA/QC for Data Evaluation

The following table provides a list of the data quality indicators for the analytical phase of the assessment and the methods adopted in ensuring that the data quality indicators were met.

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Table 15: DQO's for Laboratories

DATA QUALITY INDICATOR	METHOD(S) OF ACHIEVEMENT
Data Precision and Accuracy	Use of analytical laboratories experienced in the analyses undertaken, with appropriate NATA certification. NATA accreditation requires adequately trained and experienced testing staff. Field duplicate, and inter-laboratory duplicate / split samples analysed Acceptable RPD for duplicate and split comparison overall Appropriate and validated laboratory test methods used Adequate laboratory performance based on results of the blank samples, matrix spike samples, control samples, duplicates and surrogate spike samples
Data Representativeness	Representative coverage of potential contaminants, based on history, site activities and site features Adequate laboratory internal quality control and quality assurance methods, complying with the NEPM.
Documentation Completeness	Preparation of chain of custody records Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody NATA registered laboratory results certificates provided
Data Comparability	Use of NATA registered laboratories Test methods consistent for each sample Test methods comparable between primary and secondary laboratory Acceptable Relative Percentage Differences between original samples and field duplicates and inter-laboratory duplicate / split samples. Some high RPDs recorded.
Data Completeness	Analysis for all potential contaminants of concern. Field duplicate sample numbers complying with NEPM

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Based on the above, it is considered that the quality assurance and quality control data quality indicators have been complied with, both in the field and in the laboratory. As such, it is concluded that the laboratory test data obtained as part of this assessment is reliable and useable for this assessment.

10.5 Conclusion for the QA/QC

The sampling methods (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation works were consistent with Aargus protocols and were found to meet the DQOs for this project. It is therefore considered that the data is sufficiently precise and accurate and that the results can be used for the purpose of this project.

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11.0 SITE ASSESSMENT CRITERIA

11.1 Soil

To assess the contamination status of soils at a site, the NSW EPA refers to the document entitled National Environmental Protection Council (1999) National Environmental Protection (Assessment of Site Contamination) Measure (NEPM).

The EPA guidelines indicate that the assessment of soil test results and comparison with defined soil criteria should include consideration of a number of factors such as:

1. Land uses, e.g. residential, agricultural/horticultural, recreation or commercial/industrial;
2. Potential child occupancy;
3. Potential environmental effects including leaching into groundwater;
4. Single or multiple contaminants;
5. Depth of contamination;
6. Level and distribution of contamination;
7. Bioavailability of contaminant(s), e.g. Related to speciation, route of exposure;
8. Toxicological assessment of the contaminant(s), e.g. Toxic kinetics, carcinogenicity, acute and chronic toxicity;
9. Physico-chemical properties of the contaminant(s);
10. State of the site surface, e.g. paved or grassed exposed;
11. Potential exposure pathways; and
12. Uncertainties with the sampling methodology and toxicological assessment.

The site is proposed to be rezoned for high density residential developments and commercial land uses. With respect to human health, the analytical results are assessed against risk based health investigation (HIL) guidelines appropriate for the site, those being the **HIL 'D' -** *Residential with minimal opportunities for soil access, including high-rise, apartments and flats*.

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The NEPM 1999 does not include investigation levels for TPH and BTEX. For assessing contamination by these compounds at sites used for sensitive land use, such as residential, the NSW EPA refers to the NSW EPA (1994) "Guidelines for Assessing Service Station Sites". The NSW EPA has recommended that these threshold values should also be used to assess the suitability of sites for less stringent uses, such as residential with minimal access to the soil or parklands.

The adopted assessment criteria are presented in the following table:

Table 16 – Soil Assessment Criteria

Contaminant	Assessment Criteria (mg/kg)		Source
	HIL 'D'	NSW EPA	
Inorganics			
Arsenic	400	-	NEPM, 1999
Cadmium	80	-	NEPM, 1999
Chromium (III)	48,000	-	NEPM, 1999
Copper	4,000	-	NEPM, 1999
Lead	1,200	-	NEPM, 1999
Zinc	28,000	-	NEPM, 1999
Nickel	2400	-	NEPM, 1999
Mercury	60	-	NEPM, 1999
Organics			
TPH/BTEX			
C_6 to C_9 Fraction	-	65	NSW EPA, 1994
C_{10} to C_{36} Fraction	-	1,000	NSW EPA, 1994
Benzene	-	1	NSW EPA, 1994
Toluene	-	1.4	NSW EPA, 1994
Ethylbenzene	-	3.1	NSW EPA, 1994
Total Xylenes	-	14	NSW EPA, 1994
PAH			
Benzo(a)pyrene	4	-	NEPM, 1999
Total PAH	80	-	NEPM, 1999
OCP			
Aldrin + Dieldrin	40	-	NEPM, 1999
Chlordane	200	-	NEPM, 1999
DDT+DDD+DDE	800	-	NEPM, 1999
Heptachlor	40	-	NEPM, 1999
PCB (Total)	40	-	NEPM, 1999
Phenol	34,000	-	NEPM, 1999
Cyanide	1,000	-	NEPM, 1999

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11.2 Export of Soils

To assess the waste classification of materials to be disposed of off-site, the NSW EPA refers to the *NSW DECC* (2009) *Waste Classification Guidelines, Part 1: Classifying Waste.*

To classify a non-liquid waste as General Solid Waste or Restricted Solid Waste, the threshold values of the "total concentration without TCLP" (referred to as CT in the text), or the threshold values for the "leachable and total concentration" together can be used.

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12.0 ASSESSMENT DISCUSSION

A summary of the test results are presented in the following tables together with the assessment criteria adopted. A discussion of the test data is also presented in the following sub-sections.

Reference may be made to Appendix C - Laboratory Results for the laboratory certificates.

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12.1 Soil Results

12.1.1 Heavy Metals

Table 17 – Heavy Metals Test Results

Analyte / Sample Reference	Depth(m)	METALS (mg/kg) ARSENIC	CADMIUM	CHROMIUM	COPPER	NICKEL	LEAD	ZINC	MERCURY
ERM Australia P/L (2001)									
BH1	0.5	5.5	<0.5	19	52	15	22	60	0.025
BH2	0.5	5.5	<0.5	7.5	38	18	31	52	0.04
BH3	0.2	4.5	<0.5	31	29	27	12	58	0.01
BH4	0	3	<0.5	7.5	10	2.5	39	16	0.02
BH5	0.2	6	<0.5	12	54	25	32	160	0.025
BH6	0.2	7.5	<0.5	7	760	29	150	380	0.045
BH7	0.1	5	<0.5	12	51	13	180	105	0.27
BH8	0.1	12	<0.5	14	45	34	87	190	0.25
BH9	0.1	3	<0.5	18	24	3.5	20	42	0.04
BH10	0.2	26	<0.5	14	52	50	83	240	0.02
BH11	0.1	300	1	22	150	43	440	810	0.17
BH12	0.2	5	<0.5	23	65	10	130	83	0.06
Aargus P/L (2012)									
BH13	0.2	2.4	0.1	10	13	5.1	56	64	<0.05
BH13	0.7	2	0.1	8	23	3.3	90	68	0.06
BH14	0.2	51	1	18	65	15	580	440	0.17
BH14	0.6	8.9	<0.1	18	15	2.1	33	27	0.05
BH15	0.2	18	0.4	18	110	20	140	220	0.2
BH15	0.6	7	<0.1	9.5	41	2.2	16	50	<0.05
BH16	0.2	3.4	0.3	10	61	130	21	99	<0.05
BH16	1	2.9	0.2	12	63	150	28	100	<0.05
BH17	0.2	4.6	0.1	8.9	17	4	44	59	<0.05
BH17	0.5	76	0.8	32	120	100	220	400	0.1
BH18	0.2	17	1.4	34	85	100	120	300	0.07
BH18	0.6	8.3	<0.1	9	28	5.8	43	21	<0.05
BH19	0.2	9.8	0.9	36	70	74	100	360	0.11
BH19	0.6	18	0.1	34	63	58	42	87	0.07
BH20	0.2	130	0.9	33	87	36	510	560	0.67
BH20	0.8	8	<0.1	22	19	3.5	26	22	0.05
BH21	0.2	7.4	80	38	140	10	120	200	0.08
BH21	1	16	0.5	54	74	66	76	300	0.07
BH22	0.2	16	0.7	67	460	190	460	320	0.22
BH22	0.85	11	0.4	25	100	13	76	230	0.05
S23	-	4.2	2.1	28	45	64	130	300	<0.05
Practical Quantitation Limits (PQL)		1	0.1	2	2	1	2	5	0.05
GUIDELINES FOR THE NSW SITE AUDITOR SCHEME (2006)									
Provisional Phytotoxity-Based Investigation Levels (PPBIL)		20	3	400/1[e]	100	60	600	200	1
NATIONAL ENVIRONMENT PROTECTION MEASURE (1999)									
Health Investigation Levels (HIL) [a] (HIL 'A')		100	20	12%/100 [f]	1000	600	300	7000	10/15 [g]
HIL 'D' [b]		**400**	**80**	**48%/400**	**4000**	**2400**	**1200**	**28000**	**40/60**
HIL 'E' [c]		200	40	24%/200	2000	600	600	14000	20/30
HIL 'F' [d]		500	100	60%/500	5000	3000	1500	35000	50/75

Notes
a: Residential development with accessible soils, including childrens day care centres, kindergartens, preschools and primary schools.
b: Residential with minimal opportunities for soil access, including high- rise, apartments and flats
c: Parks, recreational open space and playing fields, including secondary schools
d: Commercial or industrial development
e: 400mg/kg for Chromium (+3) and 1mg/kg for Chromium (+6).
f: 12% (120000mg/kg) for Chromium (+3) and 100mg/kg for Chromium (+6).
g: 10mg/kg for Methyl Mercury and 15mg/kg for Inorganic Mercury.

As shown in Table 17, the concentrations of metals for the soils were below the assessment criteria those being HIL 'D'.

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12.1.2 TPH & BTEX

Table 18 – TPH & BTEX Test Results

Analyte / Sample Location	Depth (m)	TPH (mg/kg) C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 [b]	BTEX (mg/kg) BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
ERM Australia P/L (2001)										
BH1	0.5	<10	<50	160	<100	160	<0.2	<0.5	<0.5	<1
BH2	0.5	50	1690	5630	360	**7730**	<0.2	<0.5	<0.5	1
BH3	0.2	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
BH4	0	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
BH5	0.2	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
BH6	0.2	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
BH7	0.1	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
BH8	0.1	<10	<50	270	130	400	<0.2	<0.5	<0.5	<1
BH9	0.1	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
BH10	0.2	<10	250	3640	660	**4550**	<0.2	<0.5	<0.5	<1
BH11	0.1	<10	<50	100	<100	100	<0.2	<0.5	<0.5	<1
BH12	0.2	<10	<50	<100	<100	<250	<0.2	<0.5	<0.5	<1
Aargus P/L (2012)										
BH13	0.2	<10	<50	<100	<100	<100	<0.5	<0.5	<0.5	<1.5
BH14	0.2	<10	<50	240	260	500	<0.5	<0.5	<0.5	<1.5
BH15	0.2	<10	<50	<100	<100	<100	<0.5	<0.5	<0.5	<1.5
BH16	0.2	<10	<50	<100	150	150	<0.5	<0.5	<0.5	<1.5
BH17	0.2	<10	<50	<100	<100	<100	<0.5	<0.5	<0.5	<1.5
BH18	0.2	<10	<50	<100	230	230	<0.5	<0.5	<0.5	<1.5
BH19	0.2	<10	<50	310	110	420	<0.5	<0.5	<0.5	<1.5
BH20	0.2	<10	<50	430	510	940	<0.5	<0.5	<0.5	<1.5
BH21	0.2	<10	<50	<100	<100	<100	<0.5	<0.5	<0.5	<1.5
BH22	0.2	<10	<50	350	440	790	<0.5	<0.5	<0.5	<1.5
Practical Quantitation Limits (PQL)		10	50	100	100	100	0.5	0.5	0.5	1.5
EPA Levels [a]		**65**	**C10-C36 =1000**				**1**	**1.4**	**3.1**	**14**

Notes a: Contaminated Sites: "Guidelines for Assessing Service Station Sites", 1994, EPA
b: C10- C36 = (C10- C14) + (C15- C28) + (C29- C36); concentrations less than PQL are assumed equal to PQL.
NA: Not Applicable

As indicated in Table 18 above, TPH & BTEX concentrations were below the suggested levels in the EPA Service Station with the exception of the following:

- 7,730mg/kg of TPH (C_{10}-C_{36}) in borehole BH2 (0.5m) which exceeded the EPA levels of 1,000mg/kg.

- 4,550mg/kg of TPH (C_{10}-C_{36}) in borehole BH10 (0.2m) which exceeded the EPA levels of 1,000mg/kg.

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12.1.3 B(a)P, Total PAH, OCP, PCB, OPP, Phenol & Cyanide

Table 19 – B(a)P, Total PAH, OCP, PCB, OPP, Phenol & Cyanide Test Results

Analyte		PAH (mg/kg)		Organochlorine Pesticides (mg/kg)										
Sample Location	Depth (m)	BENZO(a)PYRENE (mg/kg)	TOTAL PAH (mg/kg)	HEPTACHLOR	ALDRIN	DIELDRIN	DDD	DDE	DDT	CHLORDANE (trans & cis)	TOTAL PCB (mg/kg)	TOTAL PHENOLS (mg/kg)	TOTAL CYANIDES (mg/kg)	TOTAL OPP's (mg/kg)
ERM Australia P/L (2001)														
BH1	0.5	**6**	67	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<1	<5	-	<PQL	<PQL
BH2	0.5	<0.5	9.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH3	0.2	<0.5	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH4	0	<0.5	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH5	0.2	<0.5	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH6	0.2	<0.5	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH7	0.1	<0.5	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH8	0.1	**5.2**	55.7	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<1	<5	-	<PQL	<PQL
BH9	0.1	<0.5	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH10	0.2	1.1	12.9	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<1	<5	-	<PQL	<PQL
BH11	0.1	1.3	13.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
BH12	0.2	<0.5	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	-	<PQL	<PQL
Aargus P/L (2012)														
BH13	0.2	<0.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	<0.5	7.5	-
BH13	0.7	<0.5	<1	-	-	-	-	-	-	-	-	-	-	-
BH14	0.2	<0.5	<1	<0.05	<0.05	0.48	<0.05	<0.05	<0.2	0.56	<0.5	<0.5	<1	-
BH15	0.2	<0.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	<0.5	4.6	-
BH16	0.2	<0.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	0.07	<0.5	<0.5	<1	-
BH16	1	<0.5	<1	-	-	-	-	-	-	-	-	-	-	-
BH17	0.2	<0.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	<0.5	2.6	-
BH17	0.5	0.6	3.6	-	-	-	-	-	-	-	-	-	-	-
BH18	0.2	<5	<10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1.53	<0.5	<0.5	<1	-
BH19	0.2	<0.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1.08	<0.5	<0.5	2.6	-
BH20	0.2	0.6	4.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	0.56	<0.5	<0.5	2.6	-
BH21	0.2	<0.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	<0.5	<1	-
BH21	1	<0.5	1	-	-	-	-	-	-	-	-	-	-	-
BH22	0.2	2.9	25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.5	<0.5	<1	-
S23	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-
Practical Quantitation Limits (PQL)		0.5	NA	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.5	0.5	1	PQL
NATIONAL ENVIRONMENT PROTECTION MEASURE (1999)														
Health Investigation Levels (HIL) [a] (HIL 'A')		1	20	10	10 [e]	10 [e]	200 [f]			50	10	8500	250 [g] / 500 [h]	-
HIL 'D' [b]		**4**	**80**	**40**	**40**	**40**	**800**			**200**	**20**	**34000**	**1000 / 2000**	**-**
HIL 'E' [c]		2	40	20	20	20	400			100	40	17000	500 / 1000	-
HIL 'F' [d]		5	100	50	50	50	1000			250	50	42500	1250 / 2500	-

Notes
a: Residential with gardens and accessible soil including children's day-care centres, preschools, primary schools, townhouses and villas.
b: Residential with minimal opportunities for soil access, including high-rise, apartments and flats
c: Parks, recreational open space and playing fields, including secondary schools
d: Commercial or industrial development
e: Aldrin + Dieldrin
f: Total of DDD + DDE + DDT
g: Cyanide (free)
h: Cyanide (complex)
NA: Not Applicable
OPP Organophosphorus Pesticides

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As shown in Table 19, the concentrations of benzo(a)pyrene and total PAH for the soils were below the assessment criteria those being HIL 'D' with the exception of the following:

- 6mg/kg of benzo(a)pyrene in borehole BH1 (0.5m) which exceeded the HIL'D' criteria of 4mg/kg.
- 5.2mg/kg of benzo(a)pyrene in borehole BH8 (0.1m) which exceeded the HIL'D' criteria of 4mg/kg.

As indicated in Table 19 above, the concentrations of OCP, PCB, OPP, Phenol & Cyanide were below the adopted assessment criteria, that being the HIL 'D'.

12.1.4 Asbestos Identification

Table 20 – Asbestos Analysis Test Results

	Asbestos ID in soil
BH13 0.2	No asbestos detected
BH14 0.2	**Chrysotile, Amosite & Crocidolite asbestos detected**
BH15 0.2	**Chrysotile asbestos detected**
BH16 0.2	**Chrysotile asbestos detected**
BH17 0.2	No asbestos detected
BH18 0.2	**Chrysotile & Amosite asbestos detected**
BH19 0.2	No asbestos detected
BH20 0.2	**Chrysotile asbestos detected**
BH21 0.2	No asbestos detected
BH22 0.2	No asbestos detected

As indicated in Table 20 above, no asbestos fibres were detected in the soil samples analysed with the exception of the following"

- Chrysotile asbestos was detected in the following boreholes BH15 (0.2m), BH16 (0.2m) & BH20 (0.2m).
- Chrysotile & Amosite asbestos was detected in borehole BH18 (0.2m).
- Chrysotile, Amosite & Crocidolite asbestos was detected in borehole BH14 (0.2m).

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13.0 CONCLUSIONS AND RECOMMENDATIONS

Aargus Pty Ltd was appointed by MDM Pty Ltd to conduct a Phase II Environmental Site Assessment (ESA) of the property situated at 2 Factory Street, Granville NSW ('the site'). The northern portion of the site is proposed to be developed into a multi-storey commuter car park under a voluntary planning agreement. The southern portion of the site is proposed to be rezoned to R4 high density residential under the Parramatta LEP 2011 as to permit residential flat buildings.

The assessment criteria adopted were the available Health Investigation Levels (HIL's) of the above-mentioned guidelines for *Residential with minimal opportunities for soil access, including high-rise, apartments and flats* (HIL 'D') and the suggested levels in the EPA service station guidelines.

One previous investigation has been undertaken within the site. A Preliminary Environmental Site Assessment was prepared by Environmental Resource Management (ERM) in May 2001. Information from the above report has been utilised within this Phase II ESA report.

The scope of work in preparing this ESA report included review of existing information, soil sampling and analysis, interpretation of results/findings and report preparation in general accordance with NSW EPA '*Guidelines for Consultants Reporting on Contaminated Sites', 2011*.

A number of potential areas of environmental concerns were identified at the site, particularly:

- Historical uses such as steel manufacturing and assembly, storage and distribution of goods etc;
- Current uses such as storage of metal fences, groceries, trucks etc;
- Whole site where uncontrolled fill was imported to level the site prior to the construction of the buildings and the filling of previous low lying areas;

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- Where pesticides were potentially utilised within the site for weed control or beneath buildings / floor slabs for termite control;
- Carpark areas where leaks and spills from cars may have occurred;
- Vicinity of metal features;
- Leakages from the former UST area;
- Bunded area;
- Storage of fuels and chemicals;
- Transformer;
- Railway areas; and
- Asbestos / Fibro features within the building structures.

Samples were recovered from twelve boreholes (BH1-BH12) during the original ERM investigation in 2001. The boreholes from the ERM assessment have been used to supplement the boreholes undertaken as part of the Aargus investigation. During the Aargus investigation (April 2012), soil samples were collected from eleven boreholes (BH13 to BH22 & S23) located on a semi regular grid over the site (modified to allow accesses to sample locations and in areas not previously sampled). All fieldwork and borehole logging was conducted by qualified environmental staff (refer Appendix H – Resumes of Client Team). Boreholes were drilled using a stainless steel hand auger. Sampling was conducted on the 12th April 2012.

To reach our stated objectives, a set of thirty-three (33) primary soil samples, twelve (12) as part of the ERM 2001 assessment and twenty-one (21) as part of the Aargus 2012 assessment, were submitted for analysis on the differing fill and natural soil profiles. Three (3) QA/QC intra-laboratory duplicate soil samples and one (1) rinsate sample were analysed by the NATA accredited laboratories of MGT LabMark and LabMark. Two (2) QA/QC inter-laboratory split soil samples were analysed by the NATA accredited laboratory of SGS Environmental.

Laboratory results and QA/QC data fulfil the DQOs. The results are therefore considered a reliable basis for the following conclusions and recommendations.

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Laboratory results for the soil samples analysed were lower than the relevant regulatory guideline criteria adopted, those being HIL 'D' and EPA Service Station guidelines with the exception of the following:

- 7,730mg/kg of TPH (C_{10}-C_{36}) in borehole BH2 (0.5m) which exceeded the EPA levels of 1,000mg/kg.
- 4,550mg/kg of TPH (C_{10}-C_{36}) in borehole BH10 (0.2m) which exceeded the EPA levels of 1,000mg/kg.
- 6mg/kg of benzo(a)pyrene in borehole BH1 (0.5m) which exceeded the HIL'D' criteria of 4mg/kg.
- 5.2mg/kg of benzo(a)pyrene in borehole BH8 (0.1m) which exceeded the HIL'D' criteria of 4mg/kg.

Asbestos fibres were detected in a number of soil samples analysed:

- Chrysotile asbestos was detected in the following boreholes BH15 (0.2m), BH16 (0.2m) & BH20 (0.2m).
- Chrysotile & Amosite asbestos was detected in borehole BH18 (0.2m).
- Chrysotile, Amosite & Crocidolite asbestos was detected in borehole BH14 (0.2m).

The above boreholes (BH1, BH2, BH8, BH10, BH14, BH15, BH16, BH18 & BH20) can be considered to be hotspots and require some form of remediation.

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In Summary

Based on the information collected during this investigation and in reference to Clause 6 *"Contamination and remediation to be considered in zoning or rezoning proposal"* of SEPP 55, the site will be suitable for the proposed rezoning of the site for high density residential and commercial land uses, subject to the completion of the following:

- It is recommended that an appropriate remedial / management strategy is developed, culminating in preparation of a Remedial Action Plan (RAP) in accordance with EPA guidelines, in regards to the former UST area and hotspot areas present within the site, once the proposed development area are finalised.
- Undertake additional soil sampling at depth in the vicinity of the former UST.
- Undertake a groundwater assessment; including the installation of at least three (3) groundwater monitoring wells.
- Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the *"Waste Classification Guidelines, Part 1: Classifying Waste" NSW* DECC (2009).

If during any potential site works, significant odours and / or evidence of gross contamination not previously detected are encountered, or any other significant unexpected occurrence, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence**.**

We would be pleased to provide further information on any aspects of this report

For and on behalf of

Aargus Pty Ltd



Michael Silk
Environmental Scientist

Reviewed By



Mark Kelly
Environmental Manager

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LIMITATIONS OF ASSESSMENT

Whilst to the best of our knowledge, information contained in this report is accurate at the date of issue, although subsurface conditions, including groundwater levels and contaminant concentrations, can change in a limited time. This should be borne in mind if the report is used after a protracted delay.

There is always some disparity in subsurface conditions across a site that cannot be fully defined by investigation. Hence it is unlikely that measurements and values obtained from sampling and testing during environmental works carried out at a site will characterise the extremes of conditions that exist within the site.

There is no investigation that is thorough enough to preclude the presence of material that presently or in the future, may be considered hazardous at the site. Since regulatory criteria are constantly changing, concentrations of contaminants presently considered low may, in the future, fall under different regulatory standards that require remediation.

Opinions are judgements, which are based on our understanding and interpretation of current regulatory standards, and should not be construed as legal opinions.

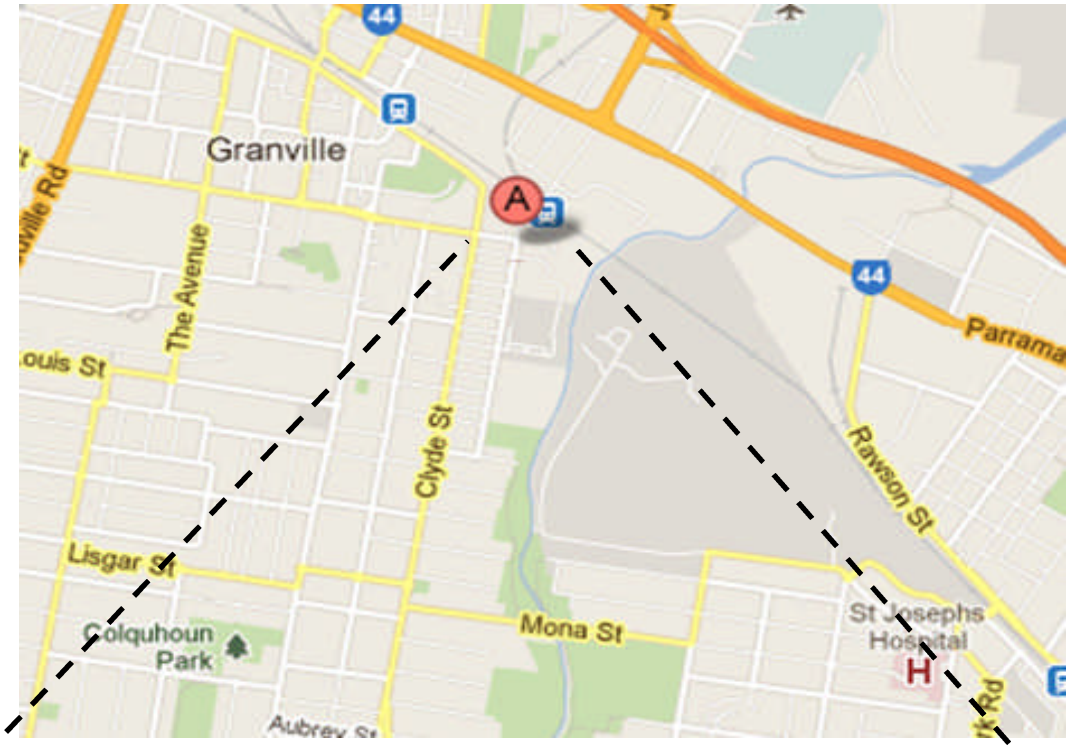
Appendix B – Important information about your environmental report should also be read in conjunction with this report.

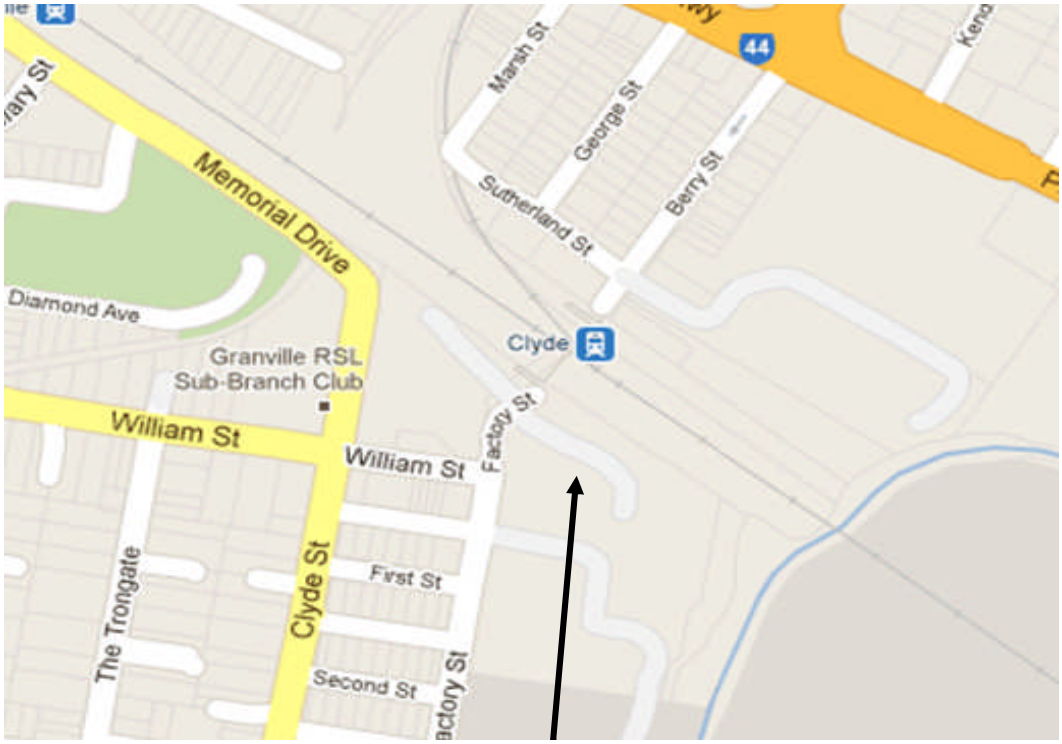
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APPENDIX A

LOCALITY MAP & SITE PLAN

LOCALITY MAP





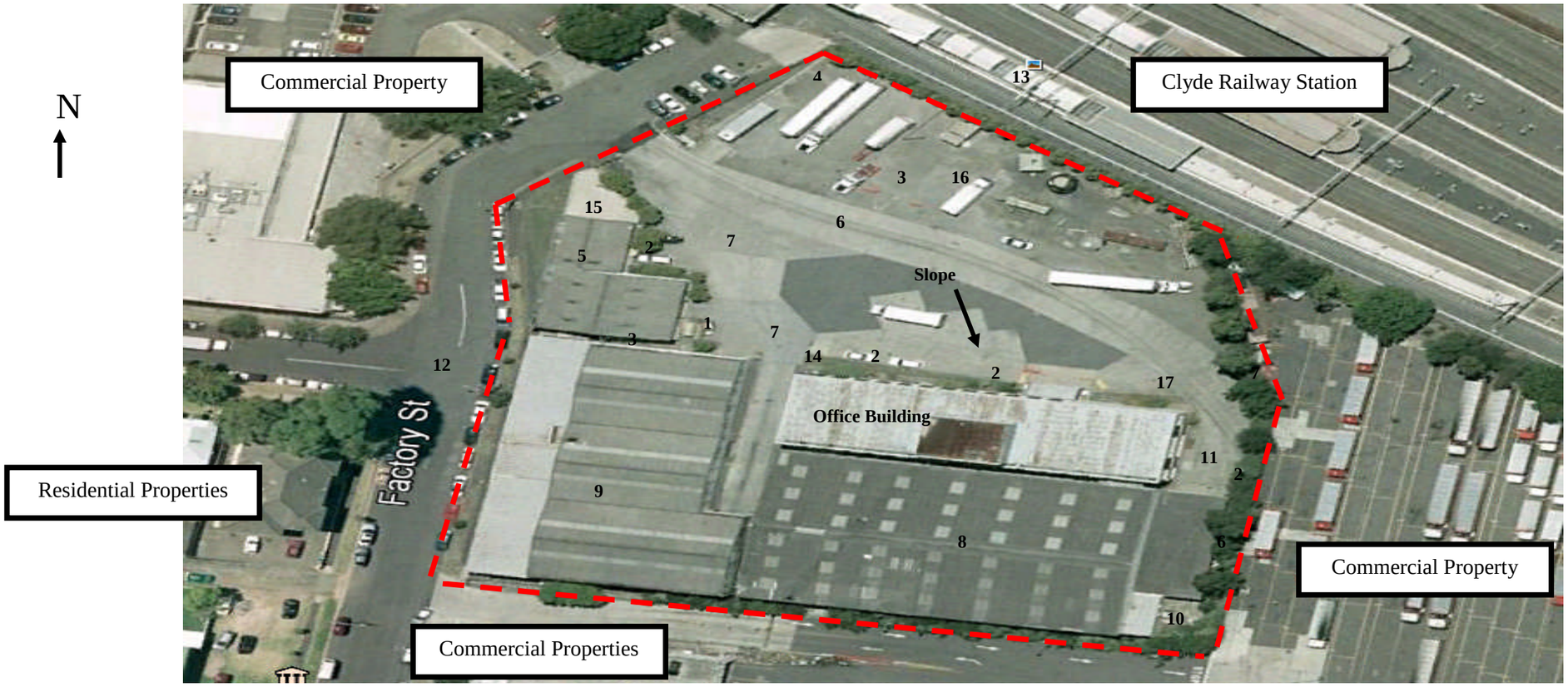
Site Location

Reference: Google (2012)

ABN 46 063 579 313 Aargus Pty Limited Environment – Chemicals – Business Development

Drawn	MS	**Phase II Environmental Site Assessment MDM Pty Ltd 2 Factory Street, Granville NSW**	Aargus AUSTRALIA	Figure 1
Approved	MK			
Date	12/4/12			
Scale	N/A			Job No: ES4962

SITE PLAN



NUMBER	SITE FEATURES	NUMBER	SITE FEATURES
1	Transformer	11	Former UST's area
2	Car Parking	12	Factory Street
3	Asphalt	13	Clyde Railway Station
4	Product Storage	14	Skip Bin
5	Former gate house	15	Retail Shop - Kitchens
6	Railway Lines	16	Parked Truck
7	Concrete surfaces	17	Scrap metal
8	Warehouse 1 - Used for metal fencing storage		
9	Warehouse 2 - Grocery Goods		
10	Bunded area (former above ground storage tank)		

Source: Google 2012

Drawn	EW/MS
Approved	MK
Date	12.04.2012
Approx Scale	N/A

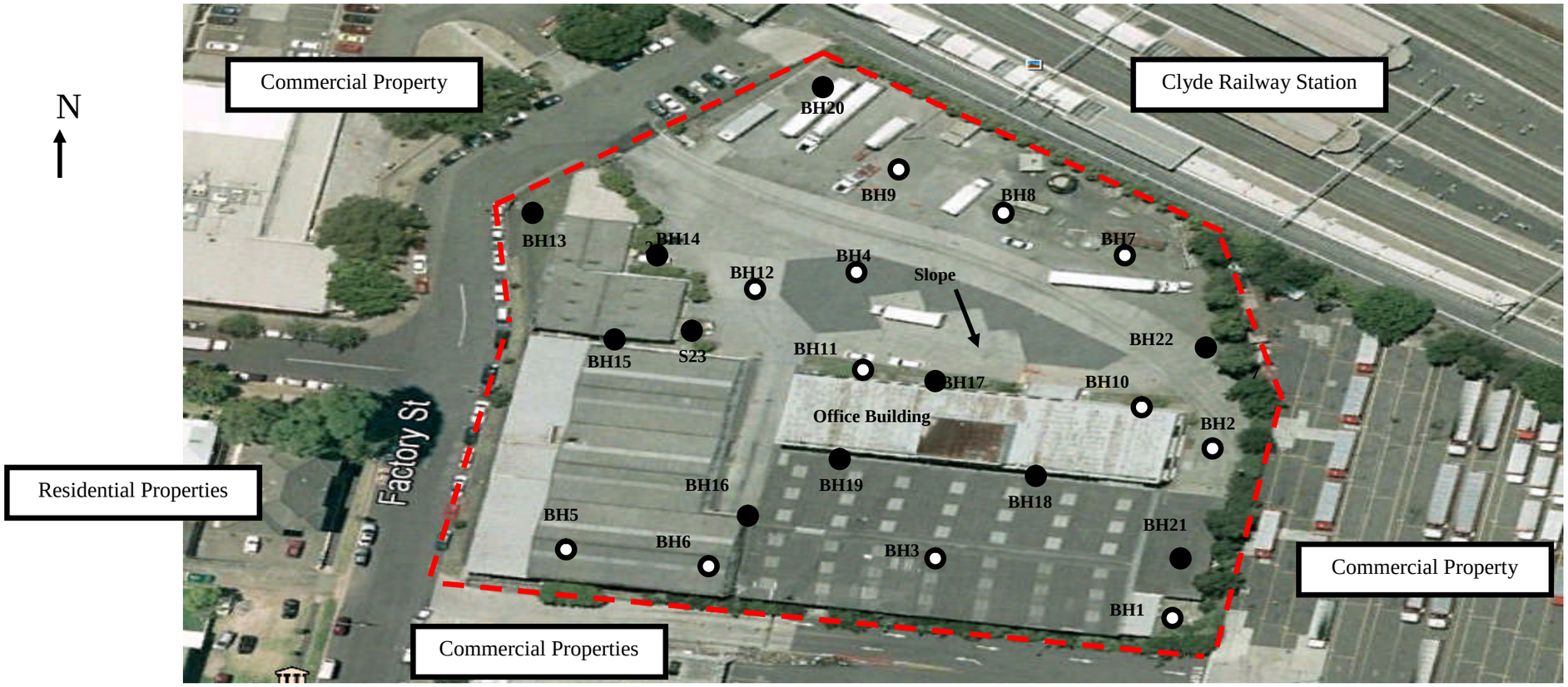
Phase II Environmental Site Assessment
MDM Pty Ltd
2 Factory Street, Granville NSW

Aargus AUSTRALIA

Fig 2a

ES4962

SITE PLAN



Legend

- Approximate Site Boundary
- ERM 2001 Borehole locations
- Aargus 2012 Borehole locations

ABN 46 063 579 313 Aargus Pty Limited Environment – Remediation – Geotechnical Engineering

Source: Google 2012

Drawn	EW/MS
Approved	MK
Date	12.04.2012
Approx Scale	N/A

Phase II Environmental Site Assessment
MDM Pty Ltd
2 Factory Street, Granville NSW

Aargus AUSTRALIA

Fig 2b

ES4962

APPENDIX B

IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL REPORT

Aargus

IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL SITE ASSESSMENT

These notes have been prepared by Aargus (Australia) Pty Ltd and its associated companies using guidelines prepared by ASFE (The Association) of Engineering Firms Practising in the Geo-sciences. They are offered to help you in the interpretation of your Environmental Site Assessment (ESA) reports.

REASONS FOR CONDUCTING AN ESA

ESA's are typically, though not exclusively, carried out in the following circumstances:

- as pre-acquisition assessments, on behalf of either purchaser or vender, when a property is to be sold;
- as pre-development assessments, when a property or area of land is to be redeveloped or have its use changed for example, from a factory to a residential subdivision;
- as pre-development assessments of greenfield sites, to establish "baseline" conditions and assess environmental, geological and hydrological constraints to the development of, for example, a landfill; and
- as audits of the environmental effects of an ongoing operation.

Each of these circumstances requires a specific approach to the assessment of soil and groundwater contamination. In all cases however, the objective is to identify and if possible quantify the risks that unrecognised **c**ontamination poses to the proposed activity. Such risks may be both financial, for example, cleanup costs or limitations on site use, and physical, for example, health risks to site users or the public.

THE LIMITATIONS OF AN ESA

Although the information provided by an ESA could reduce exposure to such risks, no ESA, however, diligently carried out can eliminate them. Even a rigorous professional assessment may fail to detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled.

AN ESA REPORT IS BASED ON A UNIQUE SET OF PROJECT SPECIFIC FACTORS

Your environmental report should not be used:

- when the nature of the proposed development is changed, for example, if a residential development is proposed instead of a commercial one;
- when the size or configuration of the proposed development is altered;
- when the location or orientation of the proposed structure is modified;
- when there is a change of ownership
- or for application to an adjacent site.

To help avoid costly problems, refer to your consultant to determine how any factors, which have changed subsequent to the date of the report, may affect its recommendations.

ESA "FINDINGS" ARE PROFESSIONAL ESTIMATES

Site assessment identifies actual subsurface conditions only at those points where samples are taken, when they are taken. Data derived through sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists who then render an opinion about overall subsurface conditions, the nature and extent of contamination, its likely impact on the proposed development and appropriate remediation measures. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than a report indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to help minimise its impact. For this reason owners should retain the services of their consultants

through the development stage, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

SUBSURFACE CONDITIONS CAN CHANGE

Natural processes and the activity of man change subsurface conditions. As an ESA report is based on conditions, which existed at the time of subsurface exploration, decisions should not be based on an ESA report whose adequacy may have been affected by time. Speak with the consultant to learn if additional tests are advisable.

ESA SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND PERSONS

Every study and ESA report is prepared in response to a specific brief to meet the specific needs of specific individuals. A report prepared for a consulting civil engineer may not be adequate for a construction contractor, or even some other consulting civil engineer. Other persons should not use a report for any purpose, or by the client for a different purpose. No individual other than the client should apply a report even apparently for its intended purpose without first conferring with the consultant. No person should apply a report for any purpose other than that originally contemplated without first conferring with the consultant.

AN ESA REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when design professionals develop their plans based on misinterpretations of an ESA. To help avoid these problems, the environmental consultant should be retained to work with appropriate design professionals to explain relevant findings and to review the adequacy of their plans and specifications relative to contamination issues.

LOGS SHOULD NOT BE SEPARATED FROM THE ENGINEERING REPORT

Final borehole or test pit logs are developed by environmental scientists, engineers or geologists based upon their interpretation of field logs (assembled by site personnel) and laboratory evaluation of field samples. Only final logs customarily included in our reports. These logs should not under any circumstances be redrawn for inclusion in site remediation or other design drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to minimise the possibility of contractors misinterpreting the logs during bid preparation. When this occurs, delays, disputes and unanticipated costs are the all-too-frequent result.

To reduce the likelihood of boring log misinterpretation, the complete report must be available to persons or organisations involved in the project, such as contractors, for their use. Those who o not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing all the available information to persons and organisations such as contractors helps prevent costly construction problems and the adversarial attitudes that may aggravate them to disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY

Because an ESA is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in transmittals. These are not exculpatory clauses designed to foist liabilities onto some other party. Rather, they are definitive clauses that identify where your consultant's responsibilities begin and end. Their use helps all parties involved recognise their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your ESA report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

APPENDIX C

LABORATORY RESULTS

mgt LabMark
ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Aargus Environmental
446 Parramatta Road
Petersham
NSW 2049

Attention: Mark Kelly

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Report	333969-S
Client Reference	GRANVILLE ES4962
Received Date	Apr 17, 2012

Client Sample ID			**BH13 0.2**	**BH13 0.7**	**BH14 0.2**	**BH14 0.6**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
mgt-LabMark Sample No.			**S12-Ap09309**	**S12-Ap09310**	**S12-Ap09311**	**S12-Ap09312**
Date Sampled			**Apr 12, 2012**	**Apr 12, 2012**	**Apr 12, 2012**	**Apr 12, 2012**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	-
TRH C10-C14	50	mg/kg	< 50	-	< 50	-
TRH C15-C28	100	mg/kg	< 100	-	240	-
TRH C29-C36	100	mg/kg	< 100	-	260	-
TRH C10-36 (Total)	100	mg/kg	< 100	-	500	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total m+p-Xylenes	1	mg/kg	< 1	-	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	-	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	101	-	104	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	420	-
TRH >C34-C40	100	mg/kg	< 100	-	160	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	101	-	109	-
Speciated Phenols						
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.6-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			BH13 0.2	BH13 0.7	BH14 0.2	BH14 0.6
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09309	S12-Ap09310	S12-Ap09311	S12-Ap09312
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	-	< 1	-
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Nitrophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Phenol-d5 (surr.)	1	%	84	-	88	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	< 0.2	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
a-Chlordane	0.05	mg/kg	< 0.05	-	0.26	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	0.48	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
g-Chlordane	0.05	mg/kg	< 0.05	-	0.30	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	101	-	109	-
Tetrachloro-m-xylene (surr.)	1	%	85	-	81	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH	1	mg/kg	< 1	< 1	< 1	-
2-Fluorobiphenyl (surr.)	1	%	87	80	91	-
p-Terphenyl-d14 (surr.)	1	%	88	104	91	-

Client Sample ID			BH13 0.2	BH13 0.7	BH14 0.2	BH14 0.6
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09309	S12-Ap09310	S12-Ap09311	S12-Ap09312
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Cyanide (total)	1	mg/kg	7.5	-	< 1	-
% Moisture	0.1	%	11	9.3	8.7	21
Asbestos			ASET Report	-	ASET Report	-
Heavy Metals						
Arsenic	1	mg/kg	2.4	2.0	51	8.9
Cadmium	0.1	mg/kg	0.1	0.1	1.0	< 0.1
Chromium	2	mg/kg	10	8.0	18	18
Copper	2	mg/kg	13	23	65	15
Lead	2	mg/kg	56	90	580	33
Mercury	0.05	mg/kg	< 0.05	0.06	0.17	0.05
Nickel	1	mg/kg	5.1	3.3	15	2.1
Zinc	5	mg/kg	64	68	440	27

Client Sample ID			BH15 0.2	BH15 0.6	BH16 0.2	BH16 1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09313	S12-Ap09314	S12-Ap09315	S12-Ap09316
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	-
TRH C10-C14	50	mg/kg	< 50	-	< 50	-
TRH C15-C28	100	mg/kg	< 100	-	< 100	-
TRH C29-C36	100	mg/kg	< 100	-	150	-
TRH C10-36 (Total)	100	mg/kg	< 100	-	150	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total m+p-Xylenes	1	mg/kg	< 1	-	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	-	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	93	-	99	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	270	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	102	-	96	-
Speciated Phenols						
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.6-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	-	< 0.5	-
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	-	< 1	-
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Nitrophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Phenol-d5 (surr.)	1	%	89	-	94	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	< 0.2	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
a-Chlordane	0.05	mg/kg	< 0.05	-	0.07	-

Client Sample ID			BH15 0.2	BH15 0.6	BH16 0.2	BH16 1.0
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09313	S12-Ap09314	S12-Ap09315	S12-Ap09316
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
g-Chlordane	0.05	mg/kg	< 0.05	-	0.07	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	102	-	96	-
Tetrachloro-m-xylene (surr.)	1	%	76	-	79	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	-	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	91	-	96	75
p-Terphenyl-d14 (surr.)	1	%	91	-	96	89
Cyanide (total)	1	mg/kg	4.6	-	< 1	-
% Moisture	0.1	%	11	21	6.1	5.0
Asbestos			ASET Report	-	ASET Report	-
Heavy Metals						
Arsenic	1	mg/kg	18	7.0	3.4	2.9
Cadmium	0.1	mg/kg	0.4	< 0.1	0.3	0.2
Chromium	2	mg/kg	18	9.5	10	12
Copper	2	mg/kg	110	41	61	63
Lead	2	mg/kg	140	16	21	28
Mercury	0.05	mg/kg	0.20	< 0.05	< 0.05	< 0.05
Nickel	1	mg/kg	20	2.2	130	150
Zinc	5	mg/kg	220	50	99	100

Client Sample ID			BH17 0.2	BH17 0.5	BH18 0.2	BH18 0.6
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09317	S12-Ap09318	S12-Ap09319	S12-Ap09320
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	-
TRH C10-C14	50	mg/kg	< 50	-	< 50	-
TRH C15-C28	100	mg/kg	< 100	-	< 100	-
TRH C29-C36	100	mg/kg	< 100	-	230	-
TRH C10-36 (Total)	100	mg/kg	< 100	-	230	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total m+p-Xylenes	1	mg/kg	< 1	-	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	-	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	99	-	103	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	150	-
TRH >C34-C40	100	mg/kg	< 100	-	460	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	103	-	105	-
Speciated Phenols						
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 5	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 5	-
2.4.5-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 5	-
2.4.6-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 5	-
Phenol	0.5	mg/kg	< 0.5	-	< 5	-
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	-	< 10	-
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 5	-
2-Nitrophenol	0.5	mg/kg	< 0.5	-	< 5	-
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	-	< 5	-
Pentachlorophenol	1	mg/kg	< 1	-	< 10	-
Phenol-d5 (surr.)	1	%	92	-	88	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	< 0.2	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
a-Chlordane	0.05	mg/kg	< 0.05	-	0.57	-

Client Sample ID			BH17 0.2	BH17 0.5	BH18 0.2	BH18 0.6
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09317	S12-Ap09318	S12-Ap09319	S12-Ap09320
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
g-Chlordane	0.05	mg/kg	< 0.05	-	0.96	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	103	-	105	-
Tetrachloro-m-xylene (surr.)	1	%	78	-	78	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.6	< 5	-
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	1.0	< 10	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Chrysene	0.5	mg/kg	< 0.5	0.5	< 5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Fluoranthene	0.5	mg/kg	< 0.5	0.8	< 5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 5	-
Pyrene	0.5	mg/kg	< 0.5	0.7	< 5	-
Total PAH	1	mg/kg	< 1	3.6	< 10	-
2-Fluorobiphenyl (surr.)	1	%	95	81	91	-
p-Terphenyl-d14 (surr.)	1	%	94	70	94	-
Cyanide (total)	1	mg/kg	2.6	-	< 1	-
% Moisture	0.1	%	5.2	14	6.7	17
Asbestos			ASET Report	-	ASET Report	-
Heavy Metals						
Arsenic	1	mg/kg	4.6	76	17	8.3
Cadmium	0.1	mg/kg	0.1	0.8	1.4	< 0.1
Chromium	2	mg/kg	8.9	32	34	9.0
Copper	2	mg/kg	17	120	85	28
Lead	2	mg/kg	44	220	120	43
Mercury	0.05	mg/kg	< 0.05	0.10	0.07	< 0.05
Nickel	1	mg/kg	4.0	100	100	5.8
Zinc	5	mg/kg	59	400	300	21

Client Sample ID			BH19 0.2	BH19 0.6	BH20 0.2	BH20 0.8
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09321	S12-Ap09322	S12-Ap09323	S12-Ap09324
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	-
TRH C10-C14	50	mg/kg	< 50	-	< 50	-
TRH C15-C28	100	mg/kg	310	-	430	-
TRH C29-C36	100	mg/kg	110	-	510	-
TRH C10-36 (Total)	100	mg/kg	420	-	940	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total m+p-Xylenes	1	mg/kg	< 1	-	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	-	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	106	-	99	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	65	-
TRH >C16-C34	100	mg/kg	350	-	790	-
TRH >C34-C40	100	mg/kg	130	-	490	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	106	-	123	-
Speciated Phenols						
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.6-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	-	< 0.5	-
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	-	< 1	-
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Nitrophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Phenol-d5 (surr.)	1	%	92	-	94	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	< 0.2	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
a-Chlordane	0.05	mg/kg	0.43	-	0.26	-

Client Sample ID			BH19 0.2	BH19 0.6	BH20 0.2	BH20 0.8
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09321	S12-Ap09322	S12-Ap09323	S12-Ap09324
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
g-Chlordane	0.05	mg/kg	0.65	-	0.30	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	106	-	123	-
Tetrachloro-m-xylene (surr.)	1	%	71	-	75	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	0.6	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	0.6	-
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	-	1.0	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	1.0	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	1.0	-
Total PAH	1	mg/kg	< 1	-	4.7	-
2-Fluorobiphenyl (surr.)	1	%	95	-	98	-
p-Terphenyl-d14 (surr.)	1	%	97	-	97	-
Cyanide (total)	1	mg/kg	2.6	-	2.6	-
% Moisture	0.1	%	8.6	17	15	21
Asbestos			ASET Report	-	ASET Report	-
Heavy Metals						
Arsenic	1	mg/kg	9.8	18	130	8.0
Cadmium	0.1	mg/kg	0.9	0.1	0.9	< 0.1
Chromium	2	mg/kg	36	34	33	22
Copper	2	mg/kg	70	63	87	19
Lead	2	mg/kg	100	42	510	26
Mercury	0.05	mg/kg	0.11	0.07	0.67	0.05
Nickel	1	mg/kg	74	58	36	3.5
Zinc	5	mg/kg	360	87	560	22

Client Sample ID			BH21 0.2	BH21 1.0	BH22 0.2	BH22 0.85
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09325	S12-Ap09326	S12-Ap09327	S12-Ap09328
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	-	< 10	-
TRH C10-C14	50	mg/kg	< 50	-	< 50	-
TRH C15-C28	100	mg/kg	< 100	-	350	-
TRH C29-C36	100	mg/kg	< 100	-	440	-
TRH C10-36 (Total)	100	mg/kg	< 100	-	790	-
BTEX						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total m+p-Xylenes	1	mg/kg	< 1	-	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	-	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	104	-	101	-
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	670	-
TRH >C34-C40	100	mg/kg	< 100	-	400	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	121	-	116	-
Speciated Phenols						
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.6-Trichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	-	< 0.5	-
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	-	< 1	-
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Nitrophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Phenol-d5 (surr.)	1	%	76	-	84	-
Organochlorine Pesticides (OC)						
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.2	mg/kg	< 0.2	-	< 0.2	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
a-Chlordane	0.05	mg/kg	< 0.05	-	< 0.05	-

Client Sample ID			BH21 0.2	BH21 1.0	BH22 0.2	BH22 0.85
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09325	S12-Ap09326	S12-Ap09327	S12-Ap09328
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit				
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
g-Chlordane	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	121	-	116	-
Tetrachloro-m-xylene (surr.)	1	%	109	-	76	-
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	1.2	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	1.1	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.9	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	2.9	-
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	4.6	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	2.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	1.7	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	0.5	2.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	2.0	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	0.6	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	1.2	-
Pyrene	0.5	mg/kg	< 0.5	0.5	3.0	-
Total PAH	1	mg/kg	< 1	1.0	25	-
2-Fluorobiphenyl (surr.)	1	%	79	98	89	-
p-Terphenyl-d14 (surr.)	1	%	83	100	90	-
Cyanide (total)	1	mg/kg	< 1	-	< 1	-
% Moisture	0.1	%	8.4	10.0	26	18
Asbestos			ASET Report	-	ASET Report	-
Heavy Metals						
Arsenic	1	mg/kg	7.4	16	16	11
Cadmium	0.1	mg/kg	80	0.5	0.7	0.4
Chromium	2	mg/kg	38	54	67	25
Copper	2	mg/kg	140	74	460	100
Lead	2	mg/kg	120	76	460	76
Mercury	0.05	mg/kg	0.08	0.07	0.22	0.05
Nickel	1	mg/kg	10	66	190	13
Zinc	5	mg/kg	200	300	320	230

Client Sample ID			S23	D1	D2
Sample Matrix			Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09329	S12-Ap09330	S12-Ap09331
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	10	mg/kg	-	< 10	< 10
TRH C10-C14	50	mg/kg	-	< 50	< 50
TRH C15-C28	100	mg/kg	-	170	< 100
TRH C29-C36	100	mg/kg	-	230	260
TRH C10-36 (Total)	100	mg/kg	-	400	260
BTEX					
Benzene	0.5	mg/kg	-	< 0.5	< 0.5
Toluene	0.5	mg/kg	-	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	-	< 1	< 1
o-Xylene	0.5	mg/kg	-	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	-	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	-	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	-	102	102
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *					
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	340	260
TRH >C34-C40	100	mg/kg	-	170	160
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PCB	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	113	118	96
Speciated Phenols					
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5
2.4.6-Trichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5
Phenol	0.5	mg/kg	-	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.5	mg/kg	-	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	-	< 1	< 1
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5
2-Nitrophenol	0.5	mg/kg	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	0.5	mg/kg	-	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	-	< 1	< 1
Phenol-d5 (surr.)	1	%	-	88	127
Organochlorine Pesticides (OC)					
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05
4.4'-DDT	0.2	mg/kg	-	< 0.2	< 0.2
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05
a-Chlordane	0.05	mg/kg	-	0.27	< 0.05

Client Sample ID			S23	D1	D2
Sample Matrix			Soil	Soil	Soil
mgt-LabMark Sample No.			S12-Ap09329	S12-Ap09330	S12-Ap09331
Date Sampled			Apr 12, 2012	Apr 12, 2012	Apr 12, 2012
Test/Reference	LOR	Unit			
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	0.55	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05
g-Chlordane	0.05	mg/kg	-	0.30	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	118	96
Tetrachloro-m-xylene (surr.)	1	%	-	75	78
Polyaromatic Hydrocarbons (PAH)					
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	-	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5
Total PAH	1	mg/kg	-	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	-	95	128
p-Terphenyl-d14 (surr.)	1	%	-	95	128
Cyanide (total)	1	mg/kg	-	< 1	< 1
% Moisture	0.1	%	5.8	8.3	7.2
Asbestos			-	ASET Report	ASET Report
Heavy Metals					
Arsenic	1	mg/kg	4.2	56	5.7
Cadmium	0.1	mg/kg	2.1	1.0	35
Chromium	2	mg/kg	28	15	54
Copper	2	mg/kg	45	70	49
Lead	2	mg/kg	130	780	170
Mercury	0.05	mg/kg	< 0.05	0.10	0.10
Nickel	1	mg/kg	64	14	10
Zinc	5	mg/kg	300	580	330

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 7			
Polyaromatic Hydrocarbons (PAH)	Sydney	Apr 24, 2012	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Apr 24, 2012	14 Day
- Method: LM-LTM-ORG2010			
Metals M8	Sydney	Apr 24, 2012	28 Day
- Method: E022 Acid Extractable metals in Soils & E026 Mercury			
BTEX	Sydney	Apr 24, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 24, 2012	14 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
mgt-LabMark Suite 13			
Polychlorinated Biphenyls (PCB)	Sydney	Apr 24, 2012	14 Day
- Method: E013 Polychlorinated Biphenyls (PCB)			
Organochlorine Pesticides (OC)	Sydney	Apr 24, 2012	14 Day
- Method: E013 Organochlorine Pesticides (OC)			
Speciated Phenols	Sydney	Apr 24, 2012	14 Day
- Method: E008 Speciated Phenols			
Cyanide (total)	Sydney	Apr 24, 2012	14 Day
- Method: E040 /E054 Total Cyanide			
% Moisture	Sydney	Apr 24, 2012	28 Day
- Method: E005 Moisture Content			

mgt LabMark
ENVIRONMENTAL LABORATORIES
ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name: Aargus Pty Ltd
Address: 446 Parramatta Road
Petersham
NSW 2049

Order No.:
Report #: 333969
Phone: 1300 137 038
Fax: 1300 136 038

Received: Apr 17, 2012 10:15 AM
Due: Apr 24, 2012 4:00 PM
Priority: 5 Day
Contact name: Mark Kelly

Client Job No.: GRANVILLE ES4962

mgt-LabMark Client Manager: Onur Mehmet

Sample Detail					% Moisture	Asbestos	ASET Reporting Fee	Cyanide (total)	Metals M8	Polychlorinated Biphenyls (PCB)	Speciated Phenols	Polyaromatic Hydrocarbons (PAH)	mgt-LabMark Suite 13	mgt-LabMark Suite 7
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217					X			X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
External Laboratory						X	X							
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
BH13 0.2	Apr 12, 2012		Soil	S12-Ap09309	X	X	X	X			X		X	X
BH13 0.7	Apr 12, 2012		Soil	S12-Ap09310	X				X			X		
BH14 0.2	Apr 12, 2012		Soil	S12-Ap09311	X	X	X	X			X		X	X
BH14 0.6	Apr 12, 2012		Soil	S12-Ap09312	X				X					
BH15 0.2	Apr 12, 2012		Soil	S12-Ap09313	X	X		X			X		X	X
BH15 0.6	Apr 12, 2012		Soil	S12-Ap09314	X				X					
BH16 0.2	Apr 12, 2012		Soil	S12-Ap09315	X	X		X			X		X	X
BH16 1.0	Apr 12, 2012		Soil	S12-Ap09316	X				X			X		
BH17 0.2	Apr 12, 2012		Soil	S12-Ap09317	X	X		X			X		X	X

mgt LabMark
ENVIRONMENTAL LABORATORIES
ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name: Aargus Pty Ltd
Address: 446 Parramatta Road
Petersham
NSW 2049

Order No.:
Report #: 333969
Phone: 1300 137 038
Fax: 1300 136 038

Received: Apr 17, 2012 10:15 AM
Due: Apr 24, 2012 4:00 PM
Priority: 5 Day
Contact name: Mark Kelly

Client Job No.: GRANVILLE ES4962

mgt-LabMark Client Manager: Onur Mehmet

Sample Detail					% Moisture	Asbestos	ASET Reporting Fee	Cyanide (total)	Metals M8	Polychlorinated Biphenyls (PCB)	Speciated Phenols	Polyaromatic Hydrocarbons (PAH)	mgt-LabMark Suite 13	mgt-LabMark Suite 7
Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217					X			X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
External Laboratory						X	X							
BH17 0.5	Apr 12, 2012		Soil	S12-Ap09318	X				X			X		
BH18 0.2	Apr 12, 2012		Soil	S12-Ap09319	X	X		X			X		X	X
BH18 0.6	Apr 12, 2012		Soil	S12-Ap09320	X				X					
BH19 0.2	Apr 12, 2012		Soil	S12-Ap09321	X	X		X			X		X	X
BH19 0.6	Apr 12, 2012		Soil	S12-Ap09322	X				X					
BH20 0.2	Apr 12, 2012		Soil	S12-Ap09323	X	X		X			X		X	X
BH20 0.8	Apr 12, 2012		Soil	S12-Ap09324	X				X					
BH21 0.2	Apr 12, 2012		Soil	S12-Ap09325	X	X		X			X		X	X
BH21 1.0	Apr 12, 2012		Soil	S12-Ap09326	X				X			X		
BH22 0.2	Apr 12, 2012		Soil	S12-Ap09327	X	X		X			X		X	X

mgt LabMark
ENVIRONMENTAL LABORATORIES
ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name: Aargus Pty Ltd
Address: 446 Parramatta Road
Petersham
NSW 2049

Order No.:
Report #: 333969
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Laboratory where analysis is conducted														
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217					X			X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
External Laboratory						X	X							
BH22 0.85	Apr 12, 2012		Soil	S12-Ap09328	X				X					
S23	Apr 12, 2012		Soil	S12-Ap09329	X				X	X				
D1	Apr 12, 2012		Soil	S12-Ap09330	X	X		X			X		X	X
D2	Apr 12, 2012		Soil	S12-Ap09331	X	X		X			X		X	X

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least

6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg:milligrams per Kilogram

mg/L:milligrams per litre

µg/L:micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%:Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 milliltres

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice
CP:	Client Parent - QC was performed on samples pertaining to this report
NCP:	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample>
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
Total m+p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Speciated Phenols E008 Speciated Phenols							
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.6-Trichlorophenol	mg/kg	< 0.5			0.5	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 1			1	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Method Blank							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.2			0.2	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
a-Chlordane	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
g-Chlordane	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Cyanide (total)	mg/kg	< 1			1	Pass	
Method Blank							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 1			1	Pass	
Cadmium	mg/kg	< 0.1			0.1	Pass	
Chromium	mg/kg	< 2			2	Pass	
Copper	mg/kg	< 2			2	Pass	
Lead	mg/kg	< 2			2	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 1			1	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	104			70-130	Pass	
TRH C10-C14	%	78			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	112			70-130	Pass	
Ethylbenzene	%	111			70-130	Pass	
Total m+p-Xylenes	%	115			70-130	Pass	
o-Xylene	%	109			70-130	Pass	
Xylenes(ortho.meta and para)	%	113			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	118			70-130	Pass	
TRH C6-C10	%	103			70-130	Pass	
TRH >C10-C16	%	84			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1254	%	100			70-130	Pass	
LCS - % Recovery							
Speciated Phenols E008 Speciated Phenols							
2.4-Dichlorophenol	%	103			70-130	Pass	
2.4-Dimethylphenol	%	98			70-130	Pass	
2.4.5-Trichlorophenol	%	87			70-130	Pass	
2.4.6-Trichlorophenol	%	100			70-130	Pass	
Phenol	%	110			70-130	Pass	
2-Methylphenol (o-Cresol)	%	102			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	108			70-130	Pass	
2-Chlorophenol	%	105			70-130	Pass	
2-Nitrophenol	%	100			70-130	Pass	
4-Chloro-3-methylphenol	%	103			70-130	Pass	
Pentachlorophenol	%	98			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	%	110			70-130	Pass	
4.4'-DDE	%	89			70-130	Pass	
4.4'-DDT	%	108			70-130	Pass	
a-BHC	%	116			70-130	Pass	
a-Chlordane	%	101			70-130	Pass	
Aldrin	%	102			70-130	Pass	
b-BHC	%	117			70-130	Pass	
d-BHC	%	111			70-130	Pass	
Dieldrin	%	102			70-130	Pass	
Endosulfan I	%	98			70-130	Pass	
Endosulfan II	%	107			70-130	Pass	
Endosulfan sulphate	%	90			70-130	Pass	
Endrin	%	101			70-130	Pass	
Endrin aldehyde	%	96			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	103			70-130	Pass	
g-Chlordane	%	100			70-130	Pass	
Heptachlor	%	99			70-130	Pass	
Heptachlor epoxide	%	103			70-130	Pass	
Hexachlorobenzene	%	101			70-130	Pass	
Methoxychlor	%	106			70-130	Pass	
LCS - % Recovery							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	108			70-130	Pass	
Acenaphthylene	%	103			70-130	Pass	
Anthracene	%	111			70-130	Pass	
Benz(a)anthracene	%	117			70-130	Pass	
Benzo(a)pyrene	%	100			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	%	109			70-130	Pass	
Benzo(g.h.i)perylene	%	107			70-130	Pass	
Chrysene	%	108			70-130	Pass	
Dibenz(a.h)anthracene	%	105			70-130	Pass	
Fluoranthene	%	108			70-130	Pass	
Fluorene	%	107			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	107			70-130	Pass	
Naphthalene	%	105			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	%	109			70-130	Pass	
Pyrene	%	108			70-130	Pass	
LCS - % Recovery							
Cyanide (total)	%	94			70-130	Pass	
LCS - % Recovery							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	%	108			70-130	Pass	
Cadmium	%	98			70-130	Pass	
Chromium	%	111			70-130	Pass	
Copper	%	113			70-130	Pass	
Lead	%	113			70-130	Pass	
Mercury	%	86			70-130	Pass	
Nickel	%	114			70-130	Pass	
Zinc	%	110			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S12-Ap09309	CP	%	103			70-130	Pass	
TRH C10-C14	S12-Ap09309	CP	%	116			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S12-Ap09309	CP	%	105			70-130	Pass	
Toluene	S12-Ap09309	CP	%	110			70-130	Pass	
Ethylbenzene	S12-Ap09309	CP	%	111			70-130	Pass	
Total m+p-Xylenes	S12-Ap09309	CP	%	118			70-130	Pass	
o-Xylene	S12-Ap09309	CP	%	117			70-130	Pass	
Xylenes(ortho.meta and para)	S12-Ap09309	CP	%	118			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
Naphthalene	S12-Ap09309	CP	%	114			70-130	Pass	
TRH C6-C10	S12-Ap09309	CP	%	100			70-130	Pass	
TRH >C10-C16	S12-Ap09309	CP	%	123			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1254	S12-Ap09309	CP	%	86			70-130	Pass	
Spike - % Recovery									
Speciated Phenols				Result 1					
2.4-Dichlorophenol	S12-Ap09309	CP	%	94			70-130	Pass	
2.4-Dimethylphenol	S12-Ap09309	CP	%	84			70-130	Pass	
2.4.5-Trichlorophenol	S12-Ap09309	CP	%	101			70-130	Pass	
2.4.6-Trichlorophenol	S12-Ap09309	CP	%	84			70-130	Pass	
Phenol	S12-Ap09309	CP	%	94			70-130	Pass	
2-Methylphenol (o-Cresol)	S12-Ap09309	CP	%	89			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-Ap09309	CP	%	97			70-130	Pass	
2-Chlorophenol	S12-Ap09309	CP	%	95			70-130	Pass	
2-Nitrophenol	S12-Ap09309	CP	%	94			70-130	Pass	
4-Chloro-3-methylphenol	S12-Ap09309	CP	%	93			70-130	Pass	
Pentachlorophenol	S12-Ap09309	CP	%	118			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides (OC)				Result 1					
4.4'-DDD	S12-Ap09309	CP	%	116			70-130	Pass	
4.4'-DDE	S12-Ap09309	CP	%	87			70-130	Pass	
4.4'-DDT	S12-Ap09309	CP	%	87			70-130	Pass	
a-BHC	S12-Ap09309	CP	%	104			70-130	Pass	
a-Chlordane	S12-Ap09309	CP	%	106			70-130	Pass	
Aldrin	S12-Ap09309	CP	%	91			70-130	Pass	
b-BHC	S12-Ap09309	CP	%	107			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
d-BHC	S12-Ap09309	CP	%	96			70-130	Pass	
Dieldrin	S12-Ap09309	CP	%	96			70-130	Pass	
Endosulfan I	S12-Ap09309	CP	%	90			70-130	Pass	
Endosulfan II	S12-Ap09309	CP	%	109			70-130	Pass	
Endosulfan sulphate	S12-Ap09309	CP	%	80			70-130	Pass	
Endrin	S12-Ap09309	CP	%	95			70-130	Pass	
Endrin aldehyde	S12-Ap09309	CP	%	99			70-130	Pass	
Endrin ketone	S12-Ap09309	CP	%	102			70-130	Pass	
g-BHC (Lindane)	S12-Ap09309	CP	%	108			70-130	Pass	
g-Chlordane	S12-Ap09309	CP	%	90			70-130	Pass	
Heptachlor	S12-Ap09309	CP	%	88			70-130	Pass	
Heptachlor epoxide	S12-Ap09309	CP	%	95			70-130	Pass	
Hexachlorobenzene	S12-Ap09309	CP	%	95			70-130	Pass	
Methoxychlor	S12-Ap09309	CP	%	108			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S12-Ap09309	CP	%	96			70-130	Pass	
Acenaphthylene	S12-Ap09309	CP	%	97			70-130	Pass	
Anthracene	S12-Ap09309	CP	%	98			70-130	Pass	
Benz(a)anthracene	S12-Ap09309	CP	%	110			70-130	Pass	
Benzo(a)pyrene	S12-Ap09309	CP	%	96			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-Ap09309	CP	%	99			70-130	Pass	
Benzo(g.h.i)perylene	S12-Ap09309	CP	%	96			70-130	Pass	
Chrysene	S12-Ap09309	CP	%	90			70-130	Pass	
Dibenz(a.h)anthracene	S12-Ap09309	CP	%	92			70-130	Pass	
Fluoranthene	S12-Ap09309	CP	%	108			70-130	Pass	
Fluorene	S12-Ap09309	CP	%	96			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S12-Ap09309	CP	%	97			70-130	Pass	
Naphthalene	S12-Ap09309	CP	%	94			70-130	Pass	
Phenanthrene	S12-Ap09309	CP	%	100			70-130	Pass	
Pyrene	S12-Ap09309	CP	%	108			70-130	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	S12-Ap12329	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	S12-Ap09312	CP	%	74			70-130	Pass	
Cadmium	S12-Ap09312	CP	%	97			70-130	Pass	
Chromium	S12-Ap09312	CP	%	75			70-130	Pass	
Mercury	S12-Ap09312	CP	%	83			70-130	Pass	
Nickel	S12-Ap09312	CP	%	86			70-130	Pass	
Zinc	S12-Ap09312	CP	%	93			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	S12-Ap09314	CP	%	99			70-130	Pass	
Cadmium	S12-Ap09314	CP	%	106			70-130	Pass	
Chromium	S12-Ap09314	CP	%	102			70-130	Pass	
Copper	S12-Ap09314	CP	%	154			70-130	Fail	Q13
Lead	S12-Ap09314	CP	%	113			70-130	Pass	
Mercury	S12-Ap09314	CP	%	79			70-130	Pass	
Nickel	S12-Ap09314	CP	%	118			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S12-Ap09323	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH >C10-C16	S12-Ap09323	CP	%	97			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Metals M8				Result 1					
Arsenic	S12-Ap09329	CP	%	100			70-130	Pass	
Cadmium	S12-Ap09329	CP	%	78			70-130	Pass	
Copper	S12-Ap09329	CP	%	113			70-130	Pass	
Mercury	S12-Ap09329	CP	%	87			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S12-Ap09330	CP	%	100			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S12-Ap09330	CP	%	104			70-130	Pass	
Toluene	S12-Ap09330	CP	%	108			70-130	Pass	
Ethylbenzene	S12-Ap09330	CP	%	106			70-130	Pass	
Total m+p-Xylenes	S12-Ap09330	CP	%	113			70-130	Pass	
o-Xylene	S12-Ap09330	CP	%	109			70-130	Pass	
Xylenes(ortho.meta and para)	S12-Ap09330	CP	%	112			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
Naphthalene	S12-Ap09330	CP	%	105			70-130	Pass	
TRH C6-C10	S12-Ap09330	CP	%	96			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	S12-Ap09331	CP	%	80			70-130	Pass	
Nickel	S12-Ap09331	CP	%	90			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-Ap09309	CP	mg/kg	< 10	< 10	8.0	30%	Pass	
TRH C10-C14	S12-Ap09309	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C15-C28	S12-Ap09309	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C29-C36	S12-Ap09309	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total m+p-Xylenes	S12-Ap09309	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-Ap09309	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S12-Ap09309	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S12-Ap09309	CP	mg/kg	< 20	< 20	7.0	30%	Pass	
TRH C6-C10 less BTEX (F1)	S12-Ap09309	CP	mg/kg	< 20	< 20	7.0	30%	Pass	
TRH >C10-C16	S12-Ap09309	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S12-Ap09309	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S12-Ap09309	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD			
Aroclor-1016	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1232	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Speciated Phenols				Result 1	Result 2	RPD			
2.4-Dichlorophenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.5-Trichlorophenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.6-Trichlorophenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-Ap09309	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Chlorophenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	S12-Ap09309	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides (OC)				Result 1	Result 2	RPD			
4.4'-DDD	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S12-Ap09309	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
a-BHC	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-Chlordane	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-Chlordane	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S12-Ap09309	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S12-Ap09309	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-Ap09309	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S12-Ap09309	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S12-Ap09311	CP	mg/kg	51	49	3.0	30%	Pass	
Cadmium	S12-Ap09311	CP	mg/kg	1.0	0.9	6.0	30%	Pass	
Chromium	S12-Ap09311	CP	mg/kg	18	16	13	30%	Pass	
Copper	S12-Ap09311	CP	mg/kg	65	55	16	30%	Pass	
Lead	S12-Ap09311	CP	mg/kg	580	520	11	30%	Pass	
Mercury	S12-Ap09311	CP	mg/kg	0.17	0.12	34	30%	Fail	Q15
Nickel	S12-Ap09311	CP	mg/kg	15	14	6.0	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	S12-Ap09311	CP	mg/kg	440	380	13	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S12-Ap09313	CP	mg/kg	18	8.6	69	30%	Fail	Q15
Cadmium	S12-Ap09313	CP	mg/kg	0.4	0.2	75	30%	Fail	Q15
Chromium	S12-Ap09313	CP	mg/kg	18	19	4.0	30%	Pass	
Duplicate									
Speciated Phenols				Result 1	Result 2	RPD			
2.4-Dichlorophenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.6-Trichlorophenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-Ap09323	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Chlorophenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	S12-Ap09323	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S12-Ap09323	CP	mg/kg	0.6	0.6	12	30%	Pass	
Benzo(a)pyrene	S12-Ap09323	CP	mg/kg	0.6	0.6	4.0	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-Ap09323	CP	mg/kg	1.0	1.1	2.0	30%	Pass	
Benzo(g.h.i)perylene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	3.0	30%	Pass	
Chrysene	S12-Ap09323	CP	mg/kg	0.5	0.6	7.0	30%	Pass	
Dibenz(a.h)anthracene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S12-Ap09323	CP	mg/kg	1.0	1.1	10	30%	Pass	
Fluorene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S12-Ap09323	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S12-Ap09323	CP	mg/kg	1.0	1.0	8.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	S12-Ap09325	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S12-Ap09328	CP	mg/kg	11	8.8	20	30%	Pass	
Cadmium	S12-Ap09328	CP	mg/kg	0.4	0.2	79	30%	Fail	Q15
Chromium	S12-Ap09328	CP	mg/kg	25	21	16	30%	Pass	
Mercury	S12-Ap09328	CP	mg/kg	0.05	< 0.05	13	30%	Pass	
Nickel	S12-Ap09328	CP	mg/kg	13	3.6	110	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-Ap09330	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-Ap09330	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S12-Ap09330	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S12-Ap09330	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total m+p-Xylenes	S12-Ap09330	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S12-Ap09330	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-Ap09330	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S12-Ap09330	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-Ap09330	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S12-Ap09330	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S12-Ap09330	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S12-Ap09330	CP	mg/kg	56	48	15	30%	Pass	
Cadmium	S12-Ap09330	CP	mg/kg	1.0	0.8	21	30%	Pass	
Chromium	S12-Ap09330	CP	mg/kg	15	16	9.0	30%	Pass	
Copper	S12-Ap09330	CP	mg/kg	70	56	21	30%	Pass	
Nickel	S12-Ap09330	CP	mg/kg	14	12	18	30%	Pass	
Zinc	S12-Ap09330	CP	mg/kg	580	470	20	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q13	Some elements for this test have failed in the QC sample. However when at least 80% have passed the QC can be released. All other QC has passed in this test batch
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Onur Mehmet	Client Services
Bob Symons	Senior Analyst-Inorganic (NSW)
James Norford	Senior Analyst-Metal (NSW)
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)



Dr. Bob Symons
Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref: ASET29427/ 32607 / 1 - 12
Your ref: 333969
NATA Accreditation No: 14484

24 April 2012

MGT- Labmark Environmental Pty Ltd
Unit F3, 16 Mars Road
Lane Cove NSW 2066

Attn: Ms Leanne Knowles

Dear Leanne,

Asbestos Identification
This report presents the results of twelve samples, forwarded by MGT- Labmark Environmental Pty Ltd on 24 April 2012, for analysis for asbestos.

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

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

3. Results :

Sample No. 1. ASET29427 / 32607 / 1. BH13 - 0.2 - Ap09309
Approx dimensions 6.0 cm x 6.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.
No asbestos detected.

Sample No. 2. ASET29427 / 32607 / 2. BH14 - 0.2 - Ap09311
Approx dimensions 6.0 cm x 6.0 cm x 3.0 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, other fibres^, plant matter, insect matter, fragments of plaster, cement, fibre cement*, brick and debris.
Chrysotile^* asbestos, Amosite^* asbestos and Crocidolite* asbestos detected.

Sample No. 3. ASET29427 / 32607 / 3. BH15 - 0.2 - Ap09313
Approx dimensions 7.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster, cement, paint flakes and debris.
Chrysotile^ asbestos detected.

Sample No. 4. ASET29427 / 32607 / 4. BH16 - 0.2 - Ap09315
Approx dimensions 7.0 cm x 6.5 cm x 2.5 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, other fibres^, plant matter, fragments of plaster and bitumen.
Chrysotile^ asbestos detected.

Sample No. 5. ASET29427 / 32607 / 5. BH17 - 0.2 - Ap09317
Approx dimensions 5.0 cm x 5.0 cm x 2.5 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, plant matter, fragments of plaster and brick.
No asbestos detected.

Sample No. 6. ASET29427 / 32607 / 6. BH18 - 0.2 - Ap09319
Approx dimensions 7.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, other fibres^, plant matter, fragments of plaster, brick and bitumen.
Chrysotile^ asbestos and Amosite^ asbestos detected.

Sample No. 7. ASET29427 / 32607 / 7. BH19 - 0.2 - Ap09321
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 8. ASET29427 / 32607 / 8. BH20 - 0.2 - Ap09323
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of soil, stones, fibres^, plant matter, fragments of plaster, cement, brick and bitumen.
Chrysotile^ asbestos detected.

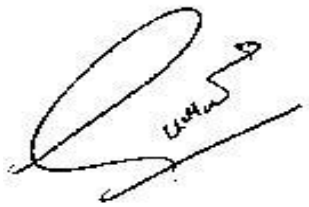
Sample No. 9. ASET29427 / 32607 / 9. BH21 - 0.2 - Ap09325
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of soil, stones, plant matter, insect matter, fragments of plaster, brick, corroded metal, glass and debris.
No asbestos detected.

Sample No. 10. ASET29427 / 32607 / 10. BH22 - 0.2 - Ap09327
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, plant matter, fragments of plaster, cement, brick, corroded metal, glass and debris.
No asbestos detected.

Sample No. 11. ASET29427 / 32607 / 11. D1 - Ap09330
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of soil, stones, fibres^, plant matter, fragments of plaster, brick and corroded metal.
Chrysotile^ asbestos detected.

Sample No. 12. ASET29427 / 32607 / 12. D2 - Ap09331
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of soil, stones, synthetic mineral fibres, plant matter, fragments of plaster, cement, brick, glass and debris.
No asbestos detected.

Analysed and reported by,



Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory
Approved Identifier.

NATA
WORLD RECOGNISED
ACCREDITATION

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

mgt LabMark
ENVIRONMENTAL LABORATORIES

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Sample Receipt Advice

Company name: **Aargus Pty Ltd**

Contact name: ALL INVOICES
Client job number: GRANVILLE ES4962
COC number: Not provided
Turn around time: 5 Day
Date/Time received: Apr 17, 2012 10:15 AM
MGT lab reference: **333969**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Organic samples had Teflon liners.

☑ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Asbestos conducted at ASET|Slight labelling discrepency. COC: BH18 0.8 Jar: BH18 0.8. We have labelled as per the COC unless otherwise specified..

Contact notes

If you have any questions with respect to these samples please contact:

Onur Mehmet on Phone : (+61) (3) 9564 7055 or by e.mail: onur.mehmet@mgtlabmark.com.au

Results will be delivered electronically via e.mail to ALL INVOICES - kerry@aargus.net.

Note: A copy of these results will also be delivered to the general Aargus Pty Ltd email address.

#333969

AARGUS PTY LTD

Laboratory Test Request / Chain of Custody Record

446 Parramatta Road
PETERSHAM NSW 2049

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038
email: admin@aargus.net

TO: MGT LABMARK
UNIT F3, BUILDING F
16 MARS ROAD
LANE COVE WEST NSW 2066

PH: 028215 6222 FAX: 02 9420 2977
ATTN:

Sampling Date:	12/04/2012	**Job No:**	ES4962
Sampled By:	EW	**Project:**	Granville
Project Manager:	MK	**Location:**	Granville

Results required by: Tuesday 24-04-12

Sampling details		Sample type										
Location	Depth (m)	Soil	Water	Heavy Metals As, Cd, Cr, Cu, Ni, Pb, Zn and Hg	TPH/ BTEX	PAH	OCP	PCB	Phenols & Cyanide	Asbestos		KEEP SAMPLE
BH13	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH13	0.7	DSG / DSP		✓		✓						YES
BH14	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH14	0.6	DSG / DSP		✓								YES
BH15	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH15	0.6	DSG / DSP		✓								YES
BH16	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH16	1	DSG / DSP		✓		✓						YES
BH17	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH17	0.5	DSG / DSP		✓		✓						YES
BH18	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH18	0.6	DSG / DSP		✓								YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
Emmanuel Woelders	EW	17/04/2012	Ellen WG.		17/04/12 10:15.

Legend:

WG	Water sample, glass bottle	USG	Undisturbed soil sample (glass jar)	DSP	Disturbed soil sample (small plastic bag)
WP	Water sample, plastic bottle	DSG	Disturbed soil sample (glass jar)	✓	Test required

@ mole H^+/tonne

333969

AARGUS PTY LTD

Laboratory Test Request / Chain of Custody Record

446 Parramatta Road
PETERSHAM NSW 2049

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038
email: admin@aargus.net

TO: **MGT LABMARK**
UNIT F3, BUILDING F
16 MARS ROAD
LANE COVE WEST NSW 2066

PH: **028215 6222** FAX: **02 9420 2977**
ATTN:

Sampling Date: 12/04/2012 **Job No:** ES4962
Sampled By: EW **Project:** Granville
Project Manager: MK **Location:** Granville

Results required by: Tuesday 24-04-12

Sampling details		Sample type										
Location	Depth (m)	Soil	Water	Heavy Metals As, Cd, Cr, Cu, Ni, Pb, Zn and Hg	TPH/ BTEX	PAH	OCP	PCB	Phenols & Cyanide	Asbestos		KEEP SAMPLE
BH19	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH19	0.6	DSG / DSP		✓								YES
BH20	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH20	0.8	DSG / DSP		✓								YES
BH21	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH21	1	DSG / DSP		✓		✓						YES
BH22	0.2	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
BH22	0.85	DSG / DSP		✓								YES
S23	_	DSG / DSP		✓				✓				YES
D1	_	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
D2	_	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
Emmanuel Woelders	EW	17/04/2012	Ellen Wg		17/04/12 10:15

Legend:
WG Water sample, glass bottle
WP Water sample, plastic bottle
USG Undisturbed soil sample (glass jar)
DSG Disturbed soil sample (glass jar)
DSP Disturbed soil sample (small plastic bag)
✓ Test required
@ mole H^+/tonne

mgt LabMark
ENVIRONMENTAL LABORATORIES

Certificate of Analysis

Aargus Environmental
446 Parramatta Road
Petersham
NSW 2049

Attention: Mark Kelly

NATA
WORLD RECOGNISED ACCREDITATION

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Report	334142-W
Client Reference	GRANVILLE ES4962
Received Date	Apr 18, 2012

Client Sample ID			**R1**
Sample Matrix			**Water**
mgt-LabMark Sample No.			**S12-Ap10248**
Date Sampled			**Apr 12, 2012**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	0.05
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
Total m+p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes(ortho.meta and para)	0.003	mg/L	< 0.003
Total BTEX	0.01	mg/L	< 0.01
4-Bromofluorobenzene (surr.)	1	%	86
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *			
Naphthalene[N02]	0.005	mg/L	< 0.005
TRH C6-C10	0.02	mg/L	0.05
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	0.05
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
Polychlorinated Biphenyls (PCB)			
Aroclor-1016	0.005	mg/L	< 0.005
Aroclor-1232	0.005	mg/L	< 0.005
Aroclor-1242	0.005	mg/L	< 0.005
Aroclor-1248	0.005	mg/L	< 0.005
Aroclor-1254	0.005	mg/L	< 0.005
Aroclor-1260	0.005	mg/L	< 0.005
Total PCB	0.005	mg/L	< 0.005
Dibutylchlorendate (surr.)	1	%	126
Speciated Phenols			
2.4-Dichlorophenol	0.002	mg/L	< 0.002
2.4-Dimethylphenol	0.002	mg/L	< 0.002
2.4.5-Trichlorophenol	0.002	mg/L	< 0.002
2.4.6-Trichlorophenol	0.002	mg/L	< 0.002
Phenol	0.002	mg/L	< 0.002
2-Methylphenol (o-Cresol)	0.002	mg/L	< 0.002

Client Sample ID			R1
Sample Matrix			Water
mgt-LabMark Sample No.			S12-Ap10248
Date Sampled			Apr 12, 2012
Test/Reference	LOR	Unit	
3&4-Methylphenol (m&p-Cresol)	0.004	mg/L	< 0.004
2-Chlorophenol	0.002	mg/L	< 0.002
2-Nitrophenol	0.002	mg/L	< 0.002
4-Chloro-3-methylphenol	0.002	mg/L	< 0.002
Pentachlorophenol	0.01	mg/L	< 0.01
Phenol-d5 (surr.)	1	%	104
Organochlorine Pesticides (OC)			
4.4'-DDD	0.0005	mg/L	< 0.0005
4.4'-DDE	0.0005	mg/L	< 0.0005
4.4'-DDT	0.002	mg/L	< 0.002
a-BHC	0.0005	mg/L	< 0.0005
a-Chlordane	0.0005	mg/L	< 0.0005
Aldrin	0.0005	mg/L	< 0.0005
b-BHC	0.0005	mg/L	< 0.0005
d-BHC	0.0005	mg/L	< 0.0005
Dieldrin	0.0005	mg/L	< 0.0005
Endosulfan I	0.0005	mg/L	< 0.0005
Endosulfan II	0.0005	mg/L	< 0.0005
Endosulfan sulphate	0.0005	mg/L	< 0.0005
Endrin	0.0005	mg/L	< 0.0005
Endrin aldehyde	0.0005	mg/L	< 0.0005
Endrin ketone	0.0005	mg/L	< 0.0005
g-BHC (Lindane)	0.0005	mg/L	< 0.0005
g-Chlordane	0.0005	mg/L	< 0.0005
Heptachlor	0.0005	mg/L	< 0.0005
Heptachlor epoxide	0.0005	mg/L	< 0.0005
Hexachlorobenzene	0.0005	mg/L	< 0.0005
Methoxychlor	0.002	mg/L	< 0.002
Dibutylchlorendate (surr.)	1	%	126
Tetrachloro-m-xylene (surr.)	1	%	100
Polyaromatic Hydrocarbons (PAH)			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b)fluoranthene & Benzo(k)fluoranthene	0.002	mg/L	< 0.002
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH	0.002	mg/L	< 0.002
2-Fluorobiphenyl (surr.)	1	%	114
p-Terphenyl-d14 (surr.)	1	%	130

Client Sample ID			**R1**
Sample Matrix			**Water**
mgt-LabMark Sample No.			**S12-Ap10248**
Date Sampled			**Apr 12, 2012**
Test/Reference	LOR	Unit	
Cyanide (total)	0.005	mg/L	0.010
Heavy Metals			
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0001	mg/L	< 0.0001
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	0.090
Zinc (filtered)	0.005	mg/L	0.015

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 6 (filtered metals)			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Apr 26, 2012	7 Day
- Method: LM-LTM-ORG2010			
Metals M8 filtered	Sydney	Apr 19, 2012	28 Day
- Method: E020/E030 Filtered Metals in Water & E026 Mercury			
BTEX	Sydney	Apr 26, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 26, 2012	7 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
mgt-LabMark Suite 13			
Polychlorinated Biphenyls (PCB)	Sydney	Apr 26, 2012	7 Day
- Method: E013 Polychlorinated Biphenyls (PCB)			
Organochlorine Pesticides (OC)	Sydney	Apr 26, 2012	7 Day
- Method: E013 Organochlorine Pesticides (OC)			
mgt-LabMark Suite 3			
Polyaromatic Hydrocarbons (PAH)	Sydney	Apr 26, 2012	7 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Speciated Phenols	Sydney	Apr 26, 2012	7 Day
- Method: E008 Speciated Phenols			
Cyanide (total)	Sydney	Apr 18, 2012	14 Day
- Method: E040 /E054 Total Cyanide			

mgt LabMark ENVIRONMENTAL LABORATORIES

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name: Aargus Pty Ltd
Address: 446 Parramatta Road
Petersham
NSW 2049

Order No.:
Report #: 334142
Phone: 1300 137 038
Fax: 1300 136 038

Received: Apr 18, 2012 1:25 PM
Due: Apr 24, 2012 4:00 PM
Priority: 4 Day
Contact name: Mark Kelly

Client Job No.: GRANVILLE ES4962

mgt-LabMark Client Manager: Onur Mehmet

Sample Detail					Cyanide (total)	mgt-LabMark Suite 3	mgt-LabMark Suite 13	mgt-LabMark Suite 6 (filtered metals)
Laboratory where analysis is conducted								
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217					X	X	X	X
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
R1	Apr 12, 2012		Water	S12-Ap10248	X	X	X	X

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least

6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg:milligrams per Kilogram

mg/L:milligrams per litre

µg/L:micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%:Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 milliltres

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice
CP:	Client Parent - QC was performed on samples pertaining to this report
NCP:	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample>
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Total m+p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes(ortho.meta and para)	mg/L	< 0.003			0.003	Pass	
Total BTEX	mg/L	< 0.01			0.01	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/L	< 0.005			0.005	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Speciated Phenols E008 Speciated Phenols							
2.4-Dichlorophenol	mg/L	< 0.002			0.002	Pass	
2.4-Dimethylphenol	mg/L	< 0.002			0.002	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.002			0.002	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.002			0.002	Pass	
Phenol	mg/L	< 0.002			0.002	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.002			0.002	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.004			0.004	Pass	
2-Chlorophenol	mg/L	< 0.002			0.002	Pass	
2-Nitrophenol	mg/L	< 0.002			0.002	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.002			0.002	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	mg/L	< 0.0005			0.0005	Pass	
4.4'-DDE	mg/L	< 0.0005			0.0005	Pass	
4.4'-DDT	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.0005			0.0005	Pass	
a-Chlordane	mg/L	< 0.0005			0.0005	Pass	
Aldrin	mg/L	< 0.0005			0.0005	Pass	
b-BHC	mg/L	< 0.0005			0.0005	Pass	
d-BHC	mg/L	< 0.0005			0.0005	Pass	
Dieldrin	mg/L	< 0.0005			0.0005	Pass	
Endosulfan I	mg/L	< 0.0005			0.0005	Pass	
Endosulfan II	mg/L	< 0.0005			0.0005	Pass	
Endosulfan sulphate	mg/L	< 0.0005			0.0005	Pass	
Endrin	mg/L	< 0.0005			0.0005	Pass	
Endrin aldehyde	mg/L	< 0.0005			0.0005	Pass	
Endrin ketone	mg/L	< 0.0005			0.0005	Pass	
g-BHC (Lindane)	mg/L	< 0.0005			0.0005	Pass	
g-Chlordane	mg/L	< 0.0005			0.0005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/L	< 0.0005			0.0005	Pass	
Heptachlor epoxide	mg/L	< 0.0005			0.0005	Pass	
Hexachlorobenzene	mg/L	< 0.0005			0.0005	Pass	
Methoxychlor	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/L	< 0.002			0.002	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Cyanide (total)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Metals M8 filtered E020/E030 Filtered Metals in Water & E026 Mercury							
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001			0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	99			70-130	Pass	
TRH C10-C14	%	77			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	92			70-130	Pass	
Ethylbenzene	%	91			70-130	Pass	
Total m+p-Xylenes	%	98			70-130	Pass	
o-Xylene	%	86			70-130	Pass	
Xylenes(ortho.meta and para)	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	%	84			70-130	Pass	
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	79			70-130	Pass	
LCS - % Recovery							
Speciated Phenols E008 Speciated Phenols							
2.4-Dichlorophenol	%	118			70-130	Pass	
2.4-Dimethylphenol	%	118			70-130	Pass	
2.4.5-Trichlorophenol	%	116			70-130	Pass	
2.4.6-Trichlorophenol	%	124			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenol	%	115			70-130	Pass	
2-Methylphenol (o-Cresol)	%	114			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	115			70-130	Pass	
2-Chlorophenol	%	114			70-130	Pass	
2-Nitrophenol	%	128			70-130	Pass	
4-Chloro-3-methylphenol	%	120			70-130	Pass	
Pentachlorophenol	%	115			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	%	106			70-130	Pass	
4.4'-DDE	%	101			70-130	Pass	
4.4'-DDT	%	103			70-130	Pass	
a-BHC	%	104			70-130	Pass	
a-Chlordane	%	105			70-130	Pass	
Aldrin	%	105			70-130	Pass	
b-BHC	%	109			70-130	Pass	
d-BHC	%	108			70-130	Pass	
Dieldrin	%	106			70-130	Pass	
Endosulfan I	%	103			70-130	Pass	
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	110			70-130	Pass	
Endrin	%	112			70-130	Pass	
Endrin aldehyde	%	115			70-130	Pass	
Endrin ketone	%	103			70-130	Pass	
g-BHC (Lindane)	%	103			70-130	Pass	
g-Chlordane	%	108			70-130	Pass	
Heptachlor	%	110			70-130	Pass	
Heptachlor epoxide	%	109			70-130	Pass	
Hexachlorobenzene	%	107			70-130	Pass	
Methoxychlor	%	111			70-130	Pass	
LCS - % Recovery							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	108			70-130	Pass	
Benz(a)anthracene	%	99			70-130	Pass	
Benzo(a)pyrene	%	89			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	%	99			70-130	Pass	
Benzo(g.h.i)perylene	%	89			70-130	Pass	
Chrysene	%	100			70-130	Pass	
Dibenz(a.h)anthracene	%	85			70-130	Pass	
Fluoranthene	%	105			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	85			70-130	Pass	
Naphthalene	%	96			70-130	Pass	
Phenanthrene	%	105			70-130	Pass	
Pyrene	%	106			70-130	Pass	
LCS - % Recovery							
Cyanide (total)	%	88			70-130	Pass	
LCS - % Recovery							
Metals M8 filtered E020/E030 Filtered Metals in Water & E026 Mercury							
Lead (filtered)	%	116			70-130	Pass	
Mercury (filtered)	%	83			70-130	Pass	
Nickel (filtered)	%	95			70-130	Pass	
Arsenic (filtered)	%	103			70-130	Pass	
Cadmium (filtered)	%	100			70-130	Pass	
Chromium (filtered)	%	110			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper (filtered)	%	114			70-130	Pass	
Zinc (filtered)	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S12-Ap10855	NCP	%	87			70-130	Pass	
TRH C10-C14	S12-Ap10851	NCP	%	75			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S12-Ap10855	NCP	%	94			70-130	Pass	
Toluene	S12-Ap10855	NCP	%	94			70-130	Pass	
Ethylbenzene	S12-Ap10855	NCP	%	96			70-130	Pass	
Total m+p-Xylenes	S12-Ap10855	NCP	%	104			70-130	Pass	
o-Xylene	S12-Ap10855	NCP	%	94			70-130	Pass	
Xylenes(ortho.meta and para)	S12-Ap10855	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
Naphthalene	S12-Ap10855	NCP	%	108			70-130	Pass	
TRH C6-C10	S12-Ap10855	NCP	%	87			70-130	Pass	
TRH >C10-C16	S12-Ap10851	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Speciated Phenols				Result 1					
2.4-Dichlorophenol	S12-Ap07386	NCP	%	108			70-130	Pass	
2.4-Dimethylphenol	S12-Ap07386	NCP	%	108			70-130	Pass	
2.4.5-Trichlorophenol	S12-Ap07386	NCP	%	108			70-130	Pass	
2.4.6-Trichlorophenol	S12-Ap07386	NCP	%	116			70-130	Pass	
Phenol	S12-Ap07386	NCP	%	106			70-130	Pass	
2-Methylphenol (o-Cresol)	S12-Ap07386	NCP	%	105			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-Ap07386	NCP	%	106			70-130	Pass	
2-Chlorophenol	S12-Ap07386	NCP	%	104			70-130	Pass	
2-Nitrophenol	S12-Ap07386	NCP	%	115			70-130	Pass	
4-Chloro-3-methylphenol	S12-Ap07386	NCP	%	108			70-130	Pass	
Pentachlorophenol	S12-Ap07386	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S12-Ap07386	NCP	%	96			70-130	Pass	
Acenaphthylene	S12-Ap07386	NCP	%	101			70-130	Pass	
Anthracene	S12-Ap07386	NCP	%	96			70-130	Pass	
Benz(a)anthracene	S12-Ap07386	NCP	%	119			70-130	Pass	
Benzo(a)pyrene	S12-Ap07386	NCP	%	98			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-Ap07386	NCP	%	110			70-130	Pass	
Benzo(g.h.i)perylene	S12-Ap07386	NCP	%	109			70-130	Pass	
Chrysene	S12-Ap07386	NCP	%	99			70-130	Pass	
Dibenz(a.h)anthracene	S12-Ap07386	NCP	%	105			70-130	Pass	
Fluoranthene	S12-Ap07386	NCP	%	101			70-130	Pass	
Fluorene	S12-Ap07386	NCP	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S12-Ap07386	NCP	%	105			70-130	Pass	
Naphthalene	S12-Ap07386	NCP	%	93			70-130	Pass	
Phenanthrene	S12-Ap07386	NCP	%	103			70-130	Pass	
Pyrene	S12-Ap07386	NCP	%	100			70-130	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	S12-Ap11532	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Metals M8 filtered				Result 1					
Lead (filtered)	S12-Ap09097	NCP	%	111			70-130	Pass	
Mercury (filtered)	S12-Ap10851	NCP	%	82			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel (filtered)	S12-Ap09097	NCP	%	91			70-130	Pass	
Arsenic (filtered)	S12-Ap09097	NCP	%	106			70-130	Pass	
Cadmium (filtered)	S12-Ap09097	NCP	%	97			70-130	Pass	
Chromium (filtered)	S12-Ap09097	NCP	%	109			70-130	Pass	
Copper (filtered)	S12-Ap09097	NCP	%	111			70-130	Pass	
Zinc (filtered)	S12-Ap09097	NCP	%	94			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-Ap10854	NCP	mg/L	1.9	1.9	1.0	30%	Pass	
TRH C10-C14	S12-Ap10850	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S12-Ap10850	NCP	mg/L	0.20	0.20	8.4	30%	Pass	
TRH C29-C36	S12-Ap10850	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-Ap10854	NCP	mg/L	0.32	0.33	1.0	30%	Pass	
Toluene	S12-Ap10854	NCP	mg/L	0.016	0.016	<1	30%	Pass	
Ethylbenzene	S12-Ap10854	NCP	mg/L	0.43	0.43	<1	30%	Pass	
Total m+p-Xylenes	S12-Ap10854	NCP	mg/L	0.29	0.29	<1	30%	Pass	
o-Xylene	S12-Ap10854	NCP	mg/L	0.071	0.072	1.0	30%	Pass	
Xylenes(ortho.meta and para)	S12-Ap10854	NCP	mg/L	0.36	0.36	<1	30%	Pass	
Total BTEX	S12-Ap10854	NCP	mg/L	1.1	1.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-Ap10854	NCP	mg/L	0.16	0.18	14	30%	Pass	
TRH C6-C10	S12-Ap10854	NCP	mg/L	2.1	2.1	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S12-Ap10854	NCP	mg/L	0.95	0.96	1.0	30%	Pass	
TRH >C10-C16	S12-Ap10850	NCP	mg/L	0.060	0.060	11	30%	Pass	
TRH >C16-C34	S12-Ap10850	NCP	mg/L	0.20	0.20	9.9	30%	Pass	
TRH >C34-C40	S12-Ap10850	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Speciated Phenols				Result 1	Result 2	RPD			
2.4-Dichlorophenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
2.4-Dimethylphenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
2.4.5-Trichlorophenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
2.4.6-Trichlorophenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	12	30%	Pass	
2-Methylphenol (o-Cresol)	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-Ap07385	NCP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
2-Chlorophenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
2-Nitrophenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
4-Chloro-3-methylphenol	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pentachlorophenol	S12-Ap07385	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	25	30%	Pass	
Benzo(a)pyrene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-Ap07385	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Benzo(g.h.i)perylene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	18	30%	Pass	
Dibenz(a.h)anthracene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	S12-Ap07385	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Metals M8 filtered				Result 1	Result 2	RPD			
Lead (filtered)	S12-Ap11532	NCP	mg/L	< 0.001	< 0.001	12	30%	Pass	
Mercury (filtered)	S12-Ap10850	NCP	mg/L	0.00010	< 0.0001	41	30%	Fail	Q15
Nickel (filtered)	S12-Ap11532	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Arsenic (filtered)	S12-Ap11532	NCP	mg/L	< 0.0005	< 0.0005	6.0	30%	Pass	
Cadmium (filtered)	S12-Ap11532	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Chromium (filtered)	S12-Ap11532	NCP	mg/L	< 0.003	< 0.003	13	30%	Pass	
Copper (filtered)	S12-Ap11532	NCP	mg/L	< 0.0005	< 0.0005	<1	30%	Pass	
Zinc (filtered)	S12-Ap11532	NCP	mg/L	< 0.005	< 0.005	14	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Onur Mehmet	Client Services
Bob Symons	Senior Analyst-Inorganic (NSW)
James Norford	Senior Analyst-Metal (NSW)
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)



Dr. Bob Symons
Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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mgt LabMark
ENVIRONMENTAL LABORATORIES

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Sample Receipt Advice

Company name: **Aargus Pty Ltd**

Contact name: ALL INVOICES
Client job number: GRANVILLE ES4962
COC number: Not provided
Turn around time: 4 Day
Date/Time received: Apr 18, 2012 1:25 PM
MGT lab reference: **334142**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Organic samples had Teflon liners.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Onur Mehmet on Phone : (+61) (3) 9564 7055 or by e.mail: onur.mehmet@mgtlabmark.com.au

Results will be delivered electronically via e.mail to ALL INVOICES - kerry@aargus.net.

Note: A copy of these results will also be delivered to the general Aargus Pty Ltd email address.

mgt Labmark Sample Receipt

#334142

AARGUS PTY LTD

Laboratory Test Request / Chain of Custody Record

446 Parramatta Road
PETERSHAM NSW 2049

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038
email: admin@aargus.net

TO: MGT LABMARK
UNIT F3, BUILDING F
16 MARS ROAD
LANE COVE WEST NSW 2066

PH: 028215 6222 FAX: 02 9420 2977
ATTN:

Sampling Date:	12/04/2012	Job No:	ES4962
Sampled By:	EW	Project:	Granville
Project Manager:	MK	Location:	Granville

Results required by: Tuesday 24-04-12

Sampling details: Location	Depth (m)	Sample type: Soil	Water	Heavy Metals As, Cd, Cr, Cu, Ni, Pb, Zn and Hg	TPH/ BTEX	PAH	OCP	PCB	Phenols & Cyanide			KEEP SAMPLE
				✓	✓	✓	✓	✓	✓			YES
Ap10248 R1	–		WP/WG									

Relinquished by: Name	Signature	Date	Received by: Name	Signature	Date
Emmanuel Woelders	EW	18/04/2012	Sean.		18/4/12

Legend:
WG Water sample, glass bottle
WP Water sample, plastic bottle
USG Undisturbed soil sample (glass jar)
DSG Disturbed soil sample (glass jar)
DSP Disturbed soil sample (small plastic bag)
✓ Test required
@ mole H^+/tonne

21 18/4/12 1-25PM

ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Mark Kelly	Manager	Huong Crawford
Client	Aargus Pty Ltd	Laboratory	SGS Alexandria Environmental
Address	446 Parramatta Road PETERSHAM NSW 2049	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	1300 137 038	Telephone	+61 2 8594 0400
Facsimile	1300 136 038	Facsimile	+61 2 8594 0499
Email	mark.kelly@aargus.net	Email	au.environmental.sydney@sgs.com
Project	**ES4962 - Granville**	SGS Reference	SE107278 R0
Order Number	(Not specified)	Report Number	0000026173
Samples	2	Date Reported	27 Apr 2012
		Date Received	13 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.

No respirable fibres detected using trace analysis technique.

Sample # 2: 1-3mm length fibre bundles found loose in sample.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Andy Sutton
Organics Chemist

Dong Liang
Inorganics Metals Team Leader

Huong Crawford
Laboratory Manager

Ly Kim Ha
Organics Supervisor

Ravee Sivasubramaniam
Hygienist

Snezana Kostoska
Inorganics Chemist

Parameter	Units	LOR	Sample Number: SE107278.001 Sample Matrix: Soil Sample Date: 12 Apr 2012 Sample Name: SS1	Sample Number: SE107278.002 Sample Matrix: Soil Sample Date: 12 Apr 2012 Sample Name: SS2
VOC's in Soil Method: AN433/AN434				
Monocyclic Aromatic Hydrocarbons				
Benzene	mg/kg	0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1
Oxygenated Compounds				
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1
Surrogates				
Dibromofluoromethane (Surrogate)	%	-	**91**	**94**
d4-1,2-dichloroethane (Surrogate)	%	-	**92**	**93**
d8-toluene (Surrogate)	%	-	**94**	**93**
Bromofluorobenzene (Surrogate)	%	-	**88**	**92**
Totals				
Total Xylenes*	mg/kg	0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	**0**	**0**
Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434				
TRH C6-C9	mg/kg	20	<20	<20
Surrogates				
Trifluorotoluene (Surrogate)	%	-	**70**	**60**
Dibromofluoromethane (Surrogate)	%	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-
d8-toluene (Surrogate)	%	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403				
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50
TRH C29-C36	mg/kg	50	<50	<50
Surrogates				
TRH (Surrogate)	%	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420				
Naphthalene	mg/kg	0.1	<0.1	**0.1**
2-methylnaphthalene	mg/kg	0.1	<0.1	**0.2**
1-methylnaphthalene	mg/kg	0.1	<0.1	**0.2**
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	**0.3**
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	**0.3**
Pyrene	mg/kg	0.1	**0.2**	**0.3**
Benzo(a)anthracene	mg/kg	0.1	**0.1**	**0.1**
Chrysene	mg/kg	0.1	**0.1**	**0.3**
Benzo(b)fluoranthene	mg/kg	0.1	**0.2**	**0.3**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	**0.2**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	**0.1**

Parameter	Units	LOR	Sample Number: SE107278.001 Sample Matrix: Soil Sample Date: 12 Apr 2012 Sample Name: SS1	Sample Number: SE107278.002 Sample Matrix: Soil Sample Date: 12 Apr 2012 Sample Name: SS2
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 (continued)				
Total PAH	mg/kg	0.8	<0.8	**2.1**
Surrogates				
d5-nitrobenzene (Surrogate)	%	-	**88**	**94**
2-fluorobiphenyl (Surrogate)	%	-	**92**	**92**
d14-p-terphenyl (Surrogate)	%	-	**102**	**84**
OC Pesticides in Soil Method: AN400/AN420				
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	**0.7**
Alpha Chlordane	mg/kg	0.1	<0.1	**0.3**
trans-Nonachlor	mg/kg	0.1	<0.1	**0.3**
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1
Surrogates				
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**70**	**73**
PCBs in Soil Method: AN400/AN420				
Arochlor 1016	mg/kg	0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1
Surrogates				
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**70**	**73**
Total Phenolics in Soil Method: AN289				
Total Phenols	mg/kg	0.1	**0.3**	**0.2**

Parameter	Units	LOR	Sample Number: SE107278.001 Sample Matrix: Soil Sample Date: 12 Apr 2012 Sample Name: SS1	Sample Number: SE107278.002 Sample Matrix: Soil Sample Date: 12 Apr 2012 Sample Name: SS2
Total Cyanide in soil by Discrete Analyser (Aquakem) Method: AN077/AN287				
Total Cyanide	mg/kg	0.1	**0.2**	**0.4**
Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320				
Arsenic, As	mg/kg	3	<3	**17**
Cadmium, Cd	mg/kg	0.3	<0.3	**1.2**
Chromium, Cr	mg/kg	0.3	**11**	**24**
Copper, Cu	mg/kg	0.5	**12**	**61**
Lead, Pb	mg/kg	1	**53**	**96**
Nickel, Ni	mg/kg	0.5	**5.2**	**55**
Zinc, Zn	mg/kg	0.5	**61**	**270**
Mercury in Soil Method: AN312				
Mercury	mg/kg	0.05	<0.05	<0.05
Fibre Identification in soil Method: AN602				
FibreID				
Asbestos Detected	No unit	-	No	Yes
SemiQuant				
Estimated Fibres	%w/w	0.01	<0.01	**>0.01**
Moisture Content Method: AN002				
% Moisture	%	0.5	**8.9**	**7.8**

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Mercury in Soil Method: ME-(AU)-[ENV]AN312

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB018504	mg/kg	0.05	<0.05	9 - 11%	105%	91%

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Hexachlorobenzene (HCB)	LB018382	mg/kg	0.1	<0.1	NA
Alpha BHC	LB018382	mg/kg	0.1	<0.1	NA
Lindane	LB018382	mg/kg	0.1	<0.1	NA
Heptachlor	LB018382	mg/kg	0.1	<0.1	85%
Aldrin	LB018382	mg/kg	0.1	<0.1	85%
Beta BHC	LB018382	mg/kg	0.1	<0.1	NA
Delta BHC	LB018382	mg/kg	0.1	<0.1	80%
Heptachlor epoxide	LB018382	mg/kg	0.1	<0.1	NA
o,p'-DDE	LB018382	mg/kg	0.1	<0.1	NA
Alpha Endosulfan	LB018382	mg/kg	0.2	<0.2	NA
Gamma Chlordane	LB018382	mg/kg	0.1	<0.1	NA
Alpha Chlordane	LB018382	mg/kg	0.1	<0.1	NA
trans-Nonachlor	LB018382	mg/kg	0.1	<0.1	NA
p,p'-DDE	LB018382	mg/kg	0.1	<0.1	NA
Dieldrin	LB018382	mg/kg	0.2	<0.2	80%
Endrin	LB018382	mg/kg	0.2	<0.2	80%
o,p'-DDD	LB018382	mg/kg	0.1	<0.1	NA
o,p'-DDT	LB018382	mg/kg	0.1	<0.1	NA
Beta Endosulfan	LB018382	mg/kg	0.2	<0.2	NA
p,p'-DDD	LB018382	mg/kg	0.1	<0.1	NA
p,p'-DDT	LB018382	mg/kg	0.1	<0.1	75%
Endosulfan sulphate	LB018382	mg/kg	0.1	<0.1	NA
Endrin Aldehyde	LB018382	mg/kg	0.1	<0.1	NA
Methoxychlor	LB018382	mg/kg	0.1	<0.1	NA
Endrin Ketone	LB018382	mg/kg	0.1	<0.1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB018382	%	-	121%	77%

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN420

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB018382	mg/kg	0.1	<0.1	71%	115%	103%
2-methylnaphthalene	LB018382	mg/kg	0.1	<0.1	57%	NA	NA
1-methylnaphthalene	LB018382	mg/kg	0.1	<0.1	42%	NA	NA
Acenaphthylene	LB018382	mg/kg	0.1	<0.1	84%	121%	113%
Acenaphthene	LB018382	mg/kg	0.1	<0.1	109%	112%	102%
Fluorene	LB018382	mg/kg	0.1	<0.1	133%	NA	NA
Phenanthrene	LB018382	mg/kg	0.1	<0.1	109%	117%	106%
Anthracene	LB018382	mg/kg	0.1	<0.1	102%	127%	115%
Fluoranthene	LB018382	mg/kg	0.1	<0.1	76%	119%	110%
Pyrene	LB018382	mg/kg	0.1	<0.1	69%	121%	111%
Benzo(a)anthracene	LB018382	mg/kg	0.1	<0.1	67%	NA	NA
Chrysene	LB018382	mg/kg	0.1	<0.1	68%	NA	NA
Benzo(b)fluoranthene	LB018382	mg/kg	0.1	<0.1	69%	NA	NA
Benzo(k)fluoranthene	LB018382	mg/kg	0.1	<0.1	54%	NA	NA
Benzo(a)pyrene	LB018382	mg/kg	0.1	<0.1	64%	126%	114%
Indeno(1,2,3-cd)pyrene	LB018382	mg/kg	0.1	<0.1	60%	NA	NA
Dibenzo(a&h)anthracene	LB018382	mg/kg	0.1	<0.1	64%	NA	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil **Method: ME-(AU)-[ENV]AN420 (continued)**

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzo(ghi)perylene	LB018382	mg/kg	0.1	<0.1	59%	NA	NA
Total PAH	LB018382	mg/kg	0.8	<0.8	78%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
d5-nitrobenzene (Surrogate)	LB018382	%	-	108%	24%	93%	110%
2-fluorobiphenyl (Surrogate)	LB018382	%	-	125%	4%	102%	105%
d14-p-terphenyl (Surrogate)	LB018382	%	-	111%	2%	123%	118%

PCBs in Soil **Method: ME-(AU)-[ENV]AN400/AN420**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Arochlor 1016	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1221	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1232	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1242	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1248	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1254	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1260	LB018382	mg/kg	0.2	<0.2	83%
Arochlor 1262	LB018382	mg/kg	0.2	<0.2	NA
Arochlor 1268	LB018382	mg/kg	0.2	<0.2	NA
Total PCBs (Arochlors)	LB018382	mg/kg	1	<1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB018382	%	-	121%	93%

Total Cyanide in soil by Discrete Analyser (Aquakem) **Method: ME-(AU)-[ENV]AN077/AN287**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery	MSD %RPD
Total Cyanide	LB018320	mg/kg	0.1	<0.1	99%	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Phenolics in Soil **Method: ME-(AU)-[ENV]AN289**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Phenols	LB018620	mg/kg	0.1	<0.1	1 - 5%	96%	91%

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest **Method: ME-(AU)-[ENV]AN040/AN320**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB018502	mg/kg	3	<3	1 - 9%	93%	84%
Cadmium, Cd	LB018502	mg/kg	0.3	<0.3	1 - 11%	96%	87%
Chromium, Cr	LB018502	mg/kg	0.3	<0.3	4 - 11%	93%	86%
Copper, Cu	LB018502	mg/kg	0.5	<0.5	5 - 13%	90%	83%
Lead, Pb	LB018502	mg/kg	1	<1	6 - 10%	96%	87%
Nickel, Ni	LB018502	mg/kg	0.5	<0.5	0 - 12%	95%	87%
Zinc, Zn	LB018502	mg/kg	0.5	<0.5	5 - 11%	96%	101%

TRH (Total Recoverable Hydrocarbons) in Soil **Method: ME-(AU)-[ENV]AN403**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MSD %RPD
TRH C10-C14	LB018382	mg/kg	20	<20	0%	105%	NA
TRH C15-C28	LB018382	mg/kg	50	<50	0 - 38%	108%	NA
TRH C29-C36	LB018382	mg/kg	50	<50	0 - 48%	103%	NA

VOC's in Soil **Method: ME-(AU)-[ENV]AN433/AN434**

Monocyclic Aromatic Hydrocarbons

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene	LB018334	mg/kg	0.1	<0.1	0%	110%	108%
Toluene	LB018334	mg/kg	0.1	<0.1	0%	102%	107%
Ethylbenzene	LB018334	mg/kg	0.1	<0.1	0%	103%	109%
m/p-xylene	LB018334	mg/kg	0.2	<0.2	0%	111%	116%
o-xylene	LB018334	mg/kg	0.1	<0.1	0%	113%	110%

Oxygenated Compounds

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
MtBE (Methyl-tert-butyl ether)	LB018334	mg/kg	0.1	<0.1	0%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB018334	%	-	93%	0%	92%	89%
d4-1,2-dichloroethane (Surrogate)	LB018334	%	-	100%	0 - 2%	100%	91%
d8-toluene (Surrogate)	LB018334	%	-	101%	0 - 1%	103%	94%
Bromofluorobenzene (Surrogate)	LB018334	%	-	85%	1 - 3%	92%	94%

Totals

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Xylenes*	LB018334	mg/kg	0.3	<0.3	0%	NA	NA
Total BTEX*	LB018334	mg/kg	-	0	NA	NA	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Volatile Petroleum Hydrocarbons in Soil **Method: ME-(AU)-[ENV]AN433/AN434**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C6-C9	LB018334	mg/kg	20	<20	0%	119%	114%

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Trifluorotoluene (Surrogate)	LB018334	%	-	89%	8%	85%	80%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analsysis by ASS or ICP as per USEPA Method 200.8.
AN077	Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
AN088	Orbital rolling for Organic pollutants are extracted from soil/sediment by transferring an appropriate mass of sample to a clear soil jar and extracting with 1:1 Dichloromethane/Acetone. Orbital Rolling method is intended for the extraction of semi-volatile organic compounds from soil/sediment samples, and is based somewhat on USEPA method 3570 (Micro Organic extraction and sample preparation). Method 3700.
AN287	A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by Aquakem DA.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN400	OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with diffential polarity of the elluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependant on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433/AN434	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.au.sgs.com/terms_and_conditions_au. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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SAMPLE RECEIPT ADVICE

SE107278

CLIENT DETAILS

Contact	Mark Kelly
Client	Aargus Pty Ltd
Address	446 Parramatta Road PETERSHAM NSW 2049
Telephone	1300 137 038
Facsimile	1300 136 038
Email	mark.kelly@aargus.net
Project	**ES4962 - Granville**
Order Number	(Not specified)
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 13/4/2012
Report Due	Tue 24/4/2012
SGS Reference	**SE107278**

SUBMISSION DETAILS

This is to confirm that 2 samples were received on Friday 13/4/2012. Results are expected to be ready by Tuesday 24/4/2012. Please quote SGS reference SE107278 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	2 Soils	Type of documentation received	COC
Date documentation received	17/4/12@10:15am	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.7°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

Samples will be held for one month for water samples and two months for soil samples from date of report, unless otherwise instructed.

COMMENTS

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

SAMPLE RECEIPT ADVICE

SE107278

CLIENT DETAILS

Client	Aargus Pty Ltd	Project	ES4962 - Granville

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	Total Recoverable Metals in Soil by ICPOES from	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	SS1	26	22	11	1	1	7	4	12	6
002	SS2	26	22	11	1	1	7	4	12	6

CONTINUED OVERLEAF

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.

SAMPLE RECEIPT ADVICE

SE107278

CLIENT DETAILS

Client	Aargus Pty Ltd	Project	ES4962 - Granville

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	SS1	2	1	1
002	SS2	2	1	1

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.

CoC received 13/4/12 at 0:15 am

SGS received 13/04/12 by S.S time 12.00 pm samples intact ✓ Cooler Pack ✓ temperature on Rec 2.7 storage S775 SB107278

AARGUS PTY LTD

Laboratory Test Request / Chain of Custody Record

446 Parramatta Road
PETERSHAM NSW 2049

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038
email: admin@aargus.net

TO: SGS AUSTRALIA PTY LTD
UNIT 16
33 MADDOX STREET
ALEXANDRIA NSW 2015

PH: 02 8594 0400 **FAX:** 02 8594 0499
ATTN:

Sampling Date:	12/04/2012	**Job No:**	ES4962
Sampled By:	EW	**Project:**	Granville
Project Manager:	MK	**Location:**	Granville

Results required by: Tuesday 24-04-12

	Sampling details		Sample type										
	Location	Depth (m)	Soil	Water	Heavy Metals As, Cd, Cr, Cu, Ni, Pb, Zn and Hg	TPH/ BTEX	PAH	OCP	PCB	Phenols & Cyanide	Asbestos		KEEP SAMPLE
1	SS1	_	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES
2	SS2	_	DSG / DSP		✓	✓	✓	✓	✓	✓	✓		YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
Emmanuel Woelders	EW	17/04/2012	Suba		13/04/12

Legend:

WG	Water sample, glass bottle	USG	Undisturbed soil sample (glass jar)	DSP	Disturbed soil sample (small plastic bag)
WP	Water sample, plastic bottle	DSG	Disturbed soil sample (glass jar)	✓	Test required

@ mole H^+/tonne

SGS

AUSTRALIA – ENVIRONMENTAL SERVICES SYDNEY – PROFORMA FORM

SAMPLE INFORMATION

Approved: D. Liang

JOB No. SE 107278

Sample No.	P 100ml UP	P 250ml UP	P 500ml UP	P 1L UP	G 100 Amber UP	G 200 Amber UP	G 500 Amber UP	G 1L Amber UP	G 40ml vial Up	G 40ml Vial HCl	P 100ml HCl	G 40ml Vial H2SO4	P 100ml H2SO4	P 250ml H2SO4	G 500ml Amber H2SO4	G 1L H2SO4	P 100/250ml HN03 Total	P 100ml HN03 Filtered	P 250ml NaOH	P 250ml Zn Acetate	Plastic Bag	G 250ml Soil Jar				Sample Matrix	Lab Bottles Supplied By	Comments
1-2																						1				Soil	Engt	Full

APPENDIX D

BOREHOLE LOGS

Aargus

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH13
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown with traces of ash	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.7m BGL in fill material	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH14
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
				CI	NATURAL Silty CLAY, medium plasticity, orange, brown & red	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.7m BGL in natural Clay	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH15
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
				CI	NATURAL Silty CLAY, medium plasticity, orange, brown & red	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.7m BGL in natural Clay	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH16
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Gravelly Sand, fine grained, dark grey with inclusions of gravel and bitumen	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 1.0m BGL in fill material	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH17
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown FILL- Sand, medium to fine grained, dark brown to grey with inclusions of ash, gravel and sandstone pieces	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
0.6					End of Borehole @ 0.6m BGL in fill material (auger refusal)	

Log Symbols

Standing groundwater level in borehole

Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH18
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Gravelly Sand, fine grained, dark grey with inclusions of gravel and bitumen	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
				CI	NATURAL Silty CLAY, medium plasticity, orange, brown & red	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.9m BGL in natural Clay	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH19
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Gravelly Sand, fine grained, dark grey with inclusions of gravel and bitumen	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
				CI	NATURAL Silty CLAY, medium plasticity, orange, brown & red	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.9m BGL in natural Clay	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH20
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown with traces of gravel & ash	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
				CI	NATURAL Silty CLAY, medium plasticity, orange, brown & red	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.9m BGL in natural Clay	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH21
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 1.0m BGL in fill material	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
W Wet - Free water visible on soil surface

Soil Classification

Clay - Particle size less than 0.002mm
Silt - Particle size between 0.002 and 0.06mm
Sand - Particle size between 0.06 and 2.0mm
Gravel - Particle size between 2.0 and 60mm

Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	BH22
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
0.5				F	FILL - Sand, fine grained, brown to light brown	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
				CI	NATURAL Silty CLAY, medium plasticity, orange, brown & red traces of organic matter	No asbestos visible, No Odours, PID <1ppm No hydrocarbon staining visible
1					End of Borehole @ 0.9m BGL in natural Clay	
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
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VS Very Soft - Unconfined compressive strength less than 25kPa
S Soft - Unconfined compressive strength 25-50kPa
F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

BOREHOLE LOG

CLIENT	MDM Pty Ltd	**BOREHOLE NO.**	S23
PROJECT	Phase II Environmental Site Assessment	**DATE.**	12.04.2012
LOCATION	2 Factory Street, Granville NSW	**JOB NO.**	ES4962
METHOD	Hand Augers	**SURFACE ELEV.**	N/A
LOGGED BY	EW/AW	**CHECKED BY**	MK

Depth (m)	Sample	Graphic Symbol	Ground Water	Classification Symbol	Soil Description (Plasticity, particle characteristics, colour, moisture, etc)	Observations
				F	FILL - Sand, fine grained, brown to light brown with traces of gravel	No asbestos visible, No Odours, PID <1ppm
					End of Borehole @ 0.1m BGL in fill material	No hydrocarbon staining visible
0.5						
1						
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
10						

Log Symbols

Standing groundwater level in borehole
Water seepage in borehole (wet)

Samples

BH1.0.5 - Soil sample taken at indicated depth
S - Surface water sample
GW/W - Groundwater sample/water sample

Moisture Condition

D Dry - Runs freely through fingers
M Moist - Does not run freely but no free water visible on soil surface
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Soil Classification

Clay - Particle size less than 0.002mm
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Strength

VS Very Soft - Unconfined compressive strength less than 25kPa
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F Firm - Unconfined compressive strength 50-100kPa
St Stiff - Unconfined compressive strength 100-200kPa
VSt Very Stiff - Unconfined compressive strength 200-400kPa
H Hard - Unconfined compressive strength greater than 400kPa

APPENDIX E

REGULATORY CRITERIA

Table 5-A - Soil Investigation Levels (mg/kg)

Substances	Health Investigation Levels (HILs)						Ecological Investigation Levels (EILs)		Background Ranges[6]
	A[1]	B[2]	C[3]	D	E	F	REIL[4]	Interim Urban[5]	
METALS/METALLOIDS									
Arsenic (total)	100			400	200	500		20	1 - 50
Barium								300	100 - 3000
Beryllium	20			80	40	100			
Cadmium	20			80	40	100		3	1
Chromium (III)	12%			48%	24%	60%		400	
Chromium (VI)	100			400	200	500		1	
Chromium (Total)*[7]									5 - 1000
Cobalt	100			400	200	500			1 - 40
Copper	1000			4000	2000	5000		100	2 - 100
Lead	300			1200	600	1500		600	2 - 200
Manganese	1500			6000	3000	7500		500	850
Methyl mercury	10			40	20	50			
Mercury (inorganic)	15			60	30	75		1	0.03
Nickel	600			2400	600	3000		60	5 - 500
Vanadium								50	20 - 500
Zinc	7000			28000	14000	35000		200	10 - 300
ORGANICS									
Aldrin + Dieldrin	10			40	20	50			
Chlordane	50			200	100	250			
DDT + DDD + DDE	200			800	400	1000			
Heptachlor	10			40	20	50			
Polycyclic aromatic hydrocarbons (PAHs)	20			80	40	100			
Benzo(a)pyrene	1			4	2	5			
Phenol	8500			34000	17000	42500			
PCBs (Total)	10			40	20	50			
Petroleum Hydrocarbon Components (constituents): • >C16 – C35 Aromatics[8]	90			360	180	450			
• >C16 – C35 Aliphatics	5600			22400	11200	28000			
• >C35 Aliphatics	56000			224000	112000	280000			
OTHER									
Boron	3000			12000	6000	15000			
Cyanides (Complexed)	500			2000	1000	2500			
Cyanides (free)	250			1000	500	1250			
Phosphorus								2000	
Sulfur								600	
Sulfate[9]								2000	

Limited Australian data developed at this time

1 Human exposure settings based on land use have been established for HILs (see Taylor and Langley 1998). These are:
- **A.** 'Standard' residential with garden/accessible soil (home-grown produce contributing less than 10% of vegetable and fruit intake; no poultry): this category includes children's day-care centres, kindergartens, preschools and primary schools.
- **B.** Residential with substantial vegetable garden (contributing 10% or more of vegetable and fruit intake) and/or poultry providing any egg or poultry meat dietary intake.
- **C.** Residential with substantial vegetable garden (contributing 10% or more of vegetable and fruit intake); poultry excluded.
- **D.** Residential with minimal opportunities for soil access: includes dwellings with fully and permanently paved yard space such as high-rise apartments and flats.
- **E.** Parks, recreational open space and playing fields: includes secondary schools.
- **F.** Commercial/Industrial: includes premises such as shops and offices as well as factories and industrial sites.

(For details on derivation of HILs for human exposure settings based on land use see Schedule B(7A).

2 Site and contaminant specific: on site sampling is the preferred approach for estimating poultry and plant uptake. Exposure estimates may then be compared to the relevant ADIs, PTWIs and GDs.

3 Site and contaminant specific: on site sampling is the preferred approach for estimating plant uptake. . Exposure estimates may then be compared to the relevant ADIs, PTWIs and GDs.

4 These will be developed for regional areas by jurisdictions as required.

5 Interim EILs for the urban setting are based on considerations of phytotoxicity, ANZECC B levels, and soil survey data from urban residential properties in four Australian capital cities.

6 Background ranges, where HILs or EILs are set, are taken from the Field Geologist's Manual, compiled by D A Berkman, Third Edition 1989. Publisher – The Australasian Institute of Mining & Metallurgy. This publication contains information on a more extensive list of soil elements than is included in this Table. Another source of information is Contaminated Sites Monograph No. 4: Trace Element Concentrations in Soils from Rural & Urban Areas of Australia, 1995. South Australian Health Commission.

7 Valence state not distinguished – expected as Cr (III).

8 The carbon number is an 'equivalent carbon number' based on a method that standardises according to boiling point. It is a method used by some analytical laboratories to report carbon numbers for chemicals evaluated on a boiling point GC column.

9 For protection of built structures.

Table 5-B

Groundwater Investigation Levels

SETTING[10]	Aquatic Ecosystems[11]		Drinking Water	Agricultural[9]	
	Marine Waters µg/L	Fresh Waters µg/L	Health[10]/ Aesthetic[11] mg/L	Irrigation (mg/L)	Livestock (mg/L)
METALS/METALLOIDS					
Aluminium		<5 (if pH <6.5) <100(if pH >6.5)	(0.2)	5.0	5.0
Antimony		30	0.003		
Arsenic (total)	50.0	50	0.007	0.1	0.5
Barium			0.7		
Beryllium		4		0.1	0.1
Boron			0.3	0.5-6.0	5.0
Cadmium	2.0	0.2-2.0	0.002	0.01	0.01
Chromium (Total)	50.0	10		1.0	
Chromium (VI)			0.05	0.1	1.0
Cobalt				0.05	1.0
Copper	5.0	2.0-5.0	2.0 (1.0)	0.2	0.5
Iron		1000	(0.3)	1.0	
Lead	5.0	1.0-5.0	0.01	0.2	0.1
Lithium				2.5	
Manganese			0.5 (0.1)	2.0	
Mercury (total)	0.1	0.1	0.001	0.002	0.002
Molybdenum			0.05	0.01	0.01
Nickel	15.0	15.0-150.0	0.02	0.02	1.0
Selenium	70.0	5.0	0.01	0.02	0.02
Silver	1.0	0.1	0.1		
Thallium	20.0	4.0			
Tin (tributyltin)	0.002	0.008			
Vanadium				0.1	0.1
Zinc	50.0	5.0-50.0	(3.0)	2.0	20.0
ORGANICS					
1,2-dichloroethane			0.003		
Benzo(a)pyrene			0.00001		
Carbon tetrachloride			0.003		
Chlorobenzene			0.3 (0.01)		
Dichloromethane (methylene chloride)			0.004		
Ethylbenzene			0.3 (0.003)		
Ethylenediamine tetracetic acid (EDTA)			0.25		
Hexachlorobutadiene	0.3	0.1	0.0007		

[10] Levels for recreational and industrial uses have not been set. For guidance on Recreational levels, see NHMRC/ARMCANZ, 1996. For recreational uses, toxic substances should, in general, not exceed the concentrations given for drinking water. For guidance on Industrial levels, see ANZECC, 1992. Industrial settings include: generic processes, hydro-electric power generation, textiles, chemical and allied industries, food and beverage, iron and steel, tanning and leather, pulp and paper, petroleum.

[11] Taken from Australian Water Quality Guidelines for Fresh and Marine Waters (AWQG) (ANZECC 1992)

SETTING[10]	Aquatic Ecosystems[11]		Drinking Water	Agricultural[9]	
	Marine Waters µg/L	Fresh Waters µg/L	Health[10]/ Aesthetic[11] mg/L	Irrigation (mg/L)	Livestock (mg/L)
ORGANICS (cont..)					
Monocyclic aromatic compounds					
Benzene	300.0	300.0	0.001		
Chlorinated benzenes		0.007-15.0[12]			
Chlorinated phenols	0.2-8.0	0.05-18.0[13]	0.04-1.5		
Phenol	50.0	50.0			
Toluene		300.0	0.8 (0.025)		
Xylene			0.6 (0.02)		
Pesticides	Footnote[14]	Footnote[15]	Footnote[16]		See guidelines for raw water for drinking water supply (AWQG, ANZECC 1992)
Aldrin	10.0 ng/L	10.0 ng/L	0.0003		
Chlordane	4.0 ng/L	4.0 ng/L	0.001		
DDT	1.0 ng/L	1.0 ng/L	0.02		
Dieldrin	2.0 ng/L	2.0 ng/L	0.0003		
Heptachlor	10.0 ng/L	10.0 ng/L	0.0003		
Phthalate esters					
di-n-butylphthalate		4.0			
di(2-ethylhexyl)phthalate		0.6			
other phthalate esters		0.2			
Polyaromatic hydrocarbons					
Polychlorinated biphenyls	0.004	0.001			
Polycyclic aromatic hydrocarbons	3.0	3.0			
Styrene (vinylbenzene)			0.03 (0.004)		
Tetrachloroethene			0.05		
Trichlorobenzenes (total)			0.03 (0.005)		
Vinyl chloride			0.0003		
OTHER					
Calcium					1,000.0
Chloride			(250.0)	30.0 700.0[17]	
Cyanide	5	0.005	0.08		
Fluoride			1.5	1.0	2.0
Nitrate-N			50.0		30.0
Nitrite-N			3.0		10.0
AESTHETIC PARAMETERS					
Colour and clarity	< 10% change in euphotic depth	< 10% change in euphotic depth			

[12] See table 2.8, p.2-49 AWQG (ANZECC 1992) for further information
[13] see table 2.9, p2-50 AWQG (ANZECC 1992) for further information
[14] see table 2.10 also, p.2-55 (ANZECC 1992) for further information
[15] see table 2.10 also, p.2-55 (ANZECC 1992) for further information
[16] see table on p32 (Guidelines for Pesticides), p32 (NHMRC/ARMCANZ 1996)
[17] Maximum chloride concentration should be set according to the sensitivity of the crop. For further information. (See Tables 5.1, 5.2, 5.3, 5.4, ANZECC 1992)

APPENDIX F

AARGUS ENVIRONMENTAL PROTOCOLS



Sampling Quality & Fieldwork Assurance Protocols

January 2011

Aargus AUSTRALIA

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Groundwater Well & Wellhead Construction Details

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1.0 OBJECTIVE AND SCOPE

The objective of Aargus Pty Ltd, Aargus Engineering Pty Ltd and Aargus Laboratories Pty Ltd (Aargus) Protocols is to ensure that the methodology followed during fieldworks is adequate to provide data which is usable and representative of the conditions actually encountered at the site.

The scope of these protocols is to:

- Outline the methods and procedures for the field investigations during an engineering, laboratory or environmental assessment or remediation and validation program; and
- Specify methods and procedures which ensure that soil and groundwater samples recovered are representative of the actual subsurface conditions at the site, as well as ensuring that the risk of introducing external contamination to samples and to the environment is minimised.

These protocols must be adhered to by Aargus personnel and by sub-contractors involved in field investigations. Any deviations from these protocols should be explained within the Aargus Report to which they are attached.

2.0 SOIL SAMPLING

2.1 Collection methods

Possible collection methods

Soil samples are generally collected by drilling or excavating the subsurface, using one of the following drilling / excavating technique:

- Rotary air hammer
- Hand auger, trowel or manual handling (shovel)
- Solid or hollow auger
- Backhoe or Excavator

Rotary Air Hammer

The air hammer technique requires the use of synthetic blend lubricants to prevent potential contamination of the borehole if a leak were to occur. In addition, micro-filters

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are installed into the drilling airline to avoid contamination by hydrocarbons present in the compressed air.

Samples of rock are generally not collected. Where rock samples are needed, specialised techniques are used.

Hand auger, trowel or manual

A hand auger or trowel is generally used to investigate subsurface conditions of unconsolidated materials at shallow depths or in areas difficult to access with other equipment. Samples are recovered from the hand auger, taking care to avoid cross contamination, especially between samples from the same hole but at different depths. Sampling equipment is to be thoroughly cleaned between sampling events, in accordance with the procedures outlined in Section 2.5 Equipment decontamination. In the case of laboratory sampling, a pick and shovel can be used to gather adequate sample size as cross contamination is not considered an issue.

Solid or Hollow auger

Solid and hollow auger drilling techniques are well suited to unconsolidated materials. The main advantage of the hollow auger technique is that the drill rods allow access of sampling equipment at specified depths within the annulus of the drill rods.

Samples of soil are recovered using a split spoon sampler at specific depth intervals. The split spoon sampler is driven into the soil by the drill rig whilst attached to the end of the drill rods. The retrieved sample is then split lengthways into two halves when duplicate samples are required. A few centimetres of soil from the top of the split spoon sampler is discarded. Samples for volatile analysis are collected first, without mixing.

Test pits and trenches excavated with a backhoe or an excavator

Test Pit and Trenches excavated with a backhoe/excavator are used to collect relatively shallow (i.e. less than 3.5m depth) soil samples on occasions where:

- Access multiple sample locations at a site are needed;
- A description of the subsurface soil profile to approximately 3.5 m depth is required (generally in unsaturated conditions);
- The investigated site is free from known underground services and access problems;
- The investigated site is free from impenetrable surface or near surface layers including concrete and asphalt pavements; and

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- Undisturbed soil samples are required, usually at multiple depths.

Backfilling

On completion of drilling / test pitting, the investigated locations are backfilled with cuttings and compacted. Excess drill cuttings are disposed of appropriately. If the sampling location is located in an area used for the circulation of people or vehicles, the top of the sampling location should be sealed with mortar.

2.2 Soil logging

The lithological logging of soil samples and subsurface conditions is undertaken by Aargus personnel. The soil characteristics are logged in accordance with the Australian Standard *AS1726-1993 Geotechnical Site Investigations.* This includes description of grain size, visible staining, odour and colour, and of the clues which may suggest that the soil may be contaminated. Descriptions of soils are made using the Northcote method.

2.3 Collecting soil samples

The soil sample is collected using a stainless steel trowel, or directly with the hand if the sampler wears disposable gloves. Soils are quickly transferred into 250g clean amber glass jars, which have been acid washed and solvent rinsed. The jars are sealed with a screw-on teflon lined plastic lid, labelled, and placed for storage in an ice filled chest. Alternatively for engineering and laboratory sampling, 20kg plastic bulk bags are used and appropriately labelled.

2.4 Labelling of soil samples

Samples are labelled with the following information:

- Job number;
- Date of sample collection;
- Name of the Aargus professional who collected the sample; and
- Sample number: the letters used to label the samples are BH, C, SS, SP, TP and V which refer respectively to borehole samples, composite samples, surface samples, stockpile samples, test pit samples and validation samples. For borehole samples, BH3.1.0 is the sample taken from borehole 3 at 1.0m below ground level. For stockpile samples, SP1/1 is the first sample from stockpile 1. TP1.2.5 is the sample taken from testpit 1 at a depth of 2.5 metres below ground level. V3/F is the validation sample taken from location V3, the letters F N, S, E

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and W refer to the floor, north, south, east and west walls of an excavation; if some contamination is found in the validation sample, then chasing out of the contamination is required and in this case, the label of the sample is changed by adding /1 or /2 according to the number of times the contamination has been chased out. B stands for blind and could be B1, B2 etc dependant on how many blind samples were taken.

2.5 Equipment decontamination

The drilling and sampling equipment are cleaned using an appropriate surfactant (e.g. phosphate-free detergent or Decon 90), then rinsed with tap water prior to final rinsing with distilled water.

The following procedures shall be followed for decontamination of drilling and sampling equipment where required:

- buckets or tubs used for decontamination shall be cleaned with tap water and detergent and rinsed with tap water before sampling commences;
- fill first bucket or tub with tap water, and phosphate free detergent;
- fill second bucket or tub with tap water;
- clean equipment thoroughly in detergent water, using a stiff brush; rinse equipment in tap water;
- dry equipment with disposable towels;
- rinse equipment by thoroughly spraying with tap water, then final rinse with distilled water;
- allow equipment to dry; and
- change water and detergent solution between sampling event where required or when water is dirty.

Sampling decontaminated equipment should be kept in a clean area to prevent cross-contamination. Equipment that cannot be thoroughly decontaminated using the detergent wash and water rinse should be cleaned with steam or high pressure water or if a cleaner is not available, not used for further sampling (and labelled clearly "not decontaminated") or discarded. Equipment decontaminated using the high pressure steam cleaner will be treated as described above. Any equipment that cannot be thoroughly decontaminated shall be discarded and replaced.

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A new pair of latex gloves is used to handle each sample. Contaminated materials such as disposable clothing should be disposed of in accordance with environmental best practice.

2.6 Surveying of sampling locations

Sampling locations are generally located by reference to existing ground features, e.g. fences, buildings.

If the survey for location and elevation is required, it should be done by a licensed surveyor, or alternatively by an Aargus environmental engineer / scientist if the level of precision required can be obtained by the use of Aargus field equipment. Aargus has GPS equipment and level meters.

If the location is given by a licensed surveyor, it is generally given to the nearest 0.1m and referenced to the Australian Map Grid (AMG) coordinates.

3.0 GROUNDWATER SAMPLING

3.1 Groundwater Sampling Objectives

The primary objective of any groundwater (quality) sampling is to produce groundwater samples that are representative of groundwater in the aquifer and will remain representative until analytical determination or measurements are made.

3.2 Groundwater well construction

Typically wells are installed to gain access to the groundwater to be sampled. Well construction details will depend on hydrogeological setting of the site, for example the depth to groundwater strata present. Relevant information regarding the hydrogeological setting will have been obtained prior the development of any groundwater sampling program.

The preferred drilling methods will depend on the hydrogeological setting of the site and the objectives of the groundwater sampling program. For example, shallow wells in unconsolidated materials, such as sand, may be drilled using a hand auger. Drill rigs using solid of hollow flight augers may be used to drill deeper wells or through semi consolidated materials, such as stiff clay. Rotary air hammer drilling may be used were well is to be drilled through consolidated materials, such as rock. Soil samples may also be collected during drilling (see Section 2.0 SOIL SAMPLING).

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Drilling methods and materials must not have an unacceptable impact on the groundwater to be sampled. For example, if groundwater from the wells is to be tested for organic analytes, petroleum based lubricants are not to be used and oil traps must be installed on compressed air lines. Drilling techniques should also minimise compaction or smearing of the boreholes wells and transport of material into different zones, in particular, when drilling through potentially contaminated material to access groundwater.

Drill cuttings accumulated over a hole are to be removed as drilling progresses so as to prevent fallback of cuttings into the hole. Samples may be collected at a range of depths in the borehole profile during drilling.

The depth of groundwater well depends of the purpose of the investigation on the soil profile and the regional geology of the area. If the borehole location is covered by concrete, coring of the superficial hard layer is undertaken first.

Petroleum based lubricants are not used on drilling and sampling equipment, instead, Teflon based greases are used where appropriate. An Aargus professional monitors and records drilling activities, procedures adopted, materials used, progress of the stages of well construction, screen location, standpipe lens, placement, of sand filters and well seals, and general completion details, as well as the lithology of the subsurface, visible staining, unusual odours and colours (if any).

The use of a rotary air hammer rig has many advantages for consolidated material (e.g. rock), including:

- Large diameter to allow precise placement of groundwater monitoring equipment;
- No injection of drilling fluids into the formation with resulting benefits in ensuring integrity of recovered samples, and therefore no need to dispose off-site drilling fluids;
- Rapid penetration in consolidated material; and
- Provision of reliable indications of saturated conditions whilst drilling.

Drill cuttings accumulated over a hole are removed as drilling progresses so as to prevent fallback of cuttings into the hole. Samples are taken at a range of depths in the borehole profile.

Construction of the monitoring well may be carried out by the Aargus professional or the drilling contractor under the direct supervision of the Aargus environmental

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scientist/engineer. Typically on completion of drilling, slotted heavy duty PVC pipe (generally 50mm in diameter for the installation of monitoring well) is inserted into the drilled hole. The base of the pipe is capped prior to insertion in order to prevent natural soils entering the well from below. The drilled area surrounding the pipe screen is filled with coarse-grained sand. Bentonite or cement grout seal plugs may be placed above the screen depending on the hydrogeological setting of the site and sand cement mix. Excess drill cuttings are disposed of in accordance with environmental best practice.

The Aargus professional will monitor and record drilling activities, and materials encountered during drilling (including visible staining, unusual odours and colours (if any)). They will log the procedures adopted, materials used, and well construction (i.e. location of the screen, placement of sand packs and well seals and general completion details).

3.3 Development of monitoring wells

Development is the process of removing fine sand silt and clay from the aquifer around the well screen in order to maximise the hydraulic connection between the bore and the formation.

Development involves removal of fluids that may have been introduced during drilling operations as well as fines from the sand filter and screens. Well development generally involves actively agitating the water column in the well then pumping water out until, ideally, water pumped comes out visibly clean and of constant quality. Development can be undertaken immediately after installation of the groundwater well or after sufficient time has been allowed for bentonite / grout seals to consolidate.

Bores used for groundwater quality monitoring should be developed after drilling, then left for a period until bore chemistry can be demonstrated to have stabilised, any where between 24 hours and 7 days.

3.4 Purging of monitoring well

In most groundwater monitoring wells, there is a column of stagnant water above the screen that remains standing in the bore between sampling rounds. Stagnant water is generally not representative of formation water because it is in contact with bore construction materials for extended periods, is in direct contact with the atmosphere and is subject to different chemical equilibria.

Purging is the process of removing this water from the well prior to sampling. In newly installed wells, the disturbance cause by drilling may also affect water present in the

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well, and purging may be carried out concurrently with well development. Ideally wells should be purged at the lowest rate practicable until stable water chemistry is achieved.

Purging is to be performed less than 24 hours before sample collection, but usually it is performed just before sampling. The default procedure for purging a groundwater monitoring well is as follows:

- If required, measure the concentration of volatile organic vapours in the well standpipe headspace.
- Measure the depth to the standing water level in the well standpipe and the total depth of the well relative to a reference mark (generally the top of the groundwater pipe). The depth of any light non-aqueous phase liquids (LNAPL) floating on the standing water should be recorded if present using an interface probe or other suitable device.
- Calculate the volume of the groundwater in the well standpipe. The internal diameter of the well casing and the diameter of the drill hole are used to calculate the volume of water to be removed during development (nominally a minimum of three well volumes, including water present in the sand pack, should be abstracted during purging).
- Samples of water are collected generally following development/purging of each well volume. The samples are measured immediately in the field for water quality parameters, pH, electrical conductivity, redox potential and temperature. Water quality measurement probes are to be calibrated against stock standards on regular basis and decontaminated between wells.
- Pump/bail groundwater from the well until the water quality parameters have stabilised (i.e. within 10% of the previous reading) or the well is pumped/bailed dry. Collect all purged water into an appropriate volume measurement vessel. Purged water is disposed of appropriately.
- Record all appropriate development details on the well development and sampling sheet.
- Decontaminate all equipment used in the purging procedure.

3.5 Groundwater sampling

For each sampling event, starting water levels, purging times and volumes, water quality parameters and sample details are recorded on well development and sampling sheets.

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At each groundwater monitoring well, a polyethylene sheet or Eski lid is placed beside the well head and firmly fixed into position. Sampling equipment is placed onto the sheet to avoid cross contamination between the ground surface and the groundwater in the well.

Groundwater samples are collected in a bailer (Stainless Steel or disposable polymer) fitted with an emptying device. The bailer is decontaminated prior to use. All groundwater samples are retrieved at an appropriate rate in order for turbulence (which leads to cloudy samples) to be minimised.

When collecting a water sample the bailer is lowered gently into the well, until it is within the screened interval. The bailer is then steadily withdrawn, to minimise agitation of water in the well and disturbance of the surrounding sand filter material.

The procedure for using the bailer is:

- Slowly lower the bailer into the water and allow it to sink and fill with a minimum of disturbance;
- Empty the first bailer sample into a container in order to measure the volume of bailed water and to rinse the bailer with well water;
- Emptying the bailer through the bottom-emptying device (BED) collects the samples. The sample is discharged down the side of the sample bottle to minimise entry turbulence;
- Collect samples for volatile organics first, followed by semi-volatiles, other organics and then inorganics;
- The flow from the BED is adjusted so that a relatively low flow rate is maintained.

3.6 Low flow purging

Purging large volumes of water can be impractical, hazardous or may adversely affect the contaminant distribution in the sub-surface (e.g. through dilution). Low-flow purging involves minimal disturbance of the water column and aquifer and is preferable to the removal of a number of bore volumes. This method removes only small volumes of water, typically at rates of 0.1 to 1.0L/min, at a discrete depth within the bore.

Low-flow purging consists essentially of the following steps:

- The pump inlet is carefully and slowly placed in the middle or slightly above the middle of the screened interval at the point where the contaminant concentration is required (dedicated pumps, such as bladder pumps, are ideal for low-flow

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sampling). Placement of the pump inlet too close to the bottom of the bore can cause increased entrainment of solids, which have collected in the bore over time.

- Purging begins, typically at a rate of 0.1 to 1.0L/min, although higher rates may be possible provident the rate of purging does not cause significant draw down in the bore.
- During purging, groundwater stabilisation parameters should be measured and recorded to determine when they stabilise.
- When parameters have stabilised, the sample may be collected, at a rate slower or equal to purge rate.

3.7 Labelling of water samples

The water samples are identified with the same information than soil samples. GW4/2 is the sample collected from well GW4, and 2 refers to the sample number from this well, i.e. second time the well is sampled.

3.8 Sampling containers

Water samples are generally collected in bottles and containers provided by the laboratory who will analyse the samples. These are generally plastic bottles for inorganic analysis, and amber glass bottles for organic analysis. Vials are used to collect samples to be analysed for volatile organics. Sampling containers have appropriate preservatives added.

The bottles are filled to overflowing so as to remove air bubbles as much as possible prior to firmly screwing on the container cap. When performing purge and trap analyses, the vials are filled to 100% of their capacity. For headspace analyses, the vials are filled to approximately 75% of their capacity.

3.9 Well surveying

If the survey for location and elevation of a groundwater well is required, it should be done by a licensed surveyor, or alternatively by an Aargus environmental engineer / scientist if the level of precision required can be obtained by the use of Aargus field equipment.

If the location is given by a licensed surveyor, it is generally given to the nearest 0.1m and referenced to the Australian Map Grid (AMG) coordinates.

If the elevation is given by a licensed surveyor, the top of the standpipe and the ground surface adjacent to the standpipe are generally given to the nearest 0.01m and may be

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referenced to the Australian Height Datum (AHD). Relative levels (RLs) can be used if general contours are required.

4.0 SURFACE WATERS AND STORMWATER SAMPLING

4.1 Surface waters

Surface water samples are collected by hand, using automatic samplers, batch samplers or continuous samplers which can be installed to take samples at discrete time intervals or continuously. For well mixed surface water samples (up to 1m depth) a sample bottle is immersed by hand covered by a glove below the surface. Samples are also taken with sample poles that have extension arms so that more representative samples can be taken. For areas where access is difficult, samples can be collected using a retractable sample extension pole (sample bottle on the end) or in a bucket and transferred to sample bottles immediately following collection. Other methods such as pumping systems, depth samplers, automatic samplers, and integrating systems are all relatively similar with water samples being supplied to a discharge point where samples can be collected in appropriate bottles.

4.2 Stormwater

The monitoring of stormwater quality is generally required prior to reject waters into stormwater drains. Field measurements are generally carried out using a Hanna Multiprobe prior to the discharge of the water to stormwater. The water parameters measured include pH, electrical conductivity (EC, in mS/cm) and Total Dissolved Solids (TDS).

If sampling is required, samples to be analysed for inorganic compounds are collected in plastic bottles, and samples to be analysed for organic compounds are collected in amber glass bottles. The bottles are filled to overflowing so as to remove air bubbles as much as possible prior to firmly screwing on the container cap. Sample containers may have preservatives added, in accordance with the laboratory recommendations.

Vials are used for volatile organic analysis. When performing purge and trap analysis, the vials should be filled to 100% of their capacity, whereas for headspace measurements, the vials should be filled to approximately 75% of their capacity..

4.3 Filtration devices

Water filtration devices may be required to filter surface water before it is discharged to the stormwater network, in order to remove suspended solids in water. One of the most

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simple and commonly used filtration device consists of between two to four retention sedimentation bays with a geotextile covering the inlet and outlet hoses.

Litter traps (wire or plastic grids or netting) may also be used to remove larger particles or debris. Other techniques to reduce the amount of suspended matter in water include wet basins, artificial wetlands, infiltration trenches and basins, sand filters and porous pavements. Some of these latter methods are also likely to reduce the bacterial levels in water.

The use of these filtration devices does not preclude carrying out monitoring of water quality following treatment and prior to discharge, particularly to the stormwater system.

5.0 FIELD TESTING

5.1 Field measurements

Field measurement of soils and groundwater parameters provides a rapid means of assessing certain aspects of soil and water quality. They are generally taken to:

- Ensure that formation water is being sampled
- Ensure screening of soils prepares samples for laboratory testing
- Provide on-site measurements for soil and water quality parameters that are sensitive to sampling and may change rapidly (e.g. temperature, pH, redox and dissolved oxygen (DO)).
- Compare with laboratory measurements of these parameters to assist in the interpretation of analytical results of other parameters (e.g. check for chemical changes due to holding time, preservation and transport).

Field measurements may be taken either in-situ or after groundwater has been extracted from a bore. Field measurements should be taken immediately before collecting each sample.

pH and dissolved oxygen meters need to be calibrated before every use, in accordance with the manufacturer's instructions. If field meters are to be used over several hours, periodic readings of a reference solution must be made to ensure calibration is stable.

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5.2 PID Photo Ionisation Detector

Photo Ionisation Detector (PID) measurements are used to provide indicative field measurements of the amount of ionisable vapours released from a soil or water sample into the head space above the sample.

The procedure for field screening of samples using the PID is as follows:

- Prior to testing commencing, the PID is calibrated using standard laboratory calibration gas. The battery of the PID should also be sufficiently charged for the duration of the testing;
- The background concentrations of total ionisable compounds in the ambient air in the vicinity of the work area are established prior to the commencement of site activities. Background measurements are normally taken approximately 5 to 10m upwind of the work area. The readings are observed before and after each measurement of a sample to ensure that the PID is operating correctly. The maximums, fluctuations and other relevant comments are recorded.
- A glass sample jar is filled with the soil sample to be tested. The jar should not be filled more than 3/4 full;
- The jar is sealed with aluminium foil or plastic wrap and the lid is screwed;
- At least 20 minutes after placing the sample into the sampling jar, check that the PID reading is constant and similar to the background. Insert the top of the PID through the foil or plastic wrap in order to measure the ionisable vapour concentrations in the airspace above the sample;
- Monitor and record the PID readings noting fluctuations and maximum readings;
- Monitor the readings after returning the PID to a location with background concentrations. Interchangeable, clean, in-line filters for the PID probe are available to allow rapid decontamination of the unit in the field if background readings measured by the instrument are significantly greater than the background air concentration initially established;
- If perforations are present in the aluminium foil prior to analysis reseal the jar and test after having waited again for at least 20minutes.

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An alternative acceptable method is to place the soil to be tested in a disposable zip loc plastic bag and test the sample by punching a hole in the bag with the PID tube to sample the gas from the bag.

6.0 ACID SULFATE SOILS

6.1 Desktop Classification

An initial review of Acid Sulphate Soils (ASS) Planning Maps is undertaken to identify the likelihood and risk of ASS being present at the site. The following geomorphic conditions of the site are also checked as an indication of the presence of ASS: sediments of recent geological age (Holocene) ~ 6000 to 10 000 years old; soil horizons less than 5m AHD (Australian Height Datum); marine or estuarine sediments and tidal lakes; coastal wetlands or back swamp areas; waterlogged or scalded areas; inter-dune swales or coastal sand dunes; areas where the dominant vegetation is mangroves, reeds, rushes and other swamp tolerant and marine vegetation; areas identified in geological descriptions or in maps bearing sulfide minerals, coal deposits or former marine shales/sediments; and deeper older estuarine sediments >10m below the ground surface.

6.2 Site Walkover

The presence on site of hydrogen sulphide odours, acid scalds, flocculated iron, monosulfidic sludges, salt crusts, stressed vegetation, corrosion of concrete and/or steel structures and water logged soils are noted as cues for the presence of ASS.

6.3 Visual Classification

Visual indicators taken into account for the presence of ASS are the presence of jarosite (pale yellow colour) horizons or mottling, unripe muds (waterlogged, soft, blue grey or dark greenish grey in colour), silty sands and sands (mid to dark grey in colour) and the presence of shells.

6.4 Sample Collection

Samples are collected to at least one metre below the depth of the proposed excavation or estimated drop in the water table, or two metres below ground level, whichever is deepest. Samples are collected from every soil horizon or every 0.25m. Large shells, stones and fragments of wood, charcoal and other matter are noted, but removed from the sample. Small roots are not removed from the sample. If laboratory analysis is required, samples are sent for laboratory testing within 24 hours of sampling.

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6.5 Field Testing

The field pH peroxide test (pH_{FOX}) is used to obtain an indication of the presence of oxidisable sulphur in the soil. The procedure for this test is as follows:

- A small sample of soil (<100g) is collected in a glass jar and split into two sub-samples. One sub-sample is made into a 1:5 (soil : deionised water) solution in order to measure field soil pH and electrical conductivity (EC) analysis. If the resulting pH is less than 4 (pH_F<4), the sample is identified as actual acid sulphate soil (AASS)

- The second sub-sample is made into a 1:5 (soil : Hydrogen Peroxide) solution to measure pH of oxidised soil. Sodium Hydroxide (NaOH)-adjusted analytical (30%) grade Hydrogen Peroxide (H_2O_2) is used as the soil oxidising agent. A mobile electronic pH/EC probe is used to measure soil pH.

- The presence of oxidisable sulphides, organic matter or manganese in the sample, will trigger a chemical reaction. The type of effervescence and any colour change is noted with the final pH measured to give an indication of the potential change in pH should the soil remain exposed to oxygen. If the resulting pH is less than 3 (pH_{FOX}<3) or if pH_{FOX} is at least one unit less than the pH_F, this suggests that the soil tested is potential acid sulfate soil (PASS).

6.6 Laboratory Testing

When the field test suggests that the material tested contains ASS or PASS, this should be confirmed by laboratory analysis (POCAS/SPOCAS or TOS testing).

7.0 NOISE MONITORING

Measurements are taken at a range of times during the day in order to assess the trends in noise emission over time. Noise is measured using a hand-held Rion NA-29 Sound Level Meter with digital microphone. Some noise meters change and appropriate equioment which is calibrated is used for all monitoring. The reference level of the meter is checked before and after the measurements using a Rion NC-73 Sound Level Calibrator to ensure there is no significant drift. Noise measurements are made over a 15-minute interval using the “fast” response of the sound level meter. 5dB would be added if the noise is substantially tonal or impulsive in character. Measurements should be adapted to the type of noise being measured i.e. construction, occupation, club, etc.

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8.0 DUST MONITORING

Sampling is conducted at locations of potential concern. The deposit gauge static sampler contains a glass funnel measuring approximately 150mm with the angle of the cones sides being 60 degrees, placed into a rubber stoppers in the mouth of a five-litre glass receptacle. The deposit gauge is placed in a stand so that the height of the funnel of the deposit gauge is between 1.8 and 2.2m above ground level. A quantity of 7.8g copper sulfate pentahydrate dissolved in water is placed in the glass receptacle in order to prevent algal growth.

Exposure periods vary depending on the purpose of the investigation but typically the period is 30 ±2 days. Samples are usually analysed for measured soils: total solids, insoluble solids, ash and combustible solids.

Dust can also be measured using a High Volume Air Sampler. Such sampler should be located at least 2 metre away from any structures so that an undisturbed sample can be collected. HVASs can be used indoors or outdoors.

9.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

9.1 Introduction

Inaccuracies in sampling and analytical programs can result from many causes, including collection of unrepresentative samples, unanticipated interferences between elements during laboratory analyses, equipment malfunctions and operator error. Inappropriate sampling, preservation, handling, storage and analytical techniques can also reduce the precision and accuracy of results.

The Australian Standard AS4482.1-2005 *Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-Volatile and Semi-Volatile Compounds* has documented procedures for quality assurance (QA) and quality control (QC) for sampling and analysis to ensure that the required degree of accuracy and precision is obtained. The Australian Standard also recommends the use of two laboratories for the implementation of a QA program for the analyses in addition to the QC procedures followed by the primary laboratory.

9.2 Field QAQC samples

General

Procedures for duplicate sampling should be identical to those used for routine sampling and duplicate samples will be despatched for analysis for the same parameters using the

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same methods as the routine samples. No homogenisation of samples which may induce the loss of volatile compounds (such as BTEX) should occur. Whenever possible, the selection of samples for duplicate analyses should be biased towards samples believed to contain the contaminant of concern.

Intra-laboratory duplicates

Intra-laboratory duplicate samples, also referred to as Blind duplicates, are used to assess the variation in analyte concentration between samples collected from the same sampling point and / or also the repeatability of the laboratory analyses. Samples are split in the field to form a primary sample and a QC duplicate (intra-laboratory replicate) sample. The intra-laboratory duplicates are taken from a larger than normal quantity of soil collected from the same sampling point, removed from the ground in a single action, and divided into two vessels. These samples are submitted to the laboratory as two individual samples without any indication to the laboratory that they have been duplicated.

Intra-laboratory duplicate samples should be collected at a rate of approximately 1 in 20 soil samples and analysed for the full suite of analytes. At least one intra-laboratory duplicate sample should be included in each batch of samples.

Inter-laboratory duplicates

Inter-laboratory duplicate samples, also referred to as Split duplicates, provide a check on the analytical proficiency of the laboratories. The samples are taken from a larger than normal quantity of soil collected from the same sampling point, removed from the ground in a single action, and divided into two vessels. One sample from each set is submitted to a different laboratory for analysis. The same analytes should be determined by both laboratories using the same analytical methods.

Inter-laboratory duplicates should be collected at a rate of approximately 1 in 20 soil samples and analysed for the full suite of analytes. At least one inter-laboratory duplicate sample should be included in each batch of samples.

Blanks

<u>Rinsate Blanks</u>

Rinsate blank samples provide information on the potential for cross-contamination of substances from the sampling equipment used. Rinsate blanks are collected where cross-contamination of samples is likely to impact on the validity of the sampling and assessment process (e.g. when the investigation level of a contaminant is close to the detection limit for this contaminant). They are prepared in the field using empty bottles and the distilled water used during the final rinse of sampling equipment. After

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completion of the decontamination process, fresh distilled water is poured over the sampling equipment and collected. The distilled water is exposed to the air for approximately the same time the sample would be exposed. The collected water is then transferred to an appropriate sample bottle and the proper preservative added, if required.

One rinsate blank par day and / or one per piece of sampling equipment are collected during the decontamination process, and analysed for the analytes of interest. At least one rinsate blank should be included in each batch of samples. One rinsate blank should be collected for every 50 samples collected and analysed for the full suite of analytes.

Trip Blanks / Spikes

Trip blanks / spikes are a check on the sample contamination originating or lost from sample transport, handling, and shipping. These are samples of soil or water prepared by the laboratory with a zero or known concentration of analytes.

Field Blanks

Field blanks are a check on sample contamination originating from sample transport, handling, shipping, site conditions or sample containers. These are similar to trip blanks except the water is transferred to sample containers on site.

9.3 Laboratory quality assurance / quality control

The laboratories undertake the analyses utilising their own internal procedures and their test methods (for which they are NATA, or equivalent, accredited) and in accordance with their own quality assurance system which forms part of their accreditation.

Laboratory duplicate samples

Laboratory duplicate samples measure precision. These samples are taken from one sample submitted for analytical testing in a batch. The rate of duplicate analysis will be according to the requirements of the laboratory's accreditation but should be at least one per batch. Precision is reported as standard deviation SD or Relative Percent Difference %RPD, being:

$$\%RPD = \frac{(D1 - D2)}{(D1 + D2)} \times 200$$

where: D1: sample concentration and D2: duplicate sample concentration

Replicate data for precision is expected to be less than 30% RPD at concentration levels greater than ten times the EQL, or less than 50% RPD at concentration levels less than ten times the EQL. Sample results with a RPD exceeding 100% require specific

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discussion. Note that certain methods may allow for threshold limits outside of these limits.

Matrix Spiked Samples

Matrix spiked samples are used to monitor the performance of the analytical methods used, and to assess whether the sample matrix has an effect of on the extraction and analytical techniques. A sample is spiked by adding an aliquot of known concentration of the target analyte(s) to the sample matrix prior to sample extraction and analysis. These samples should be analysed at a rate of approximately 5% of all analyses, or at least one per batch. Matrix spikes are reported as a percent recovery %R, being:

$$\%R = \frac{(SSR-SR)}{SA} \times 100$$

where: SSR: spiked sample result, SR: sample result (blank) and SA: spike added

Recovery data for accuracy is described by control limits specified by the laboratory (generally ranging between 70% and 130%) and referenced to US EPA SW-846 method guidelines values.

Laboratory Blank

Laboratory blanks are used to correct for possible contamination resulting from the preparation or processing of the samples. These are usually an organic or aqueous solution that is as free as possible of analyte and contains all the reagents in the same volume as used in the processing of the samples. Laboratory blanks must be carried through the complete sample preparation procedure and contain the same reagent concentrations in the final solution as in the sample solution used for analysis. Laboratory blanks should be analysed at a rate of once per process batch, and typically at a rate of 5% of all analyses.

Laboratory Control Samples

Laboratory Control Samples, also referred to as Quality Control Check Samples, are used to assess the repeatability and long term accuracy of the laboratory analysis. These are externally prepared and supplied reference material containing representative analytes under investigation. Recovery check portions should be fortified at concentrations that are easily quantified but within the range of concentrations expected for real samples. Laboratory Control samples should be analysed at a rate of one per process batch, and typically at a rate of 5% of analyses. Laboratory control samples are reported as a percent recovery %R, being:

$$\%R = \frac{(SSR-SR)}{SA} \times 100$$

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where: SSR: spiked sample result, SR: sample result (blank) and SA: spike added

Recovery data for accuracy is described by control limits specified by the laboratory and referenced to US EPA SW-846 method guidelines values. Ideally, all calculated recovery values should be within the acceptable limits. However, in the event that control limit outliers are reported, professional judgement is used to assess the extent to which such results may affect the overall usability of data.

Surrogates

Surrogates are used to provide a means of checking, for every analysis, that no gross errors have occurred at any stage of the procedure leading to significant analyte losses. Surrogate are quality control monitoring spikes, which are added to all fields and QAQC samples at the beginning of the sample extraction process in the laboratory. Surrogates are closely related to the sample analytes being measured (particularly with regard to extraction, recovery through cleanup procedures and response to chromatography) and are not normally found in the natural environment.

Surrogate spikes will not interfere with quantification of any analytes of interest and may be separately and independently quantified by virtue of, for example, chromatographic separation or production of different mass ions in a GC/MS system. Surrogates are measured as Percent Recovery %R expressed as:

$$\%R = \frac{(SSR)}{SA} \times 100$$

where: SSR: spiked sample result and SA: spike added

Recovery data for accuracy is described by control limits specified by the laboratory and referenced to US EPA SW-846 method guidelines values.

10.0 DATA QUALITY OBJECTIVES

10.1 General

Data Quality Objectives (DQOs) are defined to ensure that the data is sufficiently accurate and precise to be used for the purpose of the project works. DQOs are defined for a number of areas including:

- sampling methods;
- decontamination procedures;

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- sample storage (including nature of the containers) and preservation;
- laboratory analysis, including PQL, recoveries (surrogates, spikes), duplicates;
- preparation of CoC forms;
- document and data completeness; and
- data comparability.

The NSW DEC Contaminated Sites Guidelines for the NSW Site Auditor Scheme (2nd Ed) 2006 also provide a seven step process for Data Quality Objectives (DQOs). These are as follows:

- State the problem
- Identify the decisions
- Identify inputs to the decision
- Define the study boundaries
- Develop a decision rule
- Specify limits on decision errors
- Optimise the design for obtaining data

DQOs must be adopted for all assessments and remediation programmes. The DQO process must be commenced before any investigative works begin on a project.

10.2 Field DQOs

The DQOs for sampling methods, decontamination procedures, sample storage (including nature of the containers) and preservation, preparation of CoC forms, and document and data completeness are the Aargus protocols which have been described in the previous sections of this document.

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10.3 Assessment of RPD values for field duplicate samples

The criteria used to assess RPD values for field duplicate samples is based on discussion reported in AS4482.1 1997, a summary of which is presented below:

Table 1: RPD acceptance criteria

Sample type	Typical acceptable RPD
Intra-laboratory duplicate (blind duplicate)	30-50°% (*)
Inter-laboratory duplicate (split duplicate)	30-50% (*)

It is noted that other factors such as sampling technique, sample variability, absolute concentration relative to criteria and laboratory performance should also be considered when evaluating RPD values.

The Australian Standard also states that the variation can be expected to be higher for organic analytes than for inorganics, and for low concentrations of analytes (lower than five times the detection limit). Based on Aargus Pty Ltd experience, RPD up to 70% are considered to be acceptable for organic species. RPD of 100% or more are generally considered to demonstrate poor correlation and should be discussed.

10.4 Laboratory Data Quality Objectives (DQO)

General

Aargus also provides internal laboratory testing for a range of physical parameters. Aargus is NATA certified to conduct these tests.

SGS is the Aargus-preferred laboratory for the chemical analysis of primary samples. SGS is accredited by the National Association of Testing Authorities (NATA).

The laboratory generally used by Aargus for analysing inter-duplicate samples is Labmark.

Analytical methods including detection limits are provided on each laboratory report and are checked as part of the data review process.

Laboratory QA/QC

Specific to SGS, standard QA/QC data includes LCS, MB, CRM (CRM metals only), Laboratory Duplicate (1 in first 5-10 samples, then every tenth sample) and Spike sample (1 in first 5-20 samples, then every 20th sample), and surrogate recovery's (target

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organics). All QA/QC is reviewed by a senior chemist prior to customer release and includes a DQO comment on final report. Additional QA/QC maybe performed on batches less than 10 samples; however additional charges shall apply at the appropriate analytical rate/sample.

Laboratory analyses DQOs

The following table summarises laboratory analyses DQOs.

Table 2: Laboratory Data Quality Objectives (DQOs)

Laboratory QA/QC Testing	Laboratory QA/QC Acceptance Criteria
Method Blanks	For all inorganic analytes the Method Blanks must be less than the LOR. For organics Method Blanks must contain levels less than or equal to LOR.
Surrogate Spikes	At least two of three routine level soil sample Surrogate Spike recoveries are to be within 70-130% where control charts have not been developed and within the estimated control limited for charted surrogates. Matrix effects may void this as an acceptance criteria. Any recoveries outside these limits will have comment. Water sample Surrogates Spike recoveries are to within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criteria. Any recoveries outside these limits will have comment.
Matrix Spikes	Sample Matrix Spike duplicate recovery RPD to be <30%. In the event that the matrix spike has been applied to samples whose matrix or contamination is problematic to the method then these acceptance criteria apply to the Control Matrix Spike.
Laboratory Control Samples	Control standards must be 80-120% of the accepted value. Control standard recoveries are to be within established control limits or as a default 60-140% unless compound specific limits apply.
Laboratory Duplicate Samples	For Inorganics laboratory duplicates RPD to be <15%. For Organics Laboratory duplicates must have a RPD <30%.
Calibration of Chromatography Equipment	The calibration check standards must be within +/-15%. The calibration check blanks must be less than the LOR.

Non-compliances

Exceedances of QAQC results outside the DQO should be thoroughly investigated and discussed with the laboratories concerned, and the outcomes of these investigations should be recorded in the project files.

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11.0 USE AND CALCULATION OF THE 95% UCL FOR SITE VALIDATION PURPOSE

For environmental services, statistical analysis is performed on data. Validation of a site at the completion of remediation works should comply with the recommendations of the applicable guidelines. For a site to be considered uncontaminated or successfully remediated, the typical minimum requirement is that the 95% upper confidence limit (UCL) of the arithmetic average concentration of the contaminant(s) is less than an acceptable limit, eg the threshold value of an health-based investigation level.

The calculation of the 95% UCL of the arithmetic average concentration method requires that the probable average concentration and standard deviation of the contaminant be known. This method is most applicable for validation sampling, where the mean concentration and the standard deviation can be estimated from sampling results. The 95% UCL is calculated as follows:

$$95\%\ UCL = mean + t_{\alpha,n-1} \frac{STDEV}{\sqrt{n}}$$

where

mean	arithmetic average of all sample measurements
$t_{\alpha,n-1}$	A test statistic (Student's t at an α level of significance and n-1 degrees of freedom)
α	The probability (in that case chosen to be 0.05) that the 'true' average concentration of the sampling area might exceed the UCL average determined by the above equation
STDEV	Standard deviation of the sample measurements
n	number of samples measurements

12.0 COPYRIGHT

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13.0 ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
ASS	Acid Sulfate Soil
BGL	Below Ground Level
BTEX	Benzene, Toluene, Ethyl benzene and Xylene
CoC	Chain of Custody
DEC	Department of Conservation (formerly EPA)
DIPNR	Department of Infrastructure Planning and Natural Resources
DQO	Data Quality Objective
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
HIL	Health-Based Soil Investigation Level
LGA	Local Government Area
NEHF	National Environmental Health Forum
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NHMRC	National Health and Medical Research Council
NSL	No Set Limit
OCP/OPP	Organochlorine Pesticides /Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbon
PASS	Potential Acid Sulfate Soil
PCB	Polychlorinated Biphenyl
PID	Photo Ionisation Detector
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance, Quality Control
RAC	Remediation Acceptance Criteria
RAP	Remediation Action Plan
RPD	Relative Percentage Difference
SAC	Site Assessment Criteria
SVC	Site Validation Criteria
SWL	Standing Water Level
TCLP	Toxicity Characteristics Leaching Procedure
TESA	Targeted Environmental Site Assessment
TPH	Total Petroleum Hydrocarbons
UCL	Upper Confidence Limit
VHC	Volatile Halogenated Compounds
VOC	Volatile Organic Compounds

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14.0 REFERENCES

- ANZECC (1992) – *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites.*
- ANZECC (1996) – *Drinking Water Guidelines.*
- ANZECC (2000) – *Guidelines for Fresh and Marine Waters.*
- Land and Biodiversity committee (2003) – *Minimum Construction requirements for water bores in Australia.*
- National Environment Protection Council (NEPC) (1999) – *National Environmental Protection (Assessment of Site Contamination) Measure.*
- Netherlands Ministry of Spatial Planning, Housing and the Environment (1994 rev. 2000) – *Environmental Quality Objectives in the Netherlands.*
- New South Wales Environment Protection Authority (1994) – *Guidelines for Assessing Service Station Sites.*
- New South Wales Environment Protection Authority (1995) – *Sampling Design Guidelines.*
- New South Wales Environment Protection Authority (1997) – *Guidelines for Consultants Reporting on Contaminated Sites.*
- New South Wales Environment Protection Authority (1998) – *Guidelines for the NSW Site Auditor Scheme.*
- New South Wales Department of Environment & Conservation (2006) – *Guidelines for the NSW Site Auditor Scheme (2nd Ed).*
- New South Wales Environment Protection Authority (1999) – *Guidelines on Significant Risk of Harm from contaminated land and the duty to report.*
- New South Wales Environment Protection Authority (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes.*
- New South Wales Environment Protection Authority (2005) – *Guidelines for assessing former orchards and market gardens.*
- QLD Department of Environment (DoE) (1998) – *Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland.*
- QLD EPA – Waste Management Branch, Contaminated Land Section – *Details about investigation thresholds and sampling – sent to Aargus on 14 Nov 2000.*
- Standards Australia AS1726-1993 (1993) – *Geotechnical Site Investigations.*
- Standards Australia AS4482.1-1997 (1997) – *Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-Volatile and Semi-Volatile Compounds.*
- Standards Australia AS5667.11-1998 (1998) – *Water Quality Sampling: Guidance on the Sampling of Groundwaters.*
- Victorian EPA (2000) – *Groundwater Sampling Guidelines*

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FIGURES

Figure 1 Typical Groundwater Monitoring Well Construction Details

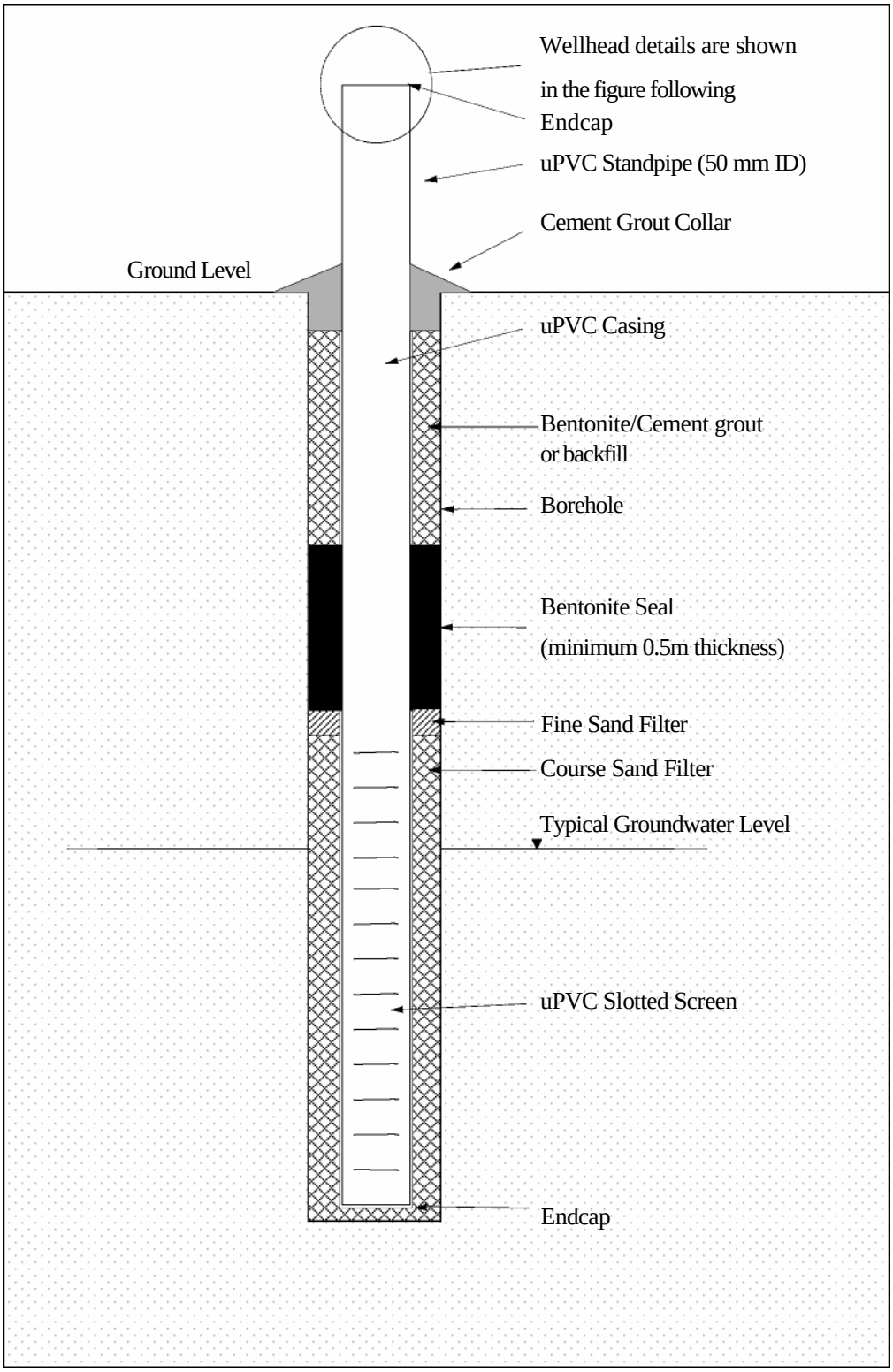
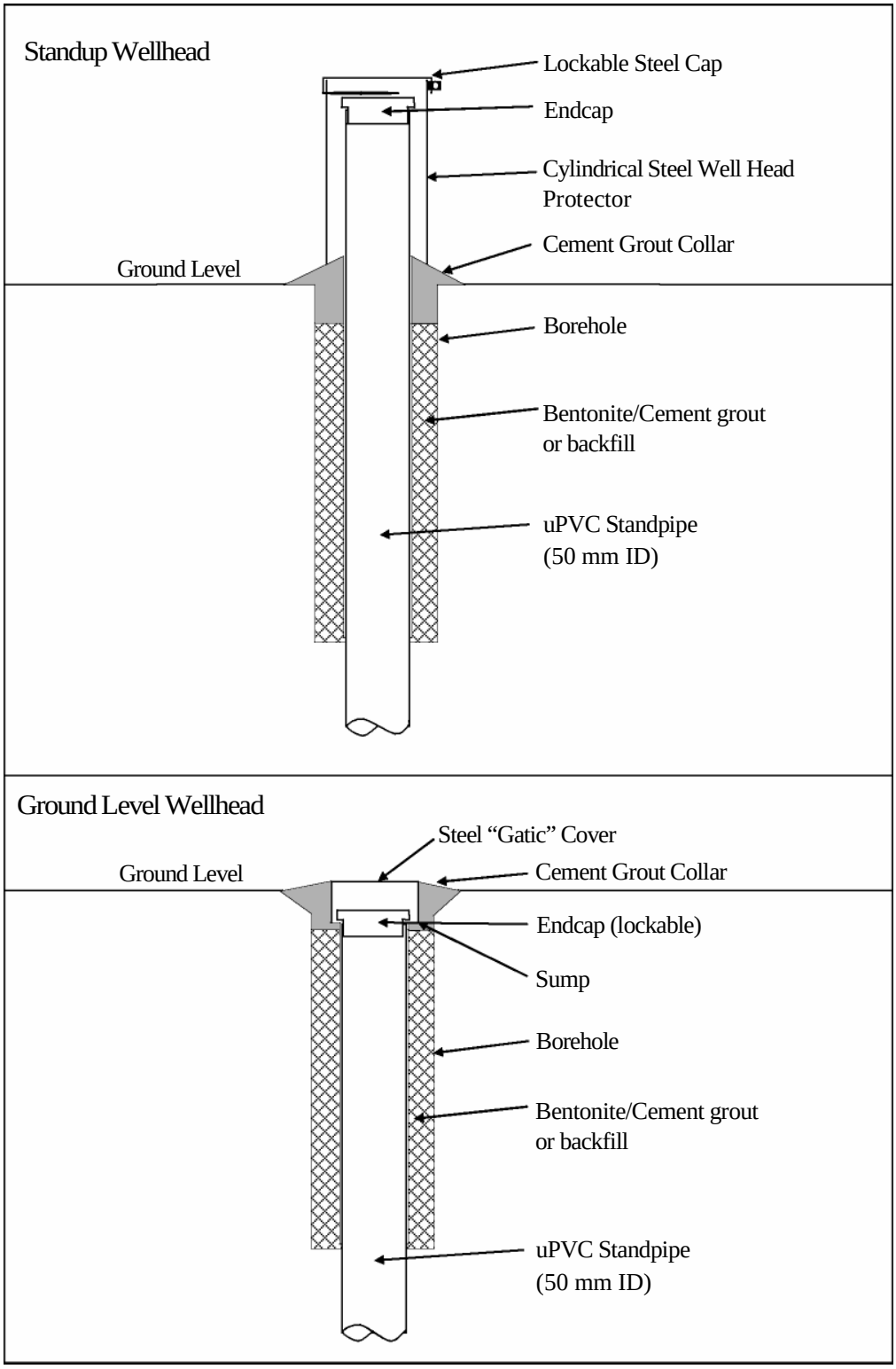


Figure 2 Groundwater Wellhead Construction Details



APPENDIX G

SITE PHOTOGRAPHS

SITE PHOTOGRAPHS

Client	MDM Pty Ltd
Project	Phase II Environmental Site Assessment
Location	2 Factory Street, Granville NSW
Job No.	ES4962
Checked By	MK

Photograph Nº 1



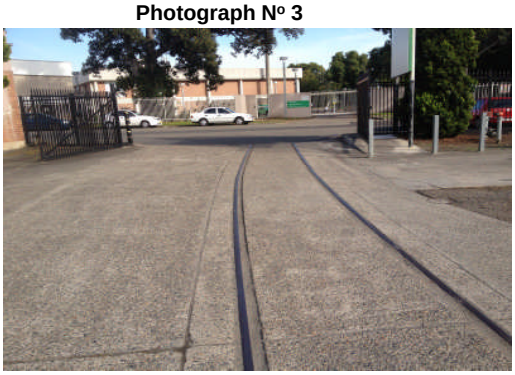
View of 2 Factory Street
Granville

Photograph Nº 2



View of the walk way in between two buildings at 2 Factory Street
Granville

Photograph Nº 3



View of the railway lines on the site
Looking west

Photograph Nº 4



View of the gravel / asphalt area on site
Looking north

Photograph Nº 5



View of the car parking areas on site

Photograph Nº 6



View of the gravel / asphalt area & truck on the site
Looking north

SITE PHOTOGRAPHS

Client	MDM Pty Ltd
Project	Phase II Environmental Site Assessment
Location	2 Factory Street, Granville NSW
Job No.	ES4962
Checked By	MK

Aargus
AUSTRALIA

Photograph Nº 7



View of 2 Factory Street
Granville

8-10 Boundary Road, Carlingford
VENM Stockpile (at St Mary's)
Shale

Photograph Nº 8



View of 2 Factory Street Granville

8-10 Boundary Road, Carlingford
VENM Stockpile (at St Mary's)
Clay

APPENDIX H

RESUMES OF CLIENT TEAM

Aargus

M i c h a e l S i l k

DATE OF BIRTH	9th January 1979
EDUCATION	Bachelor of Environmental Science, University of New England, Armidale, NSW, Australia.
ADDITIONAL COURSES	Certificate Three in Financial Services Operations QSCU Proud to be of Service Training QSCU CUNA Member Care Loan Insure Training St George Government Legislation Training St George Financial Services Trainee Program St George Customer Service Officer Module 1-3 Microsoft Office Level 1 Registered Fitness Leader Austswim Course Essentials Security License St John's Senior First Aid Army Reserve
FIELDS OF SPECIAL COMPETENCY	Indigenous Land Management, Impact Assessments, Ecology, Zoology, Catchment Management
EXPERIENCE	Michael has a strong scientific background in environmental science majoring in indigenous land management.

EXPERIENCE

2008-Present…….	Environmental Scientist *Aargus Pty Ltd*
2008……	Settlements Officer *Macquarie Bank*
2007	Loan Officer *Qantas Staff Credit Union*
2004……	Loans Support Officer *ING Bank*

2002……Customer Service Consultant
St George Bank

SELECTED PROJECTS

Virgin Excavated Natural Material (VENM)
This soil classification includes liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines. Areas where I have completed some of these include; Campbelltown, Coogee, Artamon, Dee Why, Norwest, Bankstown, Warrawee, Hurstville, Flinders

Soil Classification – Clovelly. The classifications included liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes;* NSW DECC (2006, 2nd Edition) *Guidelines for the NSW Site Auditor Scheme* where suitability of fill was required for a particular land use.

Soil Classification – Porters Creek. The classifications included liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes;* NSW DECC (2006, 2nd Edition) *Guidelines for the NSW Site Auditor Scheme* where suitability of fill was required for a particular land use.

Soil Classification - Tahmoor. The classifications included liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes;* NSW DECC (2006, 2nd Edition) *Guidelines for the NSW Site Auditor Scheme* where suitability of fill was required for a particular land use.

Soil Classification – Warriewood. The classifications included liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes;* NSW DECC (2006, 2nd Edition) *Guidelines for the NSW Site Auditor Scheme* where suitability of fill was required for a particular land use.

Soil Classification – Bonnyrigg. The classifications included liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes;* NSW DECC (2006, 2nd Edition) *Guidelines for the NSW Site Auditor Scheme* where suitability of fill was required for a particular land use.

Soil Classification – Hinchinbrook. The classifications included liaising with site personnel/ contractors, visual site inspections, sampling where applicable (including QA/QC), interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA (1999) – *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes;* NSW DECC (2006, 2nd Edition) *Guidelines for the NSW Site Auditor Scheme* where suitability of fill was required for a particular land use.

Field Sampling and report preparation - Banksmeadow NSW. *W*ork included sampling, including QA/QC, interpretation of results and assessment against relevant guidelines and reporting. The classification of material was assessed with reference to NSW EPA Health based Investigation Levels

Groundwater Sampling – Mascot NSW. Fieldwork included groundwater well development, purging and sampling.

Historical Review – Title Search information – Included researching and collecting historical and cancelled land titles through computer and manual searches from the Department of Lands.

Acid Sulphate Soil Assessment – Bardwell Valley NSW – Development areas within potential Acid Sulphate Soil regions were assessed to determine the presence, absence or extent of potential or actual Acid Sulphate Soils. Duties included site surveys, soil sampling, chemical testing of soils, preparation of borehole logs, liaising with clients and regulatory authorities and report generation

Acid Sulphate Soil Assessment – Earlwood NSW – Development areas within potential Acid Sulphate Soil regions were assessed to determine the presence, absence or extent of potential or actual Acid Sulphate Soils. Duties included site surveys, soil sampling, chemical testing of soils, preparation of borehole logs, liaising with clients and regulatory authorities and report generation

Acid Sulphate Soil Assessment – Banksmeadow NSW – Development areas within potential Acid Sulphate Soil regions were assessed to determine the presence, absence or extent of potential or actual Acid Sulphate Soils. Duties included site surveys, soil sampling, chemical testing of soils, preparation of borehole logs, liaising with clients and regulatory authorities and report generation

Hazardous Materials Assessment – Bondi - Duties included hazardous materials assessments in commercial properties. Duties included surveying buildings for hazardous material such as asbestos (pipes, lagging, roofs, sheeting, electricity backing boards, lift brakes etc), lead and other substances known to be harmful to human health and the environment. Duties included liaising with contractors and regulatory authorities, identification of hazardous materials, sampling of potential hazardous materials and report writing.

Hazardous Materials Assessment – Kogarah - Duties included hazardous materials assessments in residential properties. Duties included surveying buildings for hazardous material such as asbestos (pipes, lagging, roofs, sheeting, electricity backing boards, lift brakes etc), lead and other substances known to be harmful to human health and the environment. Duties included liaising with contractors and regulatory authorities, identification of hazardous materials, sampling of potential hazardous materials and report writing.

Statement of Environmental Effects – St Marys NSW – The purpose of this report was to show the potential impact of the change in operations on the site and on the surrounding environment. Duties included; liaising with contractors and regulatory authorities, identification of production process and proposed development, identification of environmental issues, identification of legal issues, report writing, and a preliminary hazard analysis.

Preliminary Environmental Site Assessment (Phase 1) – Kogarah NSW. Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Preliminary Environmental Site Assessment (Phase 1) – Llandilo NSW. Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Preliminary Environmental Site Assessment (Phase 1) – Mascot NSW. Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Targeted Environmental Site Assessment – Dianella WA. Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, soil and groundwater sampling, preparation of borehole logs, decontamination and QA/QC procedures, analysis of

results, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Targeted Environmental Site Assessment – Fremantle WA. Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, soil and groundwater sampling, preparation of borehole logs, decontamination and QA/QC procedures, analysis of results, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Targeted Environmental Site Assessment – Kensington VIC
Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, soil and groundwater sampling, preparation of borehole logs, decontamination and QA/QC procedures, analysis of results, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Targeted Environmental Site Assessment – St Marys NSW
Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, soil and groundwater sampling, preparation of borehole logs, decontamination and QA/QC procedures, analysis of results, reporting within strict timeframes and recommendations for remedial works. Duties also included writing proposals for a number of projects.

Environmental Site Assessment (Phase 2) – Banksmeadow NSW
Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, soil and groundwater sampling, preparation of borehole logs, decontamination and QA/QC procedures, analysis of results, reporting within strict timeframes and recommendations for remedial works. Remediation options and duties also included writing proposals for a number of projects.

Environmental Site Assessment (Phase 2) – Mascot NSW
Duties included historical searches, analysing aerial photographs liaising with authorities, identification of potential contaminants and areas of concern, sampling design, soil and groundwater sampling, preparation of borehole logs, decontamination and QA/QC procedures, analysis of results, reporting within strict timeframes and recommendations for remedial works. Remediation options and duties also included writing proposals for a number of projects.

M A R K K E L L Y

DATE OF BIRTH	25th October 1975
EDUCATIONAL QUALIFICATIONS	BAppSc (Geology) (Hons) University of New South Wales, Sydney, Australia Majoring in Soil and Groundwater Resources and Remediation
ADDITIONAL COURSES	Groundwater Hydrology Hydrogeochemistry Analysis and Interpretation of Hydrogeochemical Data Physical Aspects of Contaminated Groundwater Interpretation of Aeromagnetics Structural Interpretation and Analysis
PROFESSIONAL MEMBERSHIP	Geological Society of Australia (GSA)
PROFESSIONAL LICENCES	Senior First Aid Certificate (2006) X-ray Fluorescence (XRF) Metal Detector Operation License (EPA License No 24430) Energy Australia Passport (Service No. 7728)
PROFESSIONAL TRAINING	Asbestos Removal Course (TAFE NSW) XRF Training Course Energy Australia inductions, electrical safety rules, environmental training, safety training, first aid training, CPR training, low voltage release and rescue training and courses, substation entry & safely working near live power cables in EA network courses
FIELDS OF SPECIAL COMPETENCY	**Contaminated Land Assessment and Site Remediation –** management, technical advice, planning, data evaluation, coordinating and supervision of environmental/contaminated site assessments including preliminary and detailed assessments, contaminated site remediation and validation with particular reference to soil, water and groundwater. Acid sulphate soils, salinity and hazardous materials assessments.

EXPERIENCE:

2007 – Present	Senior Environmental Geologist – Aargus Pty Ltd
2006 - 2007	Senior Environmental Geologist – Geotechnique Pty Ltd
1999 – 2006	Environmental Geologist – Geotechnique Pty Ltd

PRACTICAL EXPERIENCE (Office)

- Project management, scheduling laboratory chemical analysis, data evaluation and reporting on environmental/contaminated site investigations including preliminary, detailed assessments, remediation and validation
- Preparation of waste classification, including biosolids from sewage treatment plants
- Salinity Assessments
- Preparation of proposals
- Occupational Health & Safety Issues
- Environmental Management Plans
- Coordinating and corresponding with Principal/Senior Environmental Engineers, Environmental Engineers, field staff, management, clients and contractors
- Liaising and negotiating with relevant government departments, statutory authorities
- Basic Turbocad skills

PRACTICAL EXPERIENCE (Field)

- Site inspections
- Soil and water sampling
- Installation of groundwater monitoring wells
- Assessing the contamination status of land/water
- Site remediation and validation
- Site management including remediation, asbestos removal
- PID calibration and use
- Hazardous material assessment
- Salinity indicators
- Service station works including underground storage tank removal
- Gas monitoring

SITES

Investigations have been carried out on a number of sites across the Sydney Metropolitan area, the greater Sydney area, rural NSW and interstate. The types of sites assessed include:

- Rural residential properties including active and former agricultural (market gardens, orchards, nursery, poultry) lands, farming lands, vacant lands etc
- Residential Properties including residential, townhouse and units
- Commercial / Industrial including activities such as tanneries, printing, tyre storage and manufacture, paint storage and manufacture, metal works, foundries, wheat processing and storage, scrap metal yards, metal recyclers etc

- Service Station Sites including small scale operations to larger sites operated by BP, Caltex etc.
- Schools including pre-development, re-development, refurbishing, hazardous materials assessment.
- Childcare Facilities
- Energy Australia facilities including active sites and decommissioning of sites.
- Sewage Treatment Plants including the assessment of biosolids, installation works and initialization of site management plans and inspections.

PROJECT EXPERTISE

Air Quality Monitoring – Levels of volatile gases were monitored to determine Occupational Health and Safety (OH&S) compliance within an enclosed work environment.

Acid Sulphate Soil Assessment – Development areas within potential Acid Sulphate Soil regions were assessed to determine the presence, absence or extent of Acid Sulphate Soils. Duties included site surveys, soil sampling, chemical testing of soils, preparation of borehole logs, liaising with clients and regulatory authorities and report generation.

Asbestos Monitoring – Dust emissions from the demolition of a building and excavation of soil with known asbestos contamination were monitored in order to measure effects on the neighbouring properties. Duties included the use of technical equipment, liaising with site personnel, analysis of data and report generation.

Asbestos Removal – Work involved monitoring the removal and delineating the extent of contamination of bonded asbestos waste from an excavation site.

Buried Chicken Carcass Removal – Work involved monitoring the removal and delineating the extent of buried of chicken carcasses within an existing poultry farm.

Classification of Excavation Material, NSW – Involvement in classifying excavated material from development sites for removal to an appropriate landfill or assessing suitability for use within a proposed development. Duties included liaising with site personnel / contractors, soil sampling and descriptions, QA/QC and report generation.

Dilapidation Assessment –The assessment entailed a site visit and a written and photographic documentation of all structural cracks on walls, ceilings, pavements, grates and road surfaces in the vicinity of the site. The purpose is to establish the pre-existing condition of the buildings so that any claim made for defects that occur during or after construction can be validated. Duties included liaising with site personnel / contractors, site inspection and report generation.

Due Diligence Reports – Carried out in relation to property acquisition and due diligence. Duties varied from report reviews, comments, costing, desktop studies, sampling and assessment, and reporting.

Dust Monitoring – Dust emissions from construction sites were collected over a period of time in order to assess the specific amount of particulate matter escaping the construction area onto neighbouring properties.

Effluent Disposal – Work was undertaken to assess the suitability of soil material for the construction of an effluent treatment and disposal system. Duties included soil sampling, preparation of borehole logs, calculation of permeability and flow rates and report generation.

Environmental Management Plans – Preparation of how the earthworks program are to be undertaken during the development works, the environmental procedures to be followed during operation and includes an Occupation Health & Safety (OH&S) plan.

Ground Water Well Monitoring – Work involved instructing contractors on where to drill monitoring wells, construction and interpretation of survey data of the wells, measurements of groundwater levels, measurement of the rate of groundwater infiltration, sampling of groundwater, QA/QC, determining groundwater flow direction and report generation

Hazardous Materials Assessment – Structures proposed for demolition were surveyed for hazardous material such as asbestos, lead and other substances known to be harmful to human health and the environment. Duties included liaising with contractors and regulatory authorities, identification of hazardous materials, sampling of potential hazardous materials and report generation.

Lead Assessment – Buildings were surveyed for lead paint, dust and soils and assessed to determine if they were harmful to human health and the environment. Duties included liaising with government, regulatory authorities, identification of lead based materials, sampling of these materials and report generation.

Phase 1 Environmental Site Assessments (desktop) – Duties included historical searches, analysing aerial photographs, liaising with authorities (WorkCover, Council's, EPA etc), identification of potential contaminants and report generation.

Phase 2 Environmental Site Assessments – Duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil and groundwater sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

Remedial Action Plans – Options for the remediation of known contaminated sites were prepared in order to determine the most efficient methods of remediation. Duties included reviewing of previous environmental assessments, data analysis, design and costing of potential remedial options.

Remediation Validation – The collection of data to assess the efficacy of remediation works in decontaminating sites. Duties included liaising with clients, contractors and regulatory authorities, field sampling, QA/QC, data analysis and report generation.

Salinity Assessments – Duties included historical searches, analysing aerial photographs, liaising with authorities, identification of potential contaminants, sampling and analysis design, soil sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

Sampling and Testing Plans – Preparation of sampling location, sampling density and testing program for ESA's and RemVal's that are sent to the Site Auditor for approval.

Site Audit Responses – replying to comments made by NSW Site Auditors on selected jobs to meet final requirements for a full clearance of a site after remedial works have taken place.

Site Based Management Plans – includes detailed management practices, and procedures for all identified environmental issues for every environmentally relevant activity (ERA) within the site. The plans provide the environmental procedures to be followed during operation and are to safeguard the way in which waste is managed.

Soil Vapour Survey – Soil vapours originating from beneath an apartment block development containing known contamination were monitored to assess the affects on human health. Duties included operation of technical equipment, sampling of soil vapours, QA/QC, analysis of data and report generation.

Targeted Environmental Site Assessments – Duties included historical searches, analysing aerial photographs, liaising with authorities, identification of potential contaminants, sampling and analysis design, soil and groundwater sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

Underground Storage Tank Removal – Removal of underground storage tanks in order to satisfy regulatory requirements for the redevelopment of sites. Duties included historical searches, liaising with contractors and regulatory authorities, sampling and analysis design, soil and groundwater sampling, decontamination, QA/QC, data analysis and report generation.

MAJOR PROJECTS

- Auburn Hospital - Various soil classifications and leachate management for an EPA inert and solid licensed landfill.

- Australian Defence Industries site, St Marys – Former defence force lands. An extensive sampling program was managed and the results of soil analysis were reviewed with respect to human heath risk and potential ecological impact. Reports endorsed by accredited site auditor.

- Auburn Catholic Club - Sampling and soil classification of soils, followed by onsite management of the disposal of the soils to licensed landfills.

- Barter & Sons - Former poultry farm, scheduled for industrial / commercial development. Responsible for cost estimating, project management and co-

ordination of site investigation works. Included a review of available site history, and contamination assessment of soils, targeting heavy metals, pesticides and asbestos. Remediation recommended landfill disposal (industrial and solid waste category).

- Brown Consulting (NSW) Group - Newbury Estate, Stanhope Gardens - Former market garden and grazing site developed for low density residential purposes. Responsible for cost estimating, project management and co-ordination of site investigation works, remediation and validation. Included review of site history information, contamination assessment of soils waters and sediment. Remediation recommendations included Landfill disposal and land farming. Reported on site investigations, remediation options (Remediation Action Plan), and validation. Reports endorsed by accredited site auditor.

- Columban Mission Institute, North Turramurra - Duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil and groundwater sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

- Cronulla Sewage Treatment Plant – Classification of biosolids for disposal off site to other land uses or to landfills.

- Deicorp Pty Ltd – Coulson Street, Erskineville – Former clothing factory and workshops with a UST to be redeveloped into a number of multi-storey residential apartment blocks. The collection of data to assess the efficacy of remediation works in decontaminating the site. Duties included liaising with clients, contractors and regulatory authorities, field sampling, QA/QC, data analysis and report generation. Reports endorsed by accredited site auditor.

- Department of Commerce – Assessment of a number of Department of Housing sites for potential hazardous materials within active housing commission units.

- Department of Housing – Lilyfield - Development of a residential area. Duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil and groundwater sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

- Department of Lands – Redfern - Development of a major residential area. Duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil and groundwater sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

- Duffy Kennedy Constructions – Cronulla – A former service station site. Sampling and soil classification of soils, followed by onsite management of the disposal of the soils to licensed landfills.

- EG Property Group / Funds Management –Port Adelaide, SA, Summer Hill and Five Dock, NSW –Active transport company, wheat production plant and silos, former bowling greens, former railway lines, land filling activities, land reclamation. Reports for due diligence and full environmental site assessments, duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil and groundwater sampling, preparation of borehole logs, decontamination, QA/QC and report generation.

- Energy Australia Substations - Various soil classifications and leachate management for an EPA inert and solid licensed landfill.

- Event Project Management - Bundaleer Street, Belrose – An active nursery to be redeveloped as part of extension works to the Covenant Christian School. A Phase 1 and Phase 2 contaminated land investigation with recommendations for remediation techniques and costs.

- Exceland Property Group (NSW) Pty Ltd – The Castellorizian Club at Kingsford. Duties included historical searches, analysing aerial photographs, liaising with authorities (WorkCover, Council's, EPA etc), identification of potential contaminants and report generation.

- Glasson Family Group – Wolli Creek – A large development site comprising a number of industrial properties including factories, warehouses, car yards etc. Conducting sampling and reporting on ASS/PASS and potential management techniques during future development.

- Glenbrook Sewer Installation - Environmental Representative for sewer installation contracts in Glenbrook. Responsible for the preparation of Environmental Management Plans (EMP) and work method statements. Monitored the works undertaken by the contractor, ensuring adequate environmental safeguards are in place and maintained. Prepared inspection reports and EMP status reports for Sydney Water.

- Granville Boys High School – assessment of soils and supervision of remedial works within an existing playing field. Remedial works included removal of soils contaminated with asbestos to an EPA licensed landfill.

- Group Development Services – Carrying out full assessments, from Stage 1 to Stage 4, on numerous rural residential sites in north western Sydney.

- International Speedway, Granville – Assessment of an existing spectator mound for asbestos and other soils analytes and recommendations for capping on-site.

- IWD Pty Ltd - Lyons Road, Drummoyne – A former service station with numerous UST's. The assessment included tank and line tests, gross pollution review, soil

sampling, groundwater sampling, historical review and final data interpretation. Remediation of contaminated soils after the tanks were removed, soil classification and final validating of site surfaces. Reports endorsed by accredited site auditor.

- JK Williams Contracting Pty Ltd - Various soil classifications and leachate management for an EPA inert and solid licensed landfill.

- John Morony Correctional Complex, Berkshire Park – assessment of soils and preparation of remedial costs prior to extension works to the existing prison.

- Landcom - Archbold Road, Eastern Creek and McIver Avenue, Middleton Grange – Former farming lands purchased by Landcom for residential subdivision, school developments, parklands and town centre (shopping facilities etc). Responsible for cost estimating, project management and co-ordination of site investigation works. Preparation of a preliminary RAP and recommendations in remediation techniques and costs.

- Liverpool City Council – Former park lands. Duties included historical searches, analysing aerial photographs, liaising with authorities (WorkCover, Council's, EPA etc), identification of potential contaminants and report generation.

- Mann Group - Various soil classifications and leachate management for an EPA inert and solid licensed landfill.

- Manson Group – Kogarah – Former glass factory with an UST. Preparation of a Remedial Action Plan (RAP), followed by remediation and validation of the site including project management, liaising with contractors and clients, sampling, soil classification and assessment, and final report generation.

- Narwee Boys High School – Preparation of a hazardous materials (HAZMAT) assessment. Analysis involved identifying asbestos materials from lagging, roofing guttering, floor tiles, electricity backing boards, mercury switches, mercury/cadmium lamps, synthetic mineral fibres, lead paint etc.

- Parramatta City Council - Sampling and soil classification of soils, followed by onsite management of the disposal of the soils to licensed landfills.

- Paynter Dixon Constructions Pty Ltd – Homebush – Teachers Credit Union site. Duties included historical searches, analysing aerial photographs, liaising with authorities (WorkCover, Council's, EPA etc), identification of potential contaminants and report generation.

- Penrith City Council - Claremont Meadows Stage 2 – South Western Precinct – Masterplan. Full environmental and salinity assessments were carried out to address the Claremont Meadows Stage 2 DCP - Performance Standards for which is currently under consideration by the Council for the Stage 1 Subdivision Plan of the properties provides for creation of residential allotments, dedication of a Public

Reserve, construction and dedication of new roads and creation of residue lots for future development.

- Proust & Gardner Consulting - Carrying out full assessments, from Stage 1 to Stage 4, on numerous rural residential and residential sites in both the local Sydney and Central Coast regions. Sites included vacant lands, farming lands, market gardens, poultry farms, residential properties and schools.

- Reefway Waste Services – Alexandria and Auburn – Active waste receivers and recyclers. Management of soil quality by analysing soils for reuse. Discussion with DECC on providing a 'gateway' mechanism for removing bona fide resource recovery from the waste regulatory framework.

- Richard Crookes Constructions Pty Ltd – Various soil classifications and leachate management for an EPA inert and solid licensed landfill.

- Robert Moore & Asscoiates - Carrying out full assessments, from Stage 1 to Stage 4, on numerous rural residential and residential sites across Sydney. Sites included vacant lands, farming lands, market gardens and residential properties.

- Royal Botanical Gardens, Sydney – Former works depot. Managing removal of UST's and associated pipelines, sampling and soil classification of soils to an EPA inert and solid waste licensed landfill.

- Sam the Paving Man - Sampling and soil classification of soils, followed by onsite management of the disposal of the soils to licensed landfills.

- Stocklands Mall, Merrylands - Former carpark area. Sampling and soil classification of soils, followed by onsite management of the disposal of the soils to licensed landfills.

- SPAD Pty Ltd – Former chemical factory. Report for full environmental site assessment, duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil sampling, preparation of borehole logs, decontamination, QA/QC and report generation. Preparation of a RAP, managing remedial works and issuing final validation report.

- Sydney Airport Corporation – Soil classification and leachate management for an EPA solid licensed landfill.

- Telstra Depot, Rooty Hill - Report for full environmental site assessment, duties included desktop study, liaising with clients, contractors and regulatory authorities, identification of potential contaminants, sampling and analysis design, soil sampling, preparation of borehole logs, decontamination, QA/QC and report

generation. Preparation of a RAP, managing remedial works and issuing final validation report.

- THG Resource – Kingston, QLD –Active scraps metal and car recycler. Duties included detailing management practices, outlining procedures for all identified environmental issues and providing a plan during operation to safeguard the way in which waste is managed.

- University of Sydney - Various soil classifications and leachate management for an EPA inert and solid licensed landfill.

APPENDIX I

DAILY WORK SHEETS



Aargus Pty Ltd

Sampling & Monitoring Details for Individual Determinants

Location/Address: 2 Factory Street
Name of Officer Responsible: Emmanuel Woelders
Title of Officer Responsible: Environment Scientist
Phone: 0419 485 917 Fax:
Mobile: " " Other:

Other persons involved in inspection & monitoring (including laboratories, passed on information, electronic readings, etc) Angus Wythes (Aargus)

Date of Inspection: 12/4/12 Time of Start: 8am Finish: 2pm
Description of Weather: Sunny Wind Direction: –
Wind Speed: – Rainfall(mm): – Humidity: –

Odours present Y (N) Location: Time:
Odours spraying Y (N) Location: Time:
Environmental &/or other accidents/concerns:(details)

Actions:

Stormwater controls Y (N) Location(s): _____ Time: _____

Dust suppression Y (N) Location(s): _____ Time: _____

Traffic control Y (N) Location(s): _____ Time: _____

Equipment on site: hand auger, buckets, esky, QA/QC, PID Meter

Truck movement tally: 0

Field Measurements

Location	PID level	Location	PID level	Location	PID level	Location	PID level
BH13	<1ppm		BH22				
Location	PID level	Location	PID level	Location	PID level	Location	PID level
BH14	<1ppm	BH22	<1ppm				
Location	PID level	Location	PID level	Location	PID level	Location	PID level
BH15	<1ppm	S23	<1ppm				
Location	PID level	Location	PID level	Location	PID level	Location	PID level
BH16	<1ppm						
Location	PID level	Location	PID level	Location	PID level	Location	PID level
BH17	<1ppm						
Location	Other	Location	Other	Location	Other	Location	Other
BH18	<1ppm						
Location	Other	Location	Other	Location	Other	Location	Other
BH19	<1ppm						
Location	Other	Location	Other	Location	Other	Location	Other
BH20	<1ppm						
Location	Other	Location	Other	Location	Other	Location	Other
BH21	<1ppm						

APPENDIX J

NSW EPA SEARCH

Rate this site

NSW GOVERNMENT Environment & Heritage

Search results

Your search for: Suburb: Granville

Matched 7 notices relating to 2 sites.

Search Again

Refine Search

Suburb	Address	Site Name	Notices related to this site
Granville	2B Factory Street	Ajax Battery Factory	1 current and 2 former
Granville	2 Blaxcell Street	Shore Petroleum	4 current

Page 1 of 1

11 May 2012

APPENDIX K

PID CERTIFICATE

Aargus

Aargus Pty Ltd
PID Certification Report
580EZ PID

This PID has been performance checked/calibrated as follows:

- ☑ Calibrate 0.0ppm Reading 0.1 ppm
- ☑ Calibrate 99.3 ppm isobutylene Reading 99.3 ppm
- ☑ Charged
- ☑ Filter check
- ☑ Lamp check

Date: 12/4/12

Checked by: Emmanuel Woelders

Signature: EWoelders

Please check that the following items are contained within the PID Equipment Register

- ☐ PID carry. case
- ☐ Model 580 EZ PID meter
- ☐ Charger
- ☐ Adapter for charger
- ☐ Calibration tube
- ☐ Sample Probe
- ☐ Water Filter Trap
- ☐ Computer cable connector
- ☐ Floppy disk software

Serial Number: 580EZ-65618-349

APPENDIX L

PROPOSED DEVELOPMENT PLANS

VOLUNTARY PLANNING AGREEMENT (VPA)

14. An indicative VPA offer has been made by the landowners for 2 Factory Street, Granville being the dedication of the northern portion of land abutting Clyde Railway Station of approximately 1,535sqm in size to Council for the purposes of a multi-storey commuter car park. The applicant has also shown interest in constructing the commuter carpark.

15. Council's endorsement is sought to commence formal negotiations of the VPA, including the assessment of the suitability of the land to be dedicated for a multi –storey commuter carpark, details relating to the size, construction and funding of the commuter carpark, the public benefit value of this dedication, the potential for additional/alternate contributions for example the dedication of unit(s) to Council for affordable housing purposes and the timing of the contribution(s).

16. The public benefit of this contribution would provide for a much needed commuter carpark in the Granville/Clyde area.

17. Initial investigations have revealed that a commuter carpark at this location may be feasible given that it is adjacent to Clyde Railway station yet on the periphery of the Granville Town Centre, being 600 metres (approximately) to the Granville Railway Station. This would give commuters a choice of accessing rail services from Clyde station or Granville station. Many commuters who access Granville town centre already currently park a similar walking distance away from Granville compared to the distance between the Clyde and Granville Railway Stations.

18. Transport for NSW is currently reviewing the Commuter Car Park and Interchange Program to address the needs of the local communities to ensure appropriate prioritisation of work and to establish the program of work and associated funding. Initial investigations of this indicative VPA offer with Transport for NSW have revealed that although Clyde Railway Station is mid-ranked on the commuter prioritisation list, Transport for NSW is willing to review the prioritisation list and explore this proposal in greater detail in conjunction with Council given the offer of land dedication and construction of the carpark by the applicant (landowner).

19. There are potential planning and public benefits in the indicative offer that should be further explored. Accordingly, this report recommends that, as required by Council's VPA policy, a formal resolution be made to proceed with negotiations and an appropriate officer be given delegated authority to negotiate the VPA on Council's behalf. The draft VPA will also need to be reviewed by Council's legal representative. It is recommended that delegation be given to the CEO of Council to negotiate the VPA.

NEXT STEPS

20. Should Council be willing to explore a planning proposal to rezone land at 2 Factory Street, Granville for high density residential uses the applicant would be invited to submit a planning proposal that addresses the matters in this report together with the required studies for further assessment.

21. The planning proposal must be prepared in accordance with Section 55 of the *Environmental Planning and Assessment Act 1979* and the Department of Planning and Infrastructure's *'A guide to preparing a planning proposal'* and *'A guide to preparing local environmental plans'*. The planning proposal must be accompanied with the following studies:

    (a) Urban Design Structure Plan
    (b) Land Use Planning Report
    (c) Traffic Impact Assessment
    (d) Social Impact Assessment
    (e) Acid Sulfate Soil Assessment
    (f) Land Contamination Report

22. Additional studies may be required following an assessment of the planning proposal.

23. A report will be put to Council following the assessment of the planning proposal and VPA. At this point, should Council proceed to support the planning proposal it will be submitted to the Department of Planning and Infrastructure for Gateway Determination.

CONCLUSION

24. The preliminary rezoning concept seeks to rezone the southern portion of the subject site to R4 High Density Residential under the Parramatta LEP 2011 so as to permit residential flat buildings. The proposal seeks a predominant building height of 15.8m (4 storeys) with a maximum building height of 18.8m (5 storeys). The northern portion of the site is proposed to be rezoned to SP2 Infrastructure under Parramatta LEP 2011 to facilitate a 148 space multi-storey commuter carpark. The applicant has made a VPA offer to Council for the dedication of this portion of land to Council for the purposes of a commuter carpark. The applicant has also shown interest in constructing the commuter carpark.

25. The industrial uses on the land are reaching, or have reached the end of their economic life. The site is well located in proximity of the Granville Town Centre and would rejuvenate the locality. The loss of employment land can be justified.

26. More detailed technical studies and investigations are required to justify different aspects of a future planning proposal including traffic, amenity, building height and floor space ratio.

27. Council's endorsement is required to further explore the concept presented by way of a planning proposal with the necessary studies submitted by the applicant that addresses the matters raised in this report.

Joel Carson
Project Officer Land Use Planning

Jennifer Concato
A/Manager Land Use Planning

ATTACHMENTS:

1	Assessment of the preliminary rezoning concept for land at 2 Factory Street, Granville	12 Pages
2	Preliminary rezoning concept submitted by applicant .	9 Pages

REFERENCE MATERIAL

ATTACHMENT 1 – Assessment of the preliminary rezoning concept for land at 2 Factory Street, Granville

This assessment of the preliminary rezoning concept includes comments made by the following Council teams; Land Use Planning, Urban Design, Economic Development, Transport Planning, Traffic Services and Catchment Management.

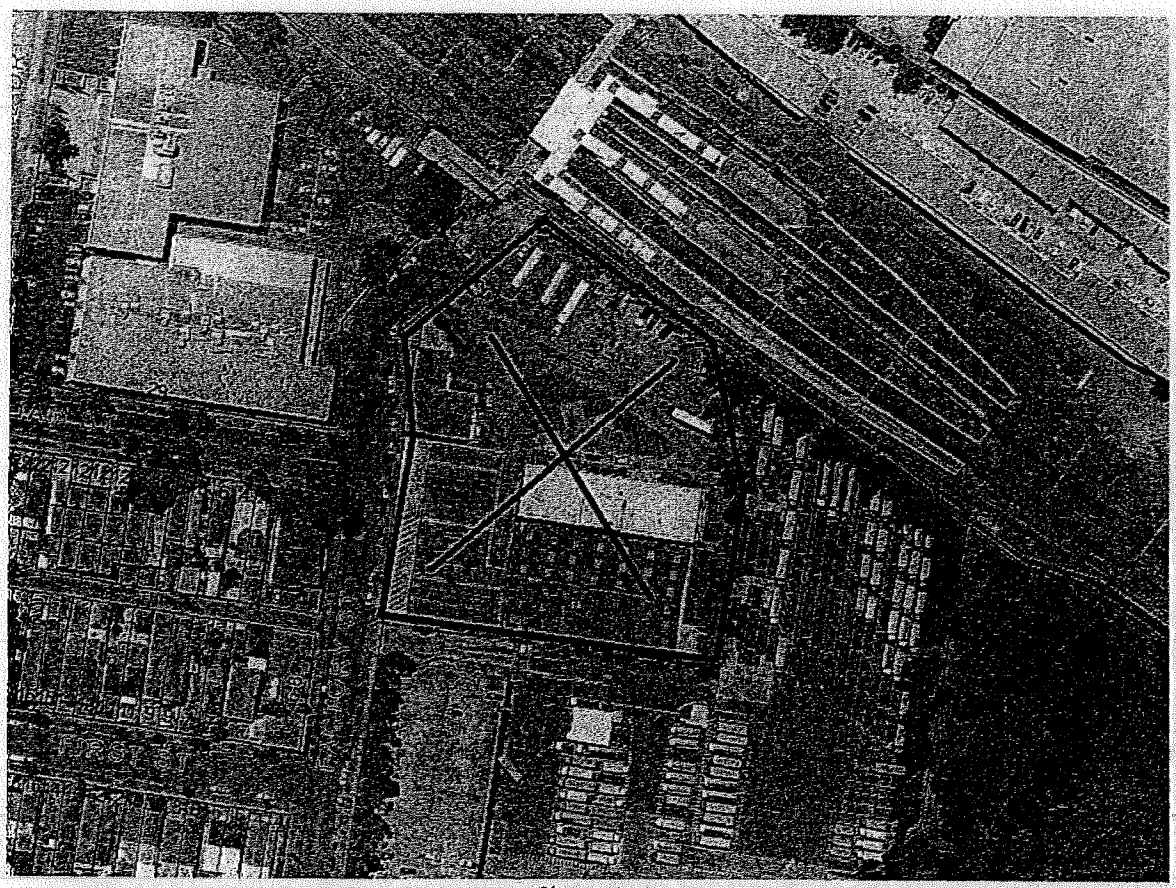
THE SITE

The subject site adjoins the south side of Clyde Railway Station at 2 Factory Street, Granville (Refer to **Attachment 1**). The site is 10,700sqm in size. The site is currently zoned for industrial purposes and is occupied by a group of industrial buildings, generally of brick construction, 2 to 3 stories in height. Large vehicle parking areas are also located on the site.

The site is adjoined at the northern boundary by the Clyde Railway Station, and at the southern and eastern boundaries by the Australia Post International Mail Centre. To the north-west of the site across Factory Street is located an industrial building occupied by a Tabcorp call centre. To the south-west of the site across Factory Street are located low density residential dwellings.



Context map



Site map

BACKGROUND

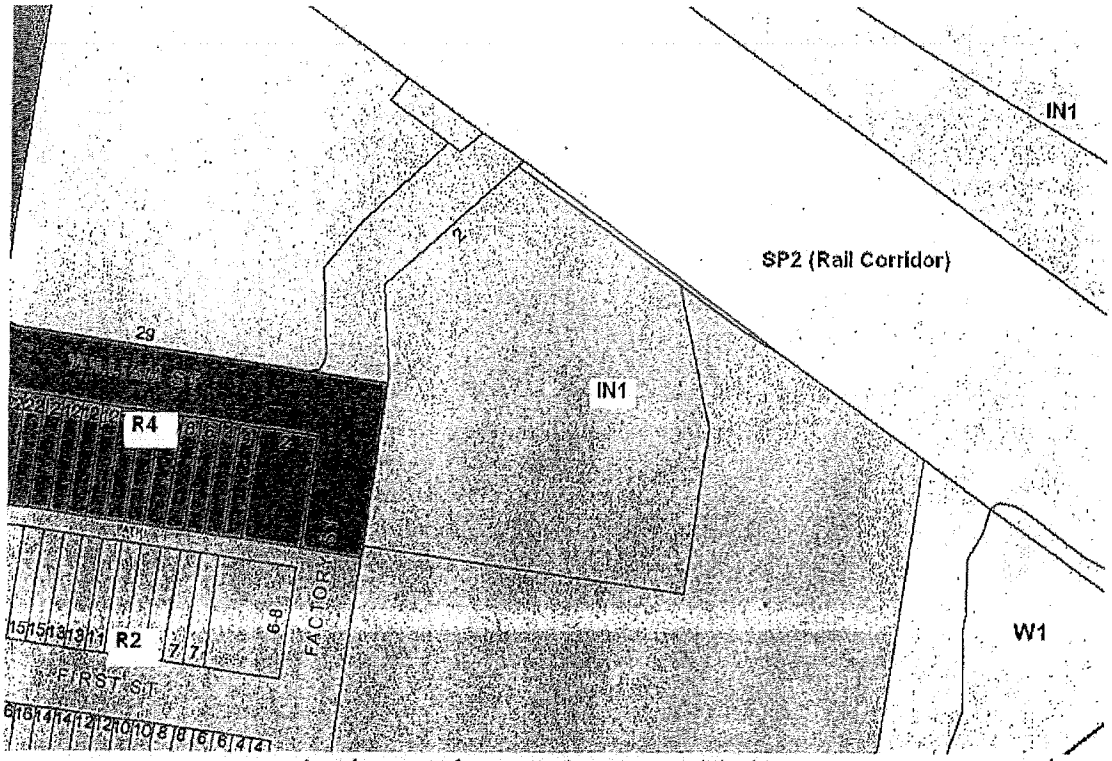
In November 2011, Council received a preliminary rezoning concept (located at **Attachment 2**) from Lockrey Planning & Development Solutions Pty Ltd, acting on behalf of the landowners MDM Pty Ltd. The proposal relates to the site known as 2 Factory Street, Granville, located adjacent to the south side of Clyde Railway Station.

The submission of a preliminary rezoning concept is to seek Council's initial feedback and to determine if the proposed concept has merit for further investigation. Should Council be willing to explore the concept presented, the applicant would be invited to submit a planning proposal together with the requested studies for further assessment by Council, that addresses the issues and makes the amendments recommended.

PLANNING CONTROLS

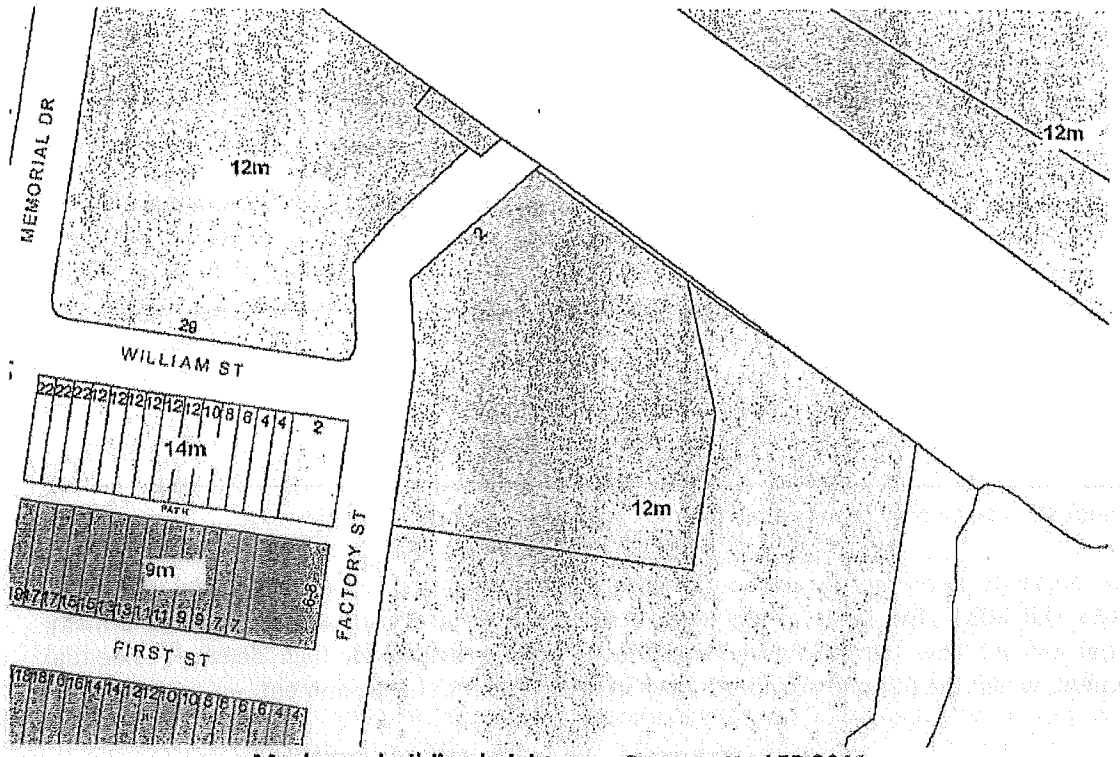
The subject site is currently zoned IN1 General Industrial under the Parramatta LEP 2011. The IN1 General Industrial zone provides for a range of industrial and warehouse land uses.

The lands adjacent to the northwest, south and east are also zoned General Industrial under the Parramatta LEP 2011. The lands to the west across Factory Street are zoned R4 High Density Residential and R2 Low Density Residential. The R4 zone provides for high density residential development, whilst the R2 zone provides for low density residential development.



Land use zoning map, Parramatta LEP 2011

The maximum building height permitted for the subject site under the Parramatta LEP 2011 is 12m. The industrial zoned lands to the northwest and south have a maximum building height of 12m. The R4 zoned lands to the west have a maximum building height of 14m, whilst the R2 zoned lands to the west have a maximum building height of 9m.



Maximum building height map, Parramatta LEP 2011

APPENDIX M

LAND TITLE INFORMATION

Aargus

NSW GOVERNMENT | Land & Property Information
A division of the Department of Finance & Services

TITLE SEARCH

Computer Folio Certificate issued under Section 96D of the Real Property Act 1900

COMPUTER FOLIO REFERENCE	
22/569501	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
10	17/9/2010

No. 08

Search certified to:
10/5/2012 11:28 AM

LAND

LOT 22 IN DEPOSITED PLAN 569501
AT CLYDE
LOCAL GOVERNMENT AREA PARRAMATTA
PARISH OF LIBERTY PLAINS COUNTY OF CUMBERLAND
TITLE DIAGRAM DP569501

FIRST SCHEDULE

M.D.M. PTY LTD (T 8234401)

SECOND SCHEDULE (8 NOTIFICATIONS)
---
1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 F784995 RIGHT OF FOOTWAY APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE 5.75 PERCH PARCEL SHOWN IN DP380918
3 DP569501 RIGHT OF FOOTWAY APPURTENANT TO THE LAND ABOVE DESCRIBED
4 T358113 EASEMENT FOR UNDERGROUND MAINS AFFECTING THE LAND SHOWN SO BURDENED IN DP117574
5 T472771 EASEMENT FOR ELECTRICITY PURPOSES AFFECTING THE LAND SHOWN SO BURDENED IN DP117574
6 AF498330 LEASE TO GREEN ALLIANCE PTY LTD OF WAREHOUSE BUILDING A, 2 FACTORY STREET, GRANVILLE. EXPIRES: 25/2/2011. OPTION OF RENEWAL: TWO TERMS OF 18 MONTHS.
7 AF498331 LEASE TO JAT REFRIGERERATED ROAD SERVICES PTY LTD OF UNIT C1, 2 FACTORY STREET, GRANVILLE. EXPIRES: 30/9/2012. OPTION OF RENEWAL: 3 YEARS.
8 AF734463 MORTGAGE TO WESTPAC BANKING CORPORATION

END OF PAGE 1 - CONTINUED OVER

The Registrar General certifies that at the date and time specified above the person(s) described in the First Schedule was the registered proprietor of an estate in fee simple (or other such estate or interest set out in the Schedule) in the land described, subject to any exceptions, encumbrances, interests, and entries which appear in the Second Schedule.

* ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE
WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

REGISTRAR GENERAL · NEW SOUTH WALES ·

Registrar General

NSW GOVERNMENT | Land & Property Information

A division of the Department of Finance & Services

TITLE SEARCH

Computer Folio Certificate issued under Section 96D of the Real Property Act 1900

COMPUTER FOLIO REFERENCE	
22/569501	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
10	17/9/2010

No. 08

Search certified to:
10/5/2012 11:28 AM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

The Registrar General certifies that at the date and time specified above the person(s) described in the First Schedule was the registered proprietor of an estate in fee simple (or other such estate or interest set out in the Schedule) in the land described, subject to any exceptions, encumbrances, interests, and entries which appear in the Second Schedule.

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

REGISTRAR GENERAL · NEW SOUTH WALES ·

Registrar General

NSW GOVERNMENT | Land & Property Information

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HISTORICAL TITLE SEARCH

Certificate issued under Section 96G
of the Real Property Act 1900

No. 07

Search certified to: 10/5/2012 11:29AM

Computer Folio Reference: 22/569501

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 12553 FOL 138

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
25/11/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
31/8/1989	Y586380	DEPARTMENTAL DEALING	
12/10/1989	Y642992	DISCHARGE OF MORTGAGE	EDITION 1
27/2/1992	E286692	DISCHARGE OF MORTGAGE	
27/2/1992	E286693	TRANSFER	
27/2/1992	E286694	MORTGAGE	EDITION 2
24/1/1995	U964652	LEASE	EDITION 3
4/12/1997	3641142	LEASE	EDITION 4
27/12/2001	8234400	DISCHARGE OF MORTGAGE	
27/12/2001	8234401	TRANSFER	
27/12/2001	8234402	MORTGAGE	EDITION 5
11/2/2004	AA405801	LEASE	EDITION 6
25/7/2005	AB648066	VARIATION OF MORTGAGE	EDITION 7
29/11/2006	AC775852	LEASE	EDITION 8
18/5/2010	AF498330	LEASE	

END OF PAGE 1 - CONTINUED OVER

The Registrar General certifies that at the date and time specified above the information set out in this search constitutes the historical record of all dealings recorded in or action taken in respect of the mentioned title which is required to be kept by the Registrar General under section 32(7) of the Real Property Act 1900.

REGISTRAR GENERAL · NEW SOUTH WALES ·

Registrar General

NSW GOVERNMENT | Land & Property Information

A division of the Department of Finance & Services

HISTORICAL TITLE SEARCH

Certificate issued under Section 96G
of the Real Property Act 1900

No. 07

Search certified to: 10/5/2012 11:29AM

Computer Folio Reference: 22/569501

Recorded	Number	Type of Instrument	C.T. Issue
18/5/2010	AF498331	LEASE	EDITION 9
17/9/2010	AF734461	DISCHARGE OF MORTGAGE	
17/9/2010	AF734463	MORTGAGE	EDITION 10

*** END OF SEARCH ***

The Registrar General certifies that at the date and time specified above the information set out in this search constitutes the historical record of all dealings recorded in or action taken in respect of the mentioned title which is required to be kept by the Registrar General under section 32(7) of the Real Property Act 1900.

REGISTRAR GENERAL · NEW SOUTH WALES ·

Registrar General

Form: 07L
Licence: 01-05-028
Licensee: N J Papallo & Co

LEASE

New South Wales
Real Property Act 1900

AC775852S

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

STAMP DUTY Office of State Revenue use only

NEW SOUTH WALES DUTY
05-07-2006 0003574132-001
SECTION 179-DUPLICATE
NO DUTY PAYABLE

(A) **TORRENS TITLE** Property leased: if appropriate, specify the part or premises

Part Lot 22 Deposited Plan 569501 being Warehouse Building A, 2 Factory Street Clyde as shown on the plan annexed hereto and marked "C"

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODE
666Q	LLPN: 123489Y N J Papallo & Co DX 584 Sydney Tel: 9279 3711 Reference (optional): NP:DP:13431	L

(C) **LESSOR** M D M PTY LTD ACN 001 879 849

The lessor leases to the lessee the property referred to above.

(D) Encumbrances (if applicable): Mortgage: 8234402

(E) **LESSEE** Her Most Gracious Majesty Queen Elizabeth The Second (Minister of Police)

Revenue NSW 2000-2005 S4 ALTERATION NOTED

(F) **TENANCY:**

(G)
1. **TERM:** Three (3) Years
2. **COMMENCING DATE:** 1 April 2006
3. **TERMINATING DATE:** 31 March 2009
4. With an **OPTION TO RENEW** for a period of N/A set out in Item/Clause N/A of N/A.
5. With an **OPTION TO PURCHASE** set out in N/A
6. Together with and reserving the **RIGHTS** set out in N/A
7. Incorporates the provisions set out in **ANNEXURE(S)** A & B hereto.
8. Incorporates the provisions set out in **MEMORANDUM** filed at Land and Property Information New South Wales as No. N/A
9. The **RENT** is set out in item/clause 13 of Annexure A.

395V 3/11/06

All handwriting must be in block capitals.

Total Pages (office use only)_____

DATE: ___/___/_____

(H)

Certified correct for the purposes of the Real Property Act 1900 by the corporation named below the common seal of which was affixed pursuant to the authority specified and in the presence of the authorised person(s) whose signature(s) appears(s) below.

Corporation: M D M Pty Ltd ACN 001 879 849
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

Name of authorised person: Michael Moscato
Office held: Secretary Director

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness: Trevor Brown
Address of witness: 2-24 Rawson Place Sydney

Signature of authorised person:

Name of authorised person: Domenic Marrocco
Office held: Director

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of authorised officer:

Authorised officer's name: Bruce Thomas Wigger
Authority of officer:
Signing on behalf of: Her Most Gracious Majesty Queen Elizabeth The Second (Minister of Police)

(I) **STATUTORY DECLARATION**

I

solemnly and sincerely declare that—

1. The time for the exercise of option to renew/option to purchase in expired lease No. has ended;
2. The lessee under that lease has not exercised the option.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900

Made and subscribed at in the State of New South Wales

on in the presence of—

Signature of witness: Signature of lessor:

Name of witness:

Address of witness:

Qualification of witness:

All handwriting must be in block capitals.

ANNEXURE A

SEE A SOLICITOR ABOUT THIS LEASE

Landlord: **M D M Pty Ltd ACN 001 879 849**

Tenant: **Her Most Gracious Majesty Queen Elizabeth The Second (Minister for Police)**

This annexure consists of 2 pages.

NOTE: Any alterations and additions to Lease Covenants in Annexure B **must** be made by additional clauses in Annexure A. The printed clauses in Annexure B are to remain in their copyright form without alteration.

SCHEDULE OF ITEMS (continued)

Item 10 (cl 2.3, 13.1) **A. The guarantor**: of Not Applicable

(cl 13.7) **B. Limit of guarantor's liability**: Not Applicable

Item 11 (cl 3) **Additional leased property**:

Item 12 (cl 4) **Option to renew**

A. Further period of Not applicable from to

B. Further period of Not applicable from to

C. Maximum period of tenancy under this lease and permitted renewals: Three (3) years

D. First day option for renewal can be exercised: Not applicable

E. Last day option for renewal can be exercised: Not applicable

Item 13 (cl 5) **A. Rent**

For the lease period:

From the commencement date to the first rent review date: $142,000.00 plus GST a year by monthly instalments of $11,833.33 plus GST

Afterwards: At the new yearly rent beginning on each review date by monthly instalments of one twelfth of the new yearly rent.

For the further period in item 12A:
From the commencement date to the first rent review date:
(for example: Current market rent) Not applicable

Afterwards: At the new yearly rent beginning on each review date by monthly instalments of one twelfth of the new yearly rent.

For the further period in item 12B: From the commencement date to the first rent review date: (for example: Current market rent)	Not applicable
Afterwards:	At the new yearly rent beginning on each review date by monthly instalments of one twelfth of the new yearly rent.

Item 13 (cl 15) **B. Goods and Services Tax**

Clause 15 provides for payment by the tenant of Goods and Services Tax unless otherwise here indicated:

Item 14 (cl 5) **Outgoings**

A. Share of outgoings: 100%
B. Outgoings -

(a) Electricity charges;
(b) Water consumption charges;
(c) Security monitoring costs;
(d) Telephone charges;
(e) Cleaning costs

for the land or the building of which the property is part, fairly apportioned to the period of this lease.

Item 15 (cl 5.1.5) **Interest rate**: 10 %

Item 16 (cl 5.4) **Rent review**

Rent review date	Method of rent review	
1 April 2007	1	~~If Method 1 applies, increase by (the increase should show a percentage or amount)~~ ~~$14,000 plus GST~~ $156,000 plus GST a year by monthly instalments of $13,000.00 plus GST

Method 1 is a fixed amount or percentage
Method 2 is Consumer Price Index.
Method 3 is current market rent.
Method 2 applies unless another method is stated.

Item 17 (cl 6.1) **Permitted use**: Motor Vehicle Storage

Item 18 (cl 8.1.1) **Amount of required public liability insurance**: Not Applicable Refer to Clause 17.

Annexure A

The following alterations and additions are to be made to the Lease Covenants in Annexure B:

1. **Clause 16 - LESSOR'S WORKS**

16.1 The Lessor will cause to have installed a separate water meter for the premises at no cost to the Lessee.

16.2 The Lessor will cause to have installed steel security grille doors to each external door in accordance with the Lessee's specifications at no cost to the Lessee.

2. Clause 17 – **INSURANCE REQUIREMENTS**

17.1 Notwithstanding any other provisions of this Lease the Lessee shall have the option to rely on itself as its own insurer and the Lessor shall not require the Lessee to take out a policy of insurance for any purpose.

ANNEXURE B

SEE A SOLICITOR ABOUT THIS LEASE

Landlord: **M D M Pty Ltd ACN 001 879 849**

Tenant: **Her Most Gracious Majesty Queen Elizabeth The Second (Minister for Police)**

This annexure consists of 12 pages.

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NOTE: Any alterations and additions to Lease Covenants in Annexure B **must** be made by additional clauses in Annexure A. The printed clauses in Annexure B are to remain in their copyright form without alteration.

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RETAIL LEASE CERTIFICATE

If section 16 of the Retail Leases Act 1994 applies to this lease, and the term plus any further terms are less than 5 years, the term will be extended unless a section 16 certificate is given. Sections 16(1) and (2) provide -

16(1) The term for which a retail shop lease is entered into, together with any further term or terms provided for by any agreement or option for the acquisition by the lessee of a further term as an extension or renewal of the lease, must not be less than 5 years. An agreement or option is not taken into account if it was entered into or conferred after the lease was entered into.

16(2) If a lease is entered into in contravention of this section, the validity of the lease is not thereby affected but the term of the lease is extended by such period as may be necessary to prevent the lease contravening this section.

I certify that I am a solicitor not acting for the landlord and that at the request of the tenant I explained to the tenant before the tenant entered into this lease -

- the effect of sections 16(1) and (2); and
- that the giving of this certificate would result in section 16 not applying to this lease.

.....
Date

.....
Signature

.....
NAME (BLOCK LETTERS)

CLAUSE 1 FORM OF THIS LEASE

What are the parts to this lease?

1.1 There are three parts to this lease - a lease form, Annexure A and this annexure.

1.2 This lease is a deed even if it is not registered.

CLAUSE 2 PARTIES

Who are the parties to this lease?

2.1 The landlord. The landlord is also called the lessor (or in the case of a sublease, the sublessor) and is named on page 1 of this lease.

2.2 The tenant. The tenant is also called the lessee (or in the case of a sublease, the sublessee) and is named on page 1 of this lease.

2.3 The guarantor, if a guarantor is named in item 10 in the schedule.

2.4 If a party consists of two or more persons, obligations of that party can be enforced against any one or more of them.

CLAUSE 3 THE PROPERTY

What property is leased?

3.1 The property leased is described on page 1 of this lease.

3.2 The landlord's fixtures are included in the property leased.

3.3 If anything else is leased (such as furniture belonging to the landlord) and is described in item 11 in the schedule it is included in the property.

3.4 If the property has facilities and services shared in common with other persons in the same building as the property, clause 11.3.2 applies to those common facilities. The tenant shares the common facilities with the landlord, and with other tenants of the landlord. The landlord can set reasonable rules for sharing these common facilities.

CLAUSE 4 LEASE PERIOD

How long is this lease for?

4.1 This lease is for the period stated in item 1 in the schedule, commences on the date stated in item 2 in the schedule and ends on the date stated in item 3 in the schedule.

4.2 If a further period, commencing when this lease ends, is stated in item 12A in the schedule then the tenant has the option to renew this lease for that period.

4.3 The tenant can renew this lease more than once if that is stated in item 12B in the schedule. However the period of tenancy under this lease and under any renewal(s) is, in total, not longer than the maximum period stated in item 12C in the schedule.

4.4 The tenant can exercise the option only if -

4.4.1 the tenant serves on the landlord a notice of exercise of option not earlier than the first day stated in item 12D in the schedule and not later than the last day stated in item 12E in the schedule;
4.4.2 there is at the time of service no rent or outgoing that is overdue for payment; and
4.4.3 at the time of service all the other obligations of the tenant have been complied with or fully remedied in accordance with the terms of any notice to remedy given by the landlord.

If this lease is extended by legislation, items 12D and 12E in the schedule are adjusted accordingly.

4.5 After exercising the option the tenant must continue to pay all rents and outgoings on time and continue to comply with all of the tenant's obligations under this lease. If the tenant does not do so, the landlord may treat any breach as being a breach of the new lease as well as of this lease.

4.6 A new lease will be the same as this lease except for -

4.6.1 the new rent;
4.6.2 the commencement date and the termination date;
4.6.3 the omission of clauses 4.2, 4.3, 4.4, 4.5 and 4.6 and items 12A and 12B in the schedule in the last lease allowed in item 12 in the schedule;
4.6.4 item 12B becoming item 12A;
4.6.5 adjustment of item 12C in the schedule; and
4.6.6 adjustment of items 12D and 12E in the schedule. The number of days between the dates stated in items 12D and 12E in the schedule of the new lease and the termination date of the new lease and the number of days between each date stated in items 12D and 12E in the schedule of this lease and the termination date of this lease are to correspond.

If the new rent is to be current market rent it will be decided in the same way that current market rent is to be decided under Method 3 stated in clause 5 assuming that this lease and the new lease were one continuous lease and the commencement date of the new lease was a rent review date.

CLAUSE 5 MONEY

What money must the tenant pay?

5.1 The tenant must pay to the landlord or as the landlord directs -

5.1.1 the rent stated in item 13A in the schedule;
5.1.2 the share stated in item 14A in the schedule of those outgoings stated in item 14B in the schedule;
5.1.3 the reasonable cost to the landlord of remedying a default by the tenant;
5.1.4 the reasonable cost to the landlord of dealing with any application by the tenant for the landlord's consent under this lease (whether or not it is given);
5.1.5 interest on these moneys at the rate stated in item 15 in the schedule when payment is more than 14 days overdue, calculated from the due date to the date of payment;
5.1.6 registration fee for registration of this lease at Land and Property Information NSW (payable on delivery to the landlord's solicitor of the executed lease);
5.1.7 stamp duty on this lease (payable on delivery to the landlord's solicitor of the executed lease) if not previously paid by the tenant to the Office of State Revenue;
5.1.8 if the tenant defaults, the landlord's reasonable legal costs relating to the default;
~~5.1.9 the landlord's reasonable costs and expenses in connection with the preparation of this lease but only that part of those costs and expenses which are permitted to be recovered by a landlord under section 14 and section 45 of the Retail Leases Act, 1994~~; and
5.1.10 Goods and Services Tax as provided for in clause 15.

5.2 The first month's instalment of rent is to be paid by the commencement date. Each later month's instalment of rent is to be paid in advance.

5.3 A payment under clause 5.1.2 must be paid on the next rent day after a request for payment is made by the landlord.

A request for payment can be made -

5.3.1 after the landlord has paid an outgoing; or
5.3.2 after the landlord has received an assessment or account for payment of an outgoing.

If item 14B in the schedule refers to land tax -

- if the property is a strata lot, the relevant land tax is land tax on that lot;
- if the property is not a strata lot but is part of a building, the relevant land tax is land tax on the land on which the building is situated, plus any land of the landlord used or available for use by or for the benefit of tenants conducting business in the building or in connection with trading in the building; and
- in either case, the land tax must be calculated as if the land was the only land owned by the landlord and there was no special trust or non-concessional company involved.

When and how is the rent to be reviewed?

5.4 The rent is to be reviewed on the rent review dates stated in item 16 in the schedule.

If this lease is extended by legislation, the rent review dates include each anniversary of the latest rent review date stated in item 16 in the schedule (or if none is stated each anniversary of the commencement date) which falls during the extension.

5.5 The tenant must continue to pay rent at the old rate until the new rate is known. After that, the tenant is to pay the new rent from the next rent day. By that rent day the tenant is also to pay any shortfall between the old and new rate for the period since the rent review date. Alternatively, the landlord is to refund to the tenant any overpayment of rent.

5.6 There are three different methods described here for fixing the new rent on a rent review date. The method agreed by the landlord and the tenant is stated at item 16 in the schedule. The tenant is entitled to a reduction if the method produces a rent lower than the rent current just before the review date.

Method 1. By a fixed amount or percentage.

5.7 In this case the new rent beginning on each review date is stated in item 16 in the schedule.

Method 2. By reference to Consumer Price Index.

5.8 In this case -

- take the yearly rent as of the last review date or if none, the rent at the commencement date ($X),
- divide that rent by the Consumer Price Index Number for Sydney (All Groups) for the quarter ended just before that date (CPI 1),
- multiply the result by the Consumer Price Index Number for Sydney (All Groups) for the quarter ended just before the review date (CPI 2).

The product is the new rent for the year beginning on the review date ($Y), written as a formula -

$$\frac{\$X}{CPI\ 1} \times CPI\ 2 = \$Y$$

5.9 The landlord must calculate the new rent after each review date and give the tenant written notice of the new rent.

5.10 If the Australian Bureau of Statistics makes a change in the reference base of the index and there is a published co-relation between the old and new base then the published co-relation is to be applied to convert the CPI 1 figure to the new reference base. If there is none then the landlord and the tenant agree to accept the calculations of the landlord's solicitor who must be retained to determine a fair co-relation between the old and the new series of numbers.

5.11 If the index used to calculate the new rent is discontinued the landlord may substitute another index that, as nearly as practicable, serves the same purpose and, if there is no such index, then the rent will be fixed by Method 3.

Method 3. By reference to current market rent.

5.12 In this case the rent is to be the current market rent. This can be higher or lower than the rent payable at the rent review date and is the rent that would reasonably be expected to be paid for the property, determined on an effective rent basis, having regard to the following matters-

5.12.1 the provisions of this lease;
5.12.2 the rent that would reasonably be expected to be paid for the property if it were unoccupied and offered for renting for the same or a substantially similar use to which the property may be put under this lease;
5.12.3 the gross rent, less the landlord's outgoings payable by the tenant;
5.12.4 where the property is a retail shop, rent concessions and other benefits that are frequently or generally offered to prospective tenants of unoccupied retail shops; and
5.12.5 the value of goodwill created by the tenant's occupation and the value of tenant's fixtures and fittings are to be ignored.

5.13 The landlord or the tenant can inform the other in writing at least 60 days before the rent review date of the rent that the landlord or tenant thinks will be the current market rent at the review date.

5.14 If the landlord and the tenant agree on a new rent then that rent will be the new rent beginning on the rent review date and the landlord and the tenant must sign a statement saying so.

5.15 If the landlord and the tenant do not agree on the amount of the new rent 30 days before the rent review date, the current market rent will be decided by a valuer appointed under clause 5.16.

5.16 The landlord and the tenant can either agree upon a valuer or can ask the President of the Law Society of New South Wales to nominate a person who is a licensed valuer to decide the current market rent. Where the property is a retail shop, the valuer appointed must be a specialist retail valuer.

5.17 The valuer will act as an expert not an arbitrator. The landlord and the tenant can each make submissions in writing to the valuer within 14 days after they receive notice of the valuer's appointment but not later unless the valuer agrees.

5.18 The valuer's decision is final and binding. The valuer must state how the decision was reached.

5.19 If the valuer -

5.19.1 does not accept the nomination to act; or
5.19.2 does not decide the current market rent within 1 month after accepting the nomination; or
5.19.3 becomes incapacitated or dies; or
5.19.4 resigns,

then another valuer is to be appointed in the same way.

5.20 The landlord and tenant must each pay half the valuer's costs.

5.21 If the landlord and tenant do not agree upon a valuer and neither asks for a valuer to be nominated before -

5.21.1 the next rent review date passes; or
5.21.2 this lease ends without the tenant renewing it; or
5.21.3 this lease is transferred after the rent review date with the landlord's consent; or
5.21.4 the property is transferred after the rent review date

then the rent will not change on that rent review date.

CLAUSE 6 USE

How must the property be used?

6.1 The tenant must -

6.1.1 use the property for the purpose stated in item 17 in the schedule and not for any other purpose;
6.1.2 open for business at times usual for a business of the kind conducted by the tenant;
6.1.3 keep the property clean and dispose of waste properly; and
6.1.4 comply with all laws relating to strata schemes and all other laws regulating how the property is used, obtain any consents or licences needed, comply with any conditions of consent, and keep current any licences or registrations needed for the use of the property or for the conduct of the tenant's business there.

6.2 The landlord can consent to a change of use and cannot withhold consent unreasonably.

6.3 The tenant must not -

6.3.1 do anything that might invalidate any insurance policy covering the property or that might increase the premium unless the landlord consents in which case the tenant must pay the increased premium; or
6.3.2 use the property as a residence or for any activity that is dangerous, offensive, noxious, illegal or immoral or that is or may become a nuisance or annoyance to the landlord or to the owner or occupier of any neighbouring property; or
6.3.3 hold any auction, bankrupt or fire sale in the property; or
6.3.4 display signs or advertisements on the outside of the property, or that can be seen from the outside, unless the landlord consents (but the landlord cannot withhold consent unreasonably); or
6.3.5 overload the floors or walls of the property.

CLAUSE 7 CONDITION AND REPAIRS

Who is to repair the property?

7.1 The landlord must –

7.1.1 maintain in a state of good condition and serviceable repair the roof, the ceiling, the external walls and external doors and associated door jambs, and the floors of the property and must fix structural defects;
7.1.2 maintain the property in a structurally sound condition; and
7.1.3 maintain essential services.

7.2 The tenant must otherwise maintain the property in its condition at the commencement date and promptly do repairs needed to keep it in that condition but the tenant does not have to -

7.2.1 alter or improve the property; or
7.2.2 fix structural defects; or
7.2.3 repair fair wear and tear.

7.3 The tenant must also -

7.3.1 reimburse the landlord for the cost of fixing structural damage caused by the tenant, apart from fair wear and tear;
7.3.2 maintain and decorate the shop front if the property has one; and
7.3.3 decorate the inside of the property in the last 3 months of the lease period (however it ends) - 'decorate' here means restoring the surfaces of the property in a style and to a standard of finish originally used e.g. by repainting.

7.4 If an authority requires work to be done on the property and it is structural work or work needed to make the property safe to use then the landlord must do the work unless it is required only because of the way the tenant uses the property. But if it is any other work or is required only because of the way the tenant uses the property then the tenant must do the work.

7.5 If the tenant fails to do any work that the tenant must do the landlord can give the tenant a notice in writing stating what the tenant has failed to do. After the notice is given the tenant must -

7.5.1 do the work immediately if there is an emergency; and
7.5.2 do the work promptly and diligently in any other case.

If the tenant does not do the work, the landlord can do it and the tenant must reimburse the landlord for the cost of the work.

7.6 The tenant must not make any structural alterations to the property. Any other alterations require the landlord's consent in writing (but the landlord cannot withhold consent unreasonably).

CLAUSE 8 INSURANCE AND DAMAGE

What insurances must the tenant take out?

8.1 The tenant must keep current an insurance policy covering -

8.1.1 liability to the public in an amount not less than the amount stated in item 18 in the schedule (for each accident or event); and
8.1.2 damage or destruction from any cause to all plate glass in the windows and other portions of the property

and must produce to the landlord, upon request, the policy and the receipt for the last premium.

What happens if the property is damaged?

8.2 If the property or the building of which it is part is damaged (a term which includes destroyed) -

8.2.1 the tenant is not liable to pay rent, or any amount payable to the landlord in respect of outgoings and other charges, that is attributable to any period during which the property cannot be used under this lease or is inaccessible due to that damage;
8.2.2 if the property is still useable under this lease but its useability is diminished due to the damage, the tenant's liability for rent and any amount in respect of outgoings attributable to any period during which useability is diminished is reduced in proportion to the reduction in useability caused by the damage;

8.2.3 if the landlord notifies the tenant in writing that the landlord considers that the damage is such as to make its repair impracticable or undesirable, the landlord or the tenant can terminate this lease by giving not less than 7 days notice in writing of termination to the other and no compensation is payable in respect of that termination;

8.2.4 if the landlord fails to repair the damage within a reasonable time after the tenant requests the landlord to do so the tenant can terminate this lease by giving not less than 7 days notice in writing of termination to the landlord; and

8.2.5 nothing in clause 8.2 affects any right of the landlord to recover damages from the tenant in respect of any damage or destruction to which the clause applies.

CLAUSE 9 ACCESS

What are the landlord's rights of access to the property?

9.1 The tenant must give the landlord (or anyone authorised in writing by the landlord) access to the property at any reasonable time for the purpose of-

9.1.1 inspecting the condition of the property, or how it is being used; or
9.1.2 doing anything that the landlord can or must do under this lease or must do by law; or
9.1.3 viewing the property as a valuer, prospective buyer or mortgagee; or
9.1.4 fixing a notice in a reasonable position on the outside of the property saying that it is for sale; or
9.1.5 viewing the property as a prospective tenant not earlier than 6 months before the lease period ends; or
9.1.6 fixing a notice not earlier than 6 months before the lease period ends in a reasonable position on the outside of the property saying that it is to let; or
9.1.7 inspecting, cleaning or repairing another property or any services to another property.

9.2 The landlord must give the tenant at least 2 days written notice for access (except in an emergency). The day of the giving of the notice and any Saturday, Sunday or public holiday on which the property is not open for business are not counted.

9.3 The landlord must promptly make good any damage caused to the property and to any of the tenant's belongings which results from exercising these rights.

9.4 The tenant must give to the landlord a copy of any notice relating to the property or relating to any neighbouring property immediately after receiving the notice.

CLAUSE 10 TRANSFER AND SUB-LEASE

Can this lease be transferred or the property shared or sub-let?

10.1 The tenant must not transfer this lease without consent.

10.2 The landlord can withhold consent only if -

10.2.1 the proposed transferee proposes to change the use to which the property is put; or
10.2.2 where the property is a retail shop, the proposed transferee has financial resources or retailing skills inferior to those of the proposed transferor and otherwise the proposed transferee has financial resources or business experience inferior to those of the proposed transferor; or
10.2.3 the tenant has not complied with clause 10.3 and, where the property is a retail shop, clause 10.4.

10.3 A request for the landlord's consent to a transfer of lease must be made in writing and the tenant must provide the landlord with such information as the landlord may reasonably require concerning the financial standing and business experience of the proposed transferee.

10.4 Where the property is a retail shop, before requesting the consent of the landlord to a proposed transfer of this lease, the tenant must furnish the proposed transferee with a copy of any disclosure statement given to the tenant in respect of this lease, together with details of any changes that have occurred in respect of the information contained in the disclosure statement (being changes of which the tenant was aware or could reasonably be expected to be aware). For the purpose of enabling the tenant to comply with this obligation, the tenant can request the landlord to provide the tenant with a copy of the disclosure statement concerned and, if the landlord is unable or unwilling to comply with such a request within 14 days after it is made, this clause 10.4 does not apply.

10.5 Where the tenant has complied with clause 10.3 and where required to do so clause 10.4 and the landlord has not within 42 days after the request was made given notice in writing to the tenant either consenting or withholding consent the landlord is taken to have consented.

10.6 The tenant has to pay in connection with any consent the landlord's reasonable legal costs, the reasonable costs of obtaining any mortgagee's consent, the stamp duty and the registration fee for the transfer.

10.7 Where the property is a retail shop, the tenant can sublet, grant a license or concession, share or part with the possession of the whole or any part of the property or mortgage or otherwise charge or encumber the tenant's estate or interest in this lease only with the written consent of the landlord which can be refused in the landlord's absolute discretion. Otherwise, the tenant cannot do any of these things.

CLAUSE 11 LANDLORD'S OTHER OBLIGATIONS

What are the landlord's other obligations?

11.1 So long as the tenant does all the things that must be done by the tenant under this lease the landlord must allow the tenant to possess and use the property in any way permitted under this lease without interference from the landlord, or any person claiming under the landlord or having superior title to the title of the landlord.

11.2 The landlord must pay all outgoings for the land or the building of which the property is part when they fall due.

11.3 If the property is part of a building owned or controlled by the landlord -

11.3.1 the landlord must maintain in reasonable structural condition all parts of the building that the tenant can use under this lease; and

11.3.2 if the property has facilities and service connections shared in common with other persons the landlord must -

11.3.2.1 allow reasonable use of the facilities and service connections including-

- the right for the tenant and other persons to come and go to and from the property over the areas provided for access;
- access by the tenant to service connections; and
- the right for the tenant's customers to park vehicles in any area set aside for customer parking, subject to any reasonable rules made by the landlord.

11.3.2.2 maintain the facilities and service connections in reasonable condition.

11.4 The landlord must ensure that this lease is registered.

11.5 If a consent is needed for this lease, from someone such as a mortgagee or head landlord of the property, then the landlord must get the consent.

CLAUSE 12 FORFEITURE AND END OF LEASE

When does this lease end?

12.1 This lease ends -

12.1.1 on the date stated in item 3 in the schedule; or
12.1.2 if the landlord lawfully enters and takes possession of any part of the property; or
12.1.3 if the landlord lawfully demands possession of the property.

12.2 The landlord can enter and take possession of the property or demand possession of the property if -

12.2.1 the tenant has repudiated this lease; or
12.2.2 rent or any other money due under this lease is 14 days overdue for payment; or
12.2.3 the tenant has failed to comply with a landlord's notice under section 129 of the Conveyancing Act 1919; or
12.2.4 the tenant has not complied with any term of this lease where a landlord's notice is not required under section 129 of the Conveyancing Act 1919 and the landlord has given at least 14 days written notice of the landlord's intention to end this lease.

12.3 When this lease ends, unless the tenant becomes a tenant of the property under a new lease the tenant must -

12.3.1 return the property to the landlord in the state and condition that this lease requires the tenant to keep it in; and
12.3.2 have removed any goods and anything that the tenant fixed to the property and have made good any damage caused by the removal.

Anything not removed becomes the property of the landlord who can keep it or remove and dispose of it and charge to the tenant the cost of removal making good and disposal.

12.4 If the landlord allows the tenant to continue to occupy the property after the end of the lease period (other than under a new lease) then -

12.4.1 the tenant becomes a monthly tenant and must go on paying the same rent and other money in the same way that the tenant had to do under this lease just before the lease period ended (apportioned and payable monthly);
12.4.2 the monthly tenancy will be on the same terms as this lease, except for -
- clause 4;
- clauses 5.4 to 5.21 inclusive; and
- clause 6.2 unless consent has previously been given;

12.4.3 either the landlord or the tenant can end the monthly tenancy by giving, at any time, one month's written notice to the other expiring on any date; and
12.4.4 anything that the tenant must do by the end of this lease must be done by the end of the monthly tenancy.

12.5 Essential terms of this lease include -

12.5.1 the obligation to pay rent not later than 14 days after the due date for payment of each periodic instalment (and this obligation stays essential even if the landlord, from time to time, accepted late payment);
12.5.2 the obligations of the tenant in clause 5.1.2 (dealing with outgoings);
12.5.3 the obligations of the tenant in clause 6.1 (dealing with use);
12.5.4 the obligations of the tenant in clause 7 (dealing with repairs); and
12.5.5 the obligations of the tenant in clause 10 (dealing with transfer and sub-lease).

12.6 If there is a breach of an essential term the landlord can recover damages for losses over the entire period of this lease but must do every reasonable thing to mitigate those losses and try to lease the property to another tenant on reasonable terms.

12.7 The landlord can recover damages even if -

12.7.1 the landlord accepts the tenant's repudiation of this lease; or
12.7.2 the landlord ends this lease by entering and taking possession of any part of the property or by demanding possession of the property; or
12.7.3 the tenant abandons possession of the property; or
12.7.4 a surrender of this lease occurs.

CLAUSE 13 GUARANTEE

What are the obligations of a guarantor?

13.1 This clause applies if a guarantor of the tenant is named in item 10A in the schedule and has signed or executed this lease or, if this lease is a renewal of an earlier lease, the earlier lease.

13.2 The guarantor guarantees to the landlord the performance by the tenant of all the tenant's obligations (including any obligation to pay rent, outgoings or damages) under this lease, under every extension of it or under any renewal of it or under any tenancy and including obligations that are later changed or created.

13.3 If the tenant does not pay any money due under this lease, under any extension of it or under any renewal of it or under any tenancy the guarantor must pay that money to the landlord on demand even if the landlord has not tried to recover payment from the tenant.

13.4 If the tenant does not perform any of the tenant's obligations under this lease, under any extension of it or under any renewal of it or under any tenancy the guarantor must compensate the landlord even if the landlord has not tried to recover compensation from the tenant.

13.5 If the tenant is insolvent and this lease or any extension or renewal of it is disclaimed the guarantor is liable to the landlord for any damage suffered by the landlord because of the disclaimer. The landlord can recover damages for losses over the entire period of this lease or any extension or renewal but must do every reasonable thing to mitigate those losses and try to lease the property to another tenant on reasonable terms.

13.6 Even if the landlord gives the tenant extra time to comply with an obligation under this lease, under any extension of it or under any renewal of it or under any tenancy, or does not insist on strict compliance with the terms of this lease or any extension of it or renewal of it or of any tenancy, the guarantor's obligations are not affected.

13.7 If an amount is stated in item 10B in the schedule the guarantor's liability under this clause is limited to that amount.

13.8 The terms of this guarantee apply even if this lease is not registered, even if any obligation of the tenant is only an equitable one, and even if this lease is extended by legislation.

CLAUSE 14 EXCLUSIONS, NOTICES AND SPECIAL CLAUSES

14.1 No covenant or power is implied in this lease by section 84 or 85 of the Conveyancing Act 1919.

14.2 A document under or relating to this lease is -

14.2.1 served if it is served in any manner provided in section 170 of the Conveyancing Act 1919; and

14.2.2 served on the tenant if it is left at the property.

14.3 This lease is subject to any legislation that cannot be excluded.

14.4 In this lease, 'retail shop' means premises to which the Retail Leases Act 1994 applies.

CLAUSE 15 GOODS AND SERVICES TAX

Unless item 13B has been completed in a way that indicates that this clause is not to apply:

15.1 The rent and all other monies payable to the landlord are exclusive of Goods and Services Tax (GST). Whenever the tenant becomes liable to pay rent or other monies payable under this lease in respect of a taxable supply made by the landlord the tenant must also pay an additional 10% to cover GST. This percentage of 10% assumes that GST payable on the value of a taxable supply is 10%. If the GST rate is different then this percentage will instead be the GST rate.

15.2 Outgoings in item 14B are to be calculated after deducting any input tax credit to which the landlord is entitled.

IMPORTANT NOTES

The following notes are for guidance and do not form part of this lease.

If you are a landlord, a solicitor will prepare this lease for you.

If you are a tenant, a solicitor can advise you about it.

1. This document creates legal rights and legal obligations.
2. Failure to register a lease can have serious consequences.
3. If an option for renewal is not exercised at the right time it will be lost.
4. The tenant can exercise an option for renewal even if there has been a breach of this lease in a case where section 133E of the Conveyancing Act 1919 applies. The landlord must give a prescribed notice within 14 days after the option is exercised if the landlord wants to rely on the breach to prevent the exercise of the option.
5. The Law Society of New South Wales is not to be responsible for any loss resulting from the use of this lease as printed whether authorised or not.

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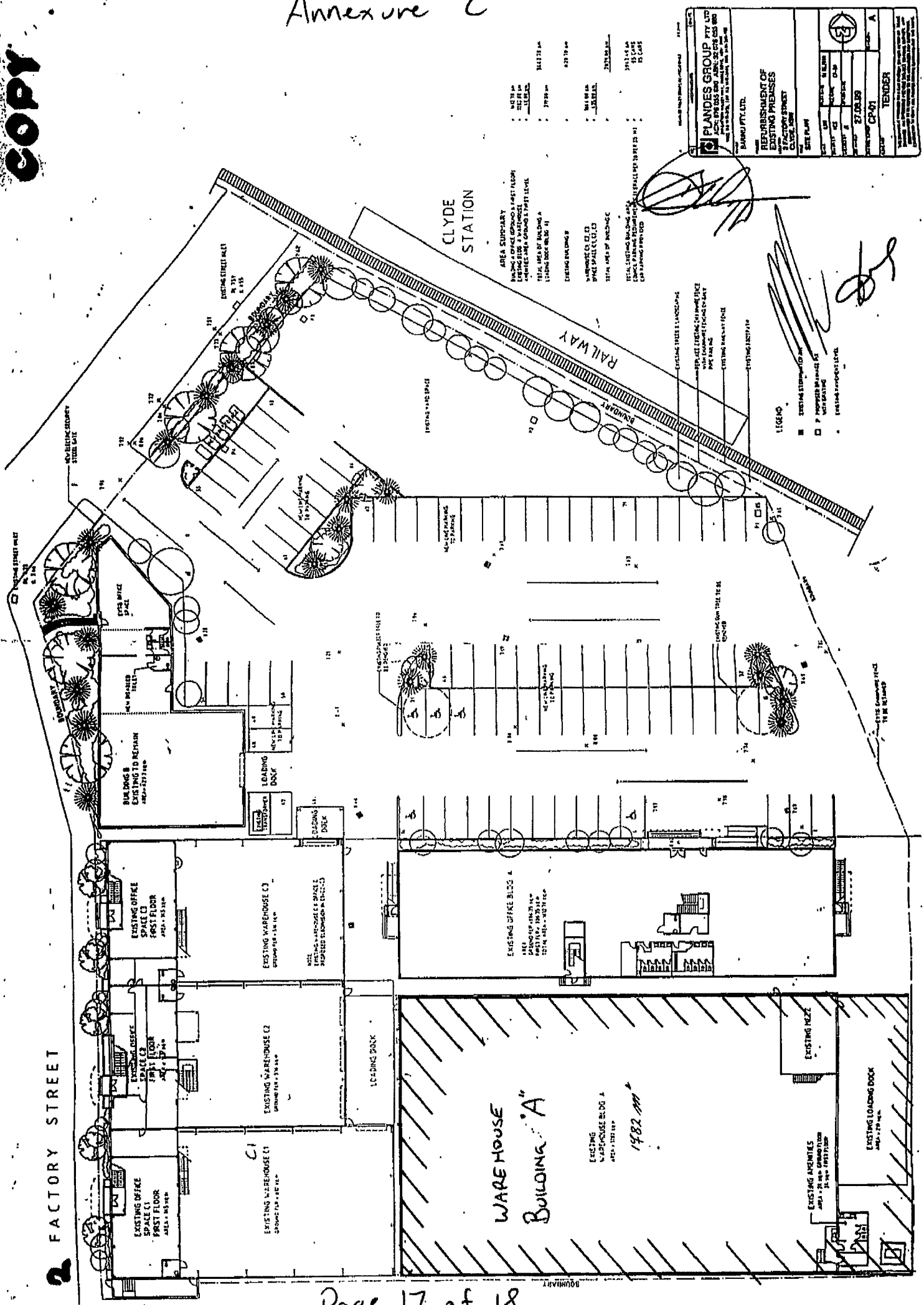
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I certify that this and the preceding eleven pages are in exactly the same wording as Annexure B of the copyright Law Society Lease.

.....
Solicitor for the Landlord

Annexure C

COPY



Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.
Corporation: **M D M Pty Ltd ACN 001 879 849**
Authority: **section 127 of the Corporations Law**

M.D.M. PTY. LIMITED A.C.N. 001 879 849 THE COMMON SEAL OF

.....
Signature of authorised person:

Michael Mazzeo
Name of authorised person:

Secretary
Office held:

.....
Signature of authorised person:

DOMENIC MARROCCO
Name of authorised person:

DIRECTOR
Office held:

Signed by BRUCE THOMAS WIGGER as duly authorised by the Minister for Police in the State of New South Wales for and on behalf of Her Most Gracious Majesty Queen Elizabeth The Second and for the purpose of rendering liable the Government of the said State (but not so as to incur any personal; Liability hereunder) in the presence of:

.....
Witness

TREVOR BROWN
Name

2-24 RAWSON PLACE SYDNEY
Address

.....

Services of notices on the Lessee should be addressed to:

The Senior Manager
Portfolio Management, State Property
Department of Commerce
Level 8, McKell Building
2-24 Rawson Place
SYDNEY NSW 2000
Attn: Trevor Brown
Tel: 02 9372 7357
Fax: 02 9372 7366

CONSENT TO LEASE

Annexure to Lease

From: MDM Pty Limited ACN 001 879 849

To: Her Most Gracious Majesty Queen Elizabeth the Second (Minister for Police)

Dated:

Perpetual Nominees Limited as Mortgagee under Mortgage(s) No. HEREBY CONSENTS to the within Lease subject to and without in any way limiting abridging affecting or prejudicing the rights powers and remedies of the Mortgagee under the said Mortgage(s) (or any of them) which rights powers and remedies shall remain in full force and effect as if this consent had not been given save and except that so long as the covenants and conditions and provisions of the within Lease are duly observed and performed the Mortgagee will in the event of the exercise of the power of sale or other power or remedy of the Mortgagee on default under the said Mortgage(s) (or any of them) exercise the same subject to the then subsisting rights of the Lessee(s) under the within Lease.

Signed at Sydney this 30th day of October 2006.

SIGNED for and on behalf of

Signed in my presence for and on behalf of Perpetual Nominees Limited (A.B.N. 37 000 733 700) under the Power of Attorney dated 12/07/02 (Registration No. 4342/443) by its Attorneys

[Signature of Attorney]	[Full name of Attorney]	[Title of Attorney]
	Yvonne Sartzetakis	Assistant Manager
[Signature of Attorney]	[Full name of Attorney]	[Title of Attorney]
	Carmel Rose	Assistant Manager

who are personally known to me and each of whom declare that they have received no notice of revocation of the Power of Attorney under which this document is signed

[Signature of Witness]	[Full name of Witness]
	Shant Nazarian

Release: 2.6
www.lands.nsw.gov.au

LEASE

New South Wales
Real Property Act 1900

AF498330T

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

STAMP DUTY Office of State Revenue use only

(A) **FOLIO OF THE REGISTER**

Property leased

Land compriced in part of certificate of title folio identifier 22/569501 known as warehouse building A, 2 Factory Street, Granville, NSW

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and LLPN if any	CODE
1W	MDM P/L P.O Box 52 Erskineville 2043 Reference:	L

(C) **LESSOR**

MDM Pty Ltd ABN 90 001 879 849

The lessor leases to the lessee the property referred to above.

(D) Encumbrances (if applicable):

(E) **LESSEE**

Green Alliance Pty Ltd ACN 122 821 363

(F) **TENANCY:** CLICK & PICK >>>

(G)
1. **TERM** 18 months
2. **COMMENCING DATE** 26 August 2009
3. **TERMINATING DATE** 25 February 2011
4. With an **OPTION TO RENEW** for a period of 18 months (there are 2 options of 18 months) set out in clause 4 of Annexure A
5. With an **OPTION TO PURCHASE** set out in clause N.A. of N.A.
6. Together with and reserving the **RIGHTS** set out inclause 13 of Annexure A
7. Incorporates the provisions or additional material set out in **ANNEXURE(S)** A and B hereto.
8. Incorporates the provisions set out in N.A.
   Lands, Land and Property Information Division as No. N.A.
9. The **RENT** is set out in item No. 8 of Reference Schedule

in the Department of
of AA 405801
of AC 775852
CT Prod 395V
for C

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.
0801

DEPARTMENT OF LANDS
LAND AND PROPERTY INFORMATION DIVISION

DATE

(H) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.
Corporation: MDM Pty Ltd ABN 90 001 879 849
Authority:

Signature of authorised person:

Name of authorised person: M. Moscato
Office held: Secretary
Michael

Signature of authorised person:

Name of authorised person: D. MASCARO
Office held: DIRECTOR
Domenic

Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.
Corporation: Green Alliance Pty Ltd ACN 122 821 363
Authority: Section 127 of the Corporations Act 2001

Signature of authorised person:

Name of authorised person: Ratick Jayah
Office held: Sole Director/Secretary

~~Signature of authorised person:~~

~~Name of authorised person:~~
~~Office held:~~

(I) **STATUTORY DECLARATION** *

I

solemnly and sincerely declare that—

1. The time for the exercise of option to in expired lease No. has ended; and
2. The lessee under that lease has not exercised the option.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900.

Made and subscribed at in the State of New South Wales

on in the presence of

Signature of witness: Signature of lessor:

Full name of witness:

Address of witness:

Qualification of witness: *[tick one]*

- ☐ Justice of the Peace
- ☐ Practising Solicitor
- ☐ Other qualified witness *[specify]*

* As the Department of Lands may not be able to provide the services of a justice of the peace or other qualified witness, the statutory declaration should be signed and witnessed prior to lodgment of the form at Land and Property Information Division.

THIS AND THE FOLLOWING 29 PAGES COMPRISE THE ANNEXURE "A" REFERRED TO IN LEASE MADE BETWEEN

MDM PTY LTD A.B.N. 90 001 879 849 **(LESSOR)**

GREEN ALLIANCE PTY LTD ACN 122 821 363 **(LESSEE)**

REFERENCE SCHEDULE

ITEM 1: (Clause 2.1)
The Land
Land comprised in part of Certificate of Title Folio Identifier 22/569501 known as warehouse building A, 2 Factory Street, Granville, New South Wales.

ITEM 2: (Clause 2.1)
The Lessor
MDM Pty Ltd ABN 90 001 879 849

Lessor's Address for Notices
PO Box 52
Erskineville, NSW, 2043

ITEM 3: (Clause 2.1)
The Lessee
Green Alliance Pty Ltd ACN 122 821 363

ITEM 4: (Clause 2.1)
Premises
Ground floor warehouse building A with adjacent ground floor office and amenities, 2 Factory Street, Granville, New South Wales, as delineated in Annexure B.

ITEM 5: (Clause 2.1)
Permitted Use
Warehousing and distribution of insulation products and associated office administration.

(Clause 8)

ITEM 6: (Clause 2.1) (Clause 3)
The Term
(a) Commencement Date: **26 August 2009**
(b) Termination Date: **25 February 2011**
(c) Term: **18 months (1.5 years)**

ITEM 7: (Clause 2.1) (Clause 4)
The First Option
(a) commencement date: **26 February 2011**
(b) termination date: **25 August 2012**
(c) term: **18 months (1.5 years)**

The Second Option
(a) commencement date: **26 August 2012**
(b) termination date: **25 February 2014**

(c) term: **18 months (1.5 years)**

ITEM 8: (Clause 2.1)
Annual Rent
$175,000 (GST-exclusive), payable monthly in advance from 1 September 2009. No rent is payable in respect of the period from the Commencement Date to 31 August 2009.

(Clause 5.1)

ITEM 9: (Clause 5.2) (Clause 6)
Adjustment of Annual Rent (for Term and Option Term)

Column 1 Review Date	Column 2 Adjustment Method	Column 3 Percentage
26/02/~~2012~~ 2011	The greater of CPI Adjustment Method and Market Review Adjustment Method (and not being less than the annual rent payable immediately prior to the Review Date)	
26/08/2012	The greater of CPI Adjustment Method and Market Review Adjustment Method (and not being less than the annual rent payable immediately prior to the Review Date)	
Annually thereafter during any holding over period	The greater of CPI Adjustment Method and Market Review Adjustment Method (and not being less than the annual rent payable immediately prior to the Review Date)	

ITEM 10: (Clause 7)
Lessees Proportion
42.35%

ITEM 11: (Clause 11.1)
Public Risk Insurance
$20,000,000.00

ITEM 12: (Clause 17)
The Guarantors
Not applicable

ITEM 13: (Bank Guarantee) (Clause 18)
Bank guarantee
$32,083.33 (equivalent to 2 months' rent)

1. EXCLUSION OF STATUTORY PROVISIONS

1.1 The covenants, powers and provisions implied in Leases by virtue of Sections 84, 84A, 85 and 86 of the Conveyancing Act, 1919 are excluded.

1.2 To the extent permitted by law, the application of any moratorium or other Act having the effect of extending the term, reducing or postponing the payment of rent, or otherwise affecting the operation of the terms of this Lease is excluded.

2. DEFINITIONS AND INTERPRETATION

2.1 Definitions

In this Lease unless the contrary intention appears:

"Auditor" means an auditor who is a registered company auditor as defined in the Corporations Law.

"Annual Rent" means the amount set out in **Item 8**, adjusted in accordance with this Lease.

"Authority" includes any government, semi or local government, statutory or other authority or body.

"Commencement Date" means the date of commencement of this Lease as set out in **Item 6**.

"Corporations Law" means the legislation regulating corporations in New South Wales.

"CPI" means the Consumer Price Index - Sydney (All Groups) or, if that index is abolished, any similar index which replaces it.

"Current Market Rent" is the rent that, having regard to the terms and conditions of this Lease and such other matters as are relevant to the assessment of current market rent, would be reasonably expected to be paid for the Premises if they were unoccupied and offered for renting for the use to which the Premises may be put in accordance with this Lease.

"First Option" means the option term set out under the heading 'First Option' in **Item 7**.

"First Option Commencement Date" means the date of commencement of the First Option set out in **Item 7**.

"First Option Termination Date" means the date of termination of the First Option set out in **Item 7**.

"Land" means the land described in **Item 1**.

"Laws" includes (but is not limited to) the requirements of all statutes, rules, regulations, proclamations, ordinances or by-laws.

"Lease" means this Lease and all schedules, appendices and annexures to this Lease.

"Lessee" means the lessee described in **Item 3** and where the Lessee is a corporation includes its successors, and where the Lessee is a person, his executors and administrators and in each case includes their permitted assigns.

"Lessee's Business" means the permitted use of the Premises set out in **Item 5**.

"Lessee's Employees" means the Lessee's servants employees agents contractors invitees sublessees licensees and concessionaries or others who may at any time be in or upon the Premises, or the Land with the consent of the Lessee (express or implied).

"Lessee's Fixtures and Fittings" includes (but is not limited to) all the Lessee's plant and equipment, fixtures, furniture and furnishings (including signs notices and floor coverings) in or upon the Premises from time to time.

"Lessor" means the lessor described in **Item 2** and includes its successors and assigns.

"Lessor's Employees" means the Lessor's servants, employees, agents, contractors and licensees.

"Lessor's Fixtures and Fittings" includes (but is not limited to) all the Lessor's plant and equipment, services, fixtures, furniture and furnishings of any nature in or upon the Premises.

"Managing Agent" means any agent appointed from time to time by the Lessor for the management of the Premises.

"Market Review Adjustment" means market review of the Annual Rent in accordance with **clause 6.3.**

"Market Review Date" means the Review Date set out in **Item 9** on which Annual Rent is to be adjusted by Market Review Adjustment.

"Premises" means that part of the Land described in **Item 4.**

"Reference Schedule" means the Reference Schedule to this Lease.

"Requirements" means any requirements notices orders or directions received from or given by any Authority, including any city, municipal, health, licensing or civic authority.

"Review Date" means each date specified in column 1 of **Item 9.**

"Second Option" means the option term set out under the heading 'Second Option' in **Item 7.**

"Second Option Commencement Date" means the date of commencement of the Second Option set out in **Item 7.**

"Second Option Termination Date" means the date of termination of the Second Option set out in **Item 7.**

"Term" or **"term of this Lease"** means the term set out in **Item 6.**

"Termination Date" means the date of termination of this Lease as set out in **Item 6.**

2.2 Interpretation

In this Lease:

(a) words importing the singular number include the plural and vice versa;

(b) words denoting any gender include all genders;

(c) the word "person" includes a corporation and vice versa;

(d) any obligation or agreement by two or more Lessees binds those Lessees jointly, and each of them and their successors and assigns severally;

(e) reference to statutes includes a reference to the regulations ordinances or by-laws made under that statute and includes all statutes regulations, ordinances or by-laws amending, consolidating or replacing them;

(f) an obligation undertaken by a party to this Lease is and will be construed as a covenant by that party, and will (unless the context otherwise requires) be construed as continuing throughout the Term, any holding over period, and for as long as that obligation remains to be performed;

(g) headings are for convenience only and do not affect interpretation;

(h) a reference to an Item is a reference to an Item of the Reference Schedule;

(i) a reference to a consent or approval given by the Lessor is a reference to consent or approval in writing.

2.3 Payment by Lessee

Any monies to be paid by the Lessee (including without limitation for Annual Rent and the Lessee's Contribution to Outgoing Expenses) must be paid without any deduction or right of set-off.

2.4 Severability

If any provision of this Lease is found by a Court to be invalid or unenforceable, then that provision will be read down to the extent necessary to give it a valid operation of a partial character. If any provision cannot be read down, the provision will be deemed to be void and the remaining provisions of this Lease will not be affected. If the severance of such provision has, or may have, the effect of reducing any amount which is or may become payable to the Lessor under this Lease, the Lessor may terminate this Lease by notice in writing to the Lessee.

2.5 Whole Agreement

This Lease comprises the whole agreement between the Lessor and the Lessee. The only enforceable obligations in relation to the subject matter are contained in this Lease. Any representations, communications, or prior agreements in relation to the subject matter are merged in, and suspended by, this Lease.

2.6 Bodies and Authorities

Where a reference is made to any body or authority, that reference will (if the body or authority ceases to exist), be deemed a reference to the body or authority as then serves substantially the same objects as that body or authority. Any reference to the President of a body or authority will, in the absence of a President, be read as a reference to the senior officer for the time being of the body or authority or such other person fulfilling the duties of President.

2.7 Governing Law

This Lease is governed by the Laws of New South Wales.

3. TERM

3.1 Term of Lease

Subject to this Lease, the Term will commence on the Commencement Date and will expire on the Termination Date.

3.2 Monthly Tenancy

If the Lessor permits, the Lessee may continue to occupy the Premises after the Termination Date (other than under a further Lease). The Lessee will do so:

(a) as a monthly tenant only;

(b) on the same terms and conditions (so far as applicable to a monthly tenant) as are contained in this Lease; and

(c) at a monthly rental, calculated in accordance with the following sub-clause and payable monthly in advance. The first rental payment will be made on the day following the Termination Date.

3.3 Rent During Holding Over

The rental for each month or part month of holding over will be one-twelfth of the sum of the following amounts, calculated at the Termination Date:

(a) Annual Rent, as adjusted under this Lease;

(b) the Lessee's Contribution to Operating Expenses. In calculating these amounts, the monthly occupancy will be treated as a continuing tenancy so as to include any increases which would accrue in the Lessee's Contribution to Operating Expenses; and

(c) any other moneys payable by the Lessee to the Lessor.

If the holding over period coincides with any Review Date in **Item 9,** the Annual Rent will be adjusted in accordance with the corresponding method outlined in **Item 9** for the relevant Review Date.

3.4 Termination of Holding Over

Any holding over is determinable:

(a) at any time by either party by one (1) month's notice in writing given to expire on any day; or

(b) if the Lessee is in default in the performance of its obligations, then the Lessor may give written notice to the Lessee expiring at any time after the expiration of seventy-two (72) hours after the date of such notice.

3.5 Lessee's failure to vacate or restore Premises by Termination Date

Notwithstanding anything contained within this Lease, and any notice given by either party hereto to the other, if, at the Termination Date, the Lessee has:

(a) failed to deliver the keys of the premises to the Lessor; or

(b) failed to carry out its obligations to carry out work at, maintain, replace, make good, repair and restore the Premises in the terms of this Lease,

then the Lessee shall be deemed to continue to use and occupy the Premises after the Termination Date and shall be required to compensate the Lessor and to observe the terms and conditions of this Lease pending the date which is the **later** of:

(a) the date of the delivery of the keys by the Lessee to the Lessor; and
(b) the date of completion by the Lessee of his obligations to maintain, replace, restore and repair the Premises pursuant to this Lease (**Restoration Date**).

The compensation payable by the Lessee to the Lessor under this clause, shall be an amount which is calculated from month to month and is equivalent to the rent payable immediately prior to the Termination Date. Such amount shall accrue and fall due for payment from month to month in advance on the dates that rent would have been payable had the Lessee continued to hold over the as a monthly tenant under the Lease. Should the Resoration Date occur after a monthly amount has accrued and fallen due for payment, no amount shall be refundable by the Lessor to the Lessee. The Lessee acknowledges that the payment to the Lessor of compensation in the circumstances and on the terms outlined above is fair and reasonable.

4. OPTION

4.1 Term of First Option

The term will commence on the First Option Commencement Date and will expire on the First Option Termination Date.

4.2 Term of Second Option

The term will commence on the Second Option Commencement Date and will expire on the Second Option Termination Date.

4.3 Exercise of First Option and Second Option Procedure

The Lessee may exercise the option only if:-

(a) the Lessee serves on the Lessor, a Notice of Exercise of Option no later than three (3) months prior to the Termination Date or in the case of the Second Option, three (3) months prior to the First Option Termination Date;

(b) there are at the time of service no rental and/or outgoings that are overdue for payment;

(c) at the time of service all other obligations of the Lessee have been complied with or fully remedied in accordance with the terms of any notice to remedy given by the Lessor.

4.4 Obligations after Exercise of Option

After giving Notice of Exercise of First Option or Notice of Exercise of the Second Option (as the case may be) the Lessee must continue to pay all rent on time and continue to comply with all of the Lessee's obligations under this Lease. In the event the Lessee does not do so, the Lessor may treat any breach as being a breach of the new Lease as well as the existing Lease.

4.5 Terms of First Option Lease

The new Lease will be on the same terms and conditions as this Lease except for:

(a) the new rent;

(b) the Commencement Date and Termination Date;

(c) the omission of **Item 7** insofar as it relates to the First Option; and

(c) the omission of the definitions "The First Option", "First Option Commencement Date" and "First Option Termination Date" in clause 2.1.

4.6 Terms of Second Option Lease

The new Lease will be on the same terms and conditions as this Lease except for:

(a) the new rent;

(b) the Commencement Date and Termination Date;

(c) the omission of **Item 7**;

(d) the omission of the definitions "The First Option", "First Option Commencement Date" and "First Option Termination Date" in clause 2.1; and

(e) the omission of the definitions "The Second Option", "Second Option Commencement Date" and "Second Option Termination Date" in clause 2.1.

5. ANNUAL RENT

5.1 Payment of Annual Rent

The Lessee must pay to the Lessor the Annual Rent by equal monthly instalments in advance on the first day of each month (and proportionately for any part of a month). The first instalment must be paid on the Commencement Date. All instalments must be delivered to the Managing Agent or as the Lessor otherwise directs.

5.2 Adjustment of Annual Rent

The Annual Rent must be adjusted on those Review Dates specified in the first column of **Item 9** by the method specified in the second column of **Item 9** opposite that Review Date. Annual Rent is also adjusted during a holding over period if such period coincides with a Review Date.

6. MARKET REVIEW OF ANNUAL RENT

6.1 Applicability

This clause applies if **Item 9** contains the words "Market Review Adjustment" (or words to similar effect) opposite any Review Date set out in column 1.

6.2 Annual Rent from Review Date

The Annual Rent payable from the Review Date specified **in Item 9** will be the annual rent determined by the Market Review Adjustment Method outlined in this clause 6.

6.3 Market Rent Review Method

(a) The parties must try to agree the Annual Rent not later than two (2) months prior to each

Market Review Date. If the parties are unable to agree to such Annual Rent, then they must endeavour to agree upon a valuer to determine such Annual Rent in accordance with this clause. Each party agrees:

(i) to respond without delay and in writing to any proposal in writing received from the other party as to the Annual Rent or the identity of such valuer; and

(ii) agreement must be evidenced in writing between the parties.

(b) If the parties have not agreed:

(i) the Annual Rent to apply from the Market Review Date; or

(ii) to the identity of a valuer to determine the Annual Rent,

two (2) months prior to that Market Review Date, then either party may request the President or Acting President of the New South Wales Division of the Australian Property Institute to nominate a valuer (the **"Valuer"**).

(c) The parties must request the Valuer agreed by the parties, or nominated under the preceding paragraph, to determine the Current Market Rent as at the relevant Market Review Date as soon as reasonably practicable and in accordance with the following sub-clause.

(d) The Valuer carrying out valuation must::

(i) give detailed reasons for determination;

(ii) specify the matters to which he or she had regard for the purposes of making the determination;

(iii) act as an expert and not as an arbitrator; and

(iv) determine the Current Market Rent as at the Market Review Date, taking into account all relevant valuation principles and having regard to the terms and any variation of this Lease.

(e) In determining the Current Market Rent, the Valuer must:

(i) take in account rent concessions and other benefits frequently or generally offered to prospective Lessees of unoccupied factories;

(ii) ignore the value of goodwill created by the Lessee's occupation and the value of the Lessee's Fixtures and Fittings;

(iii) ignore deterioration of the condition of the Premises if that deterioration results from any breach of this Lease by the Lessee;

(iv) take into account any rent concessions or other benefits (such as rent abatement) paid to the Lessee to take this Lease;

(v) have regard to the length of the term of the Lease, disregarding the fact that part of the term has elapsed at the Market Review Date;

(vi) assume that all obligations under this Lease have been fully performed;

(vii) assume that the Lessee is being offered vacant possession;

(viii) take into account any rent concession or other inducements or consideration that may be paid to a prospective Lessee taking a Lease of a comparable premises;

(ix) have regard to the rental value of comparable premises, and to the value of the local goodwill attaching to the Premises;

(x) assume that the Lessor is a willing but not anxious Lessor and the Lessee is willing but not anxious Lessee;

(xi) have regard to the use of the Premises permitted by this Lease.

(f) The determination of the Valuer under this clause is final and binding on the parties.

(g) Costs of the valuation under this clause will be met by the Lessor and Lessee in equal shares.

(h) The Annual Rent or Current Market Rent determined in accordance with this clause for a Market Review Date will be the Annual Rent payable on and from that Market Review Date.

(i) The Lessee must continue to pay the Annual Rent payable immediately prior to the relevant Market Review Date until the Annual Rent is determined.

(j) Following the variation in the Annual Rent, an appropriate adjustment must be made promptly between the Lessor and the Lessee to ensure that as from the relevant Market Review Date the Lessee has paid and the Lessor has received the Annual Rent as varied.

6A. CPI ADJUSTMENT ANNUAL RENT

6A.1 Applicability

This clause applies if **Item 9** contains the words "CPI Adjustment Method" (or words to similar effect) in column 2 opposite any Review Date set out in column 1.

6A.2 Definitions

In this Lease:

"CPI Adjustment Date" means that Review Date specified in **Item 9** on which the Annual Rent is to be adjusted by CPI Adjustment.

"CPI Adjustment" means the method of adjustment of the Annual Rent referred to in **clause 6A.3.**

6A.3 CPI Adjustment Method

If CPI Adjustment (or words to a similar effect) appear in **Item 9** next to a Review Date, the Annual Rent payable from that Review Date (the "relevant Review Date") until the next Review Date is calculated as follows:

$$RR = \frac{R \times CPI}{CCPI}$$

Where:

RR is the Annual Rent from the relevant Review Date until the next Review Date;

R is the Annual Rent payable immediately before the relevant Review Date;

CPI is the CPI last published before the relevant review date;

CCPI is the CPI last published before the later of the Commencement Date of the Original Lease, and the Review Date immediately preceding the relevant Review Date.

6B Greater of Market Review Adjustment and CPI Adjustment Method

If Item 9 contains the words "the greater of CPI Adjustment Method and Market Review Adjustment Method", the Annual Rent payable from the Review Date to the next Review Date will be the greater of the annual rent determined by the CPI Adjustment Method and the Market Review Adjustment Method in accordance with this clause 6 and clause 6A (and not being less than the annual rent payable immediately prior to the Review Date).

7. OPERATING EXPENSES AND LESSEES CONTRIBUTION

7.1 Definitions

In this Lease:

(a) **"Lessee's Proportion"** means the percentage set out in **Item 10**.

(b) **"Operating Expenses"** means the total of all amounts paid or payable by the Lessor in any Outgoings Year in respect of all rates charges and costs payable to any Authority for the provision or reticulation of water, sewerage and/or drainage for the entire site at 2 factory Street, Granville of which the Premises form part.

(c) **"Outgoings Year"** means each twelve (12) months period ending on 30 June.

7.2 The Lessee shall pay to the Lessor, the Lessee's Proportion of the Operating Expenses within 14 days of the Lessee receiving the request in writing from the Lessor or its agent in respect thereof.

7.3 The Lessee will be responsible for any fines, penalties or charges relating to late payment of Operating Expenses for which it is responsible under this Lease.

7.4 All rates and taxes irrespective of the period for which they are assessed or charged shall be deemed to accrue from day to day and shall be apportioned in respect of time accordingly.

7.5 For the avoidance of doubt, the Lessee is not required to pay any amount on account of Operating Expenses for the period from the Commencement Date to 1 September 2009.

8. USE OF PREMISES

8.1 Permitted Use

The Lessee must use the Premises only for the Permitted Use set out in **Item 5**. The Lessee must:

(d) at all times conduct its business in a proper and businesslike manner, including the proper staffing and stocking of the Premises;

(e) keep the Premises free and clear of pests insects and vermin at its own cost;

(f) not do, or permit any other person to do, in or about the Premises any noxious noisy or offensive thing which in the opinion of the Lessor would create a nuisance;

(g) not hold or allow to be held any auction bankruptcy or fire sale on the Premises;

(h) not make any connections or modifications to any gas or electrical system;

(i) interfere with any drains, water supply or other services until drawings or other specification of the proposed work, class of material to be used and the name of the proposed contractor have been submitted to and approved by the Lessor in writing;

(j) maintain all licences, permits, consents and registrations required for the carrying on of the Lessee's business in the Premises.

8.2 **No Warranty as to Use**

The Lessor does not warrant that the Premises are suitable for the Permitted Use. If the Permitted Use is permissible only with the consent or approval of any Authority, the Lessee must obtain and maintain that consent or approval at his own expense.

8.3 **Compliance with Requirements of Authorities**

(a) Subject to sub-clauses (b) and (d) below, the Lessee must at all times comply with at the Lessee's expense all Laws and Requirements in relation to or affecting:

(i) the Premises;

(ii) the Lessee's Fixtures and Fittings; and

(iii) the use or occupation of the Premises, including those made in relation to the age, sex or number of persons in the Premises from time to time;

whether or not any such Laws or Requirements are addressed to or required to be effected by the Lessor, the Lessee and/or any other person.

(b) Before complying with any Laws or Requirements, the Lessee must seek and obtain the consent of the Lessor and otherwise observe the provisions in this Lease.

(c) The Lessor may (but is not obliged) elect to comply with such Laws or Requirements or any part of them at the Lessee's expense and may elect to have the balance performed and observed by the Lessee.

(d) The Lessee is not be liable for structural alterations or additions unless those caused by or arise from the Permitted Use, the number or sex of the Lessee's Employees, or any act or omission of the Lessee or the Lessee's Employees.

8.4 **Failure by Lessee to Comply**

If the Lessee fails to comply with any Law or Requirement, or if the Lessor elects to observe any such Laws or Requirements which the Lessee was otherwise responsible for performing, the Lessor may exercise any of the rights under this Lease for the purpose of complying with or observing such Laws or Requirements. The Lessee must pay on demand all reasonable costs and expenses incurred by the Lessor in observing any such Laws or Requirements as if such

monies were rent in arrears.

8.5 **Overloading - Floor and Electrical Circuits**

The Lessee must:

(b) observe the maximum floor loading weights for which the Premises were designed and must not permit the floors of the Premises to be overloaded. In particular, the Lessee may only install safes or other heavy equipment in the positions and subject to such conditions as the Lessor approves in writing;

(c) not install any equipment that overloads the electrical services to the Premises. If the Lessor, at the Lessee's request, upgrades the electrical services, the Lessee must pay to the Lessor upon demand the entire cost of those alterations (including any consultants' fees). The Lessor may require the Lessee to deposit with the Lessor the estimated cost before commencing any alterations.

8.6 **Securing the Premises**

The Lessee must ensure that all exterior doors and windows in the Premises and access to the car park on the Land are securely locked and fastened at all times when the Premises are not occupied. The Lessee authorises the Lessor and the Lessor's Employees to enter the Premises whenever necessary for the purpose of securing any door, window or gate left unlocked and unfastened.

8.7 **Vehicular access and parking**

(a) The Lessee must ensure that it does not impede access or vehicular access at any time to the other warehouses or tenants surrounding the Premises.

(b) The Lessee will be granted use of approximately 700 square metres of space on the Site for the purpose of storing shipping containers as delineated in Annexure B. The Lessor reserves the right to reallocate this space from time to time.

8.8 **Cleaning of Premises and Removal of Refuse**

The Lessee must at its own cost keep the Premises (including the exterior surface of windows), clean and not allow any accumulation of useless property or rubbish in them.

8.9 **Erection of Signs**

The Lessee must not and must not permit others to paint erect affix or place:

(a) any signs notices or advertisements to any part of the exterior of the Premises or on the internal or external surfaces of windows; or

(b) blinds or awnings to the outside of the Premises;

without the consent of the Lessor, which consent may be granted on such conditions or refused in the absolute discretion of the Lessor. The Lessee must pay the cost of any relevant applications or licence fees to the appropriate Authority.

8.10 **Holing of Walls**

The Lessee must not and must not permit any other person to cut, make holes in, mark, deface, drill or damage any of the floors, walls, ceilings or other parts of the Premises except so far as

may be reasonably necessary for the erection of approved signs, blinds, awnings or fittings. On the removal of any such structures, the Lessee must reinstate repair and make good any damage caused in or about that erection or removal.

8.11 Air-Conditioning and Fire Alarm Equipment

The Lessee must not interfere with any air conditioning plant or fire alarm equipment installed in or about the Premises and must not obstruct access to such plant or equipment.

8.12 Use of Appurtenances

The Lessee must not and must not permit any person under its control:

(a) to use the appurtenances contained in or about the Premises for any purpose other than those for which these were constructed; or

(b) to place in the toilets, urinals, drains, basins, or sinks any substances which they were not designed to receive.

8.13 Lessee to Pay Charges Levied on Premises

The Lessee must pay:

(a) 42.35% of all charges for water consumed in or on the entire site at 2 Factory Street Granville;

(b) all charges in respect of any telephone services connected to the Premises;

(c) and all other charges and impositions by any Authority for the supply of any service separately supplied to the Premises; and

(d) the electricity charges referred to in clause 8.14.

8.14 Lessee to Pay Charges in respect of Electricity

(a) The Lessee must pay:

(i) an amount reasonably estimated by the Lessor for the Lessee's electricity consumed at the Premises (being a base rate contribution) monthly in advance but subject to further adjustment; and

(ii) within 14 days of receipt of an invoice, any additional amounts determined to be payable by the Lessor or its agent in accordance with the readings on the relevant submetre, such readings to be performed from time to time.

(b) The Lessee will be refunded any amounts that are overpaid by the Lessee (by way of the monthly payments referred to in sub-clause 8.14(a)) having regard to the actual readings on the submetres.

(c) The base rate amount referred to in clause 8.14(a) may be increased by the Lessor (acting reasonably) if it is insufficient to cover electricity expenses incurred by the Lessee, having regard to actual readings.

9. MAINTENANCE, REPAIR AND ALTERATIONS TO PREMISES

9.1 **General Obligation to Maintain**

The Lessee must maintain the Premises in good and substantial repair and condition, fair wear and tear excepted. The Lessee is not responsible for damage to the structure of the Premises, or any damage caused by fire, flood, lightning, storm, tempest or act of God, unless:

(a) that damage is attributable to any act or omission on the part of the Lessee or the Lessee's Employees; or

(b) an act or omission on the part of the Lessee, or the Lessee's Employees has rendered insurance monies payable in respect of such damage irrecoverable.

9.2 **Obligations for Maintenance**

Without limitation to **clause 9.1**, the Lessee will at the Lessee's expense:

(a) keep and maintain all of the Lessee's Fixtures and Fittings clean and in good repair and condition;

(b) immediately repair and replace all damaged windows including exterior show-window with glass of the same or similar quality; and

(c) maintain and keep safe all lighting equipment and illuminated signs in or attached to the Premises.

9.3 **Alterations to the Premises**

The Lessee must not without the Lessor's consent make any alteration to, or addition in, the Premises. The Lessee must ensure that any alterations or additions comply with the requirements of the Lessor and all relevant Authorities.

9.4 **Inspection by Lessor**

(a) The Lessor and its agents may:

(i) at all reasonable times on reasonable notice (except in case of emergency when no notice will be required) enter upon the Premises and view the state of repair; and

(ii) serve upon the Lessee a notice in writing of any defect for the repair of which the Lessee may be responsible requiring the Lessee within a reasonable time to repair that defect.

b) If the Lessee fails to repair that defect, the Lessor may perform the work repairs as if it were the Lessee and, for that purpose, the Lessor's Employees upon the whole or any part of the Premises. Any costs of carrying out such work will be immediately payable by the Lessee to the Lessor and will be deemed to be rent overdue.

9.5 **Repair by Lessor by Requirement of Authority**

If at any time during the Term:

(a) an Authority requires work in relation to the Premises and the Lessor elects to do that work; or

(b) the Lessor determines to carry out any repairs renovations maintenance or alterations to

the Premises;

then the Lessor, the Lessor's Employees, and others may enter into the Premises at all times for the purpose of such works. In the exercise of any such power, the Lessor will endeavour to cause no more inconvenience to the business of the Lessee than is reasonably necessary.

9.6 **Notice of Damage**

The Lessee must promptly notify the Lessor in writing of any damage sustained to the Premises.

10. ASSIGNMENTS SUBLEASES AND MORTGAGES

10.1 Subleases and Mortgages

The Lessee must not, without the prior consent of the Lessor, grant any right affecting, dealing with, or disposing of, the whole or any part of the Premises or any estate or interest in the Premises. The Lessor will not unreasonably withhold its consent to any proposed sublease provided that the following conditions are satisfied:

(a) The Lessee has requested the Lessor's consent to the proposed sublease in writing and has provided the Lessor with such information as the Lessor reasonably requires concerning the financial standing and business expertise of the proposed sublessee;

(b) The Lessee either has not committed any default under this Lease or has committed a default which has been waived by the Lessor in writing;

(c) The Lessee has proved to the satisfaction of the Lessor that the proposed sublessee is a respectable, responsible and solvent person;

(d) The Lessee has paid to the Lessor administrative and legal costs, charges and expenses incurred by the Lessor in accordance with clause 10.2(d), as if the references in that clause to assignment were references to sublease.

10.2 Assignment

(a) Lessee **must not assign without consent**

The Lessee must not assign this Lease without first:

(i) complying with the procedure set out in **clause 10.2(c)**; and

(ii) obtaining the consent of the Lessor.

(b) **Grounds on which consent to assignment can be withheld**

The Lessor may withhold consent to the assignment of the Lease in any of the following circumstances:

(i) the proposed assignee proposes to change the use to which the Premises are put; or

(ii) the proposed assignee has financial resources or skills that are inferior to those of the proposed assignor; or

(iii) the Lessee has not complied with the following subclause.

(c) **Procedure for obtaining consent to assignment**

(i) Before requesting the consent of the Lessor to an assignment of the Lease, the Lessee must give the proposed assignee details of any changes which the Lessee is or could reasonably be expected to be aware that may have occurred.

(ii) A request for the Lessor's consent to an assignment of the Lease must be made in writing and the Lessee must provide the Lessor with any information the Lessor reasonably requires concerning the financial standing and business experience of the proposed assignee.

(iii) The Lessor will deal promptly with a request for consent. If the Lessee has complied with this clause, and the Lessor has not notified the Lessee in writing whether consent is granted or withheld within forty two (42) days after the request is made, the Lessor is deemed to have consented to the assignment.

(d) **Lessee to pay costs**

The Lessee must pay the Lessor's proper and reasonable administrative and legal costs and expenses incurred and incidental to the assignment, including the cost of preparation of the deed described in the following sub-clause. The Lessee must pay the Lessor on demand the Lessor's reasonable estimate of such costs and expenses before the Lessor undertakes any such enquiries, and must pay the balance when required by the Lessor, whether or not the consent is granted.

(e) **Assignee to enter into Deed**

The proposed assignee must enter into a Deed with the Lessor, under which the proposed assignee agrees to perform obligations of the Lessee under this Lease. The deed will be prepared and stamped by the Lessor's solicitors and will be in the form that the Lessor's solicitors reasonably require. The proposed assignee must submit a stamped transfer of Lease to the Lessor's solicitors for registration.

(f) **Guarantees on Assignment**

If the proposed assignee is a corporation (other than a corporation whose shares are listed on any member exchange of Australian Stock Exchange Limited) the Lessor may require that the obligations on the part of the proposed assignee be guaranteed by the directors and/or principal shareholders of such corporation or other appropriate persons (such guarantee to be prepared and stamped by the Lessor's solicitors at the cost of the Lessee).

(g) **Lessee's Contribution to Outgoings**

The assignee must assume the responsibility for the payment of the Lessee's Contribution to Outgoings, including any arrears in payment and any adjustment at the end of an Outgoing Year.

10.3 **Change in Control of Lessee**

For the purposes of **clause 10.2**, if the Lessee is a corporation not listed on a member exchange of the Australian Stock Exchange Limited, the following circumstances constitute an assignment of this Lease:

(a) if a corporation, or any related corporation, or any person or any person and his relatives (as defined in the Income Tax Assessment Act, 1936), who do not hold at the Commencement Date more than fifty percent of the issued capital or voting rights of the Lessee, acquires or acquire between them more than fifty percent of the issued capital or voting rights of the Lessee; or

(b) if the changes referred to in **clause 10.3(a)** occur in any holding company (as defined in the Corporations Law) of the Lessee or in any holding company of any holding company of the Lessee,

and the provisions of **clause 10.2** will apply to that assignment. If the Lessee has omitted to obtain the Lessor's consent, then the Lessee will be in default.

10.4 **Leasing and Charging Lessee's Fixtures and Fittings, Equipment etc.**

The Lessee must not mortgage, charge, lease or otherwise deal with any item of the Lessee's Fixtures and Fittings without the prior written consent of the Lessor. The consent will not be unreasonably withheld if:

(a) the Lessee is entering into a proper bona fide mortgage charge or lease as a means of financing the acquisition of the Lessee's Fixtures and Fittings; and

(b) the Lessee uses the standard form of waiver prepared by the Lessor; and

(c) pays the Lessor's reasonable costs (including legal costs where applicable).

11. INSURANCE INDEMNITIES AND ABATEMENT

11.1 **Public Risk**

The Lessee must at all times during this Lease (including any extension, renewal, or holding over under the Lease), keep current a public risk insurance for an amount of not less than the amount specified in **Item 11** or such other amount as the Lessor may notify the Lessee from time to time in respect of any single accident. The policy must be endorsed so that the indemnity is extended to include claims arising out of, or in connection with, this Lease.

11.2 **Plate Glass**

The Lessee must at all times during this Lease insure in the joint names of the Lessor and the Lessee for their respective interests and in such amount (not being less than the full insurable value) and against such risks as the Lessor may require all plate glass windows and other glass forming part of or within the Premises.

11.3 **Further Insurances**

The Lessee must at all times during this Lease insure:

(a) the contents of the Premises, including stock-in-trade and Lessee's Fixtures and Fittings; and

(b) against any liability which may arise at common law or by any relevant workers compensation legislation in connection with the Premises.

11.4 **Approved Insurers**

All policies of insurance to be effected by the Lessee under this **clause 11** must:

(a) be taken out with an insurance office or company approved by the Lessor (such approval not to be unreasonably withheld);

(b) note the names of both Lessor and Lessee for their respective interests.

11.5 Maintain Insurances

The Lessee must not, without the consent of the Lessor, do anything which could:

(a) increase the rate of insurance for the Premises; or

(b) affect the Lessor's rights in any insurance in respect of the Premises; or

(c) make any insurance invalid, or liable to be cancelled.

If the Lessor approves in writing the Lessee's proposal to increase the risk, the Lessee will pay to the Lessor on demand all extra premiums of insurance (including stamp duty and levies) incurred on account of the extra risk.

11.6 Inflammable Substances

The Lessee must not (other than in accordance with the permitted use of the Premises) store or use chemicals, inflammable liquids, acetylene gas, or volatile or explosive substances on the Premises.

11.7 Evidence of Insurance

The Lessee will, when reasonably required by the Lessor, produce to the Lessor any insurance policy required under this **clause 11**, the receipt for the last premium, and a certificate of currency.

11.8 Compliance with Requirements of Authorities

The Lessee must comply with all Laws or Requirements of any Authority, the Insurance Council of Australia, and the proper requirements of any interested insurer in relation to:

(a) the relative position of the partitions erected or proposed to be erected within the Premises; and

(b) the position of sprinklers and other fire prevention equipment (including alarms);

and the Lessee must pay the costs of any alterations which are at any time required by reason of the Lessee's non-compliance with any such Laws or Requirements.

11.9 Release of Lessor

(a) The Lessee:

(i) occupies and uses the Premises at its own risk;

(ii) releases to the extent permitted by law the Lessor, the Lessor's Employees and all persons claiming through or under the Lessor from all actions claims demands losses and liability of every kind resulting from any accident damage loss death injury cost or expense occurring to any person or property in the Premises.

(b) The release under this clause is full and absolute unless that accident damage loss death injury cost or expense is caused by the Lessor's negligence or wilful act or omission.

(c) The Lessee acknowledges that if any goods, fittings, or effects in the Premises are injured or destroyed, no part of that loss or damage will be borne by the Lessor unless that loss or damage was incurred solely as a result of the negligence or wilful act of the Lessor or any servant or agent of the Lessor.

11.10 **Indemnification of Lessor**

The Lessee indemnifies and will keep indemnified the Lessor from and against all liabilities actions claims demand losses damages costs and expenses for, or in respect of which, the Lessor is, or may be, or become, liable:

(a) by reason of any default by the Lessee under this Lease; or

(b) arising from any of the following which are caused or contributed to by any act or omission on the part of the Lessee the Lessee's Employees or of any trespassers while such trespasser is within the Premises:

(i) the negligent use waste or abuse of water gas electricity oil lighting or other services or facilities of or servicing the Premises; and

(ii) overflow or leakage of water or other fluids within into or from the Premises; and

(iii) loss of or damage to property or death of or injury to person within or near the Premises.

11.11 **Damage or Destruction of Premises**

If any part of the Premises is damaged:

(a) The Lessee is not liable to pay Annual Rent, or the Lessee's Proportion of Outgoing Expenses, attributable to any period during which the Premises cannot be used under this Lease or are inaccessible due to that damage.

(b) If the Premises are damaged but still useable, the Lessee's ability for Annual Rent and the Lessee's Proportion of Outgoings is reduced during the affected period in proportion to the diminution in useability.

(c) If the Lessor notifies the Lessee that the Lessor considers that the damage is such that repair is impracticable or undesirable, then either the Lessor or the Lessee may terminate the Lease by giving not less than seven (7) days notice in writing to the other. No compensation is payable in respect of that termination.

(d) If the Lessor omits to repair the damage within a reasonable time after the Lessee requests the Lessor in writing to do so, the Lessee may terminate the Lease by giving not less than seven (7) days notice in writing of termination to the Lessor.

(e) Paragraphs (a)-(d) of this clause do not affect any right of the Lessor to recover damages from the Lessee in respect of damage.

Nothing contained in this **clause 11.11** impose upon the Lessor any obligation to restore or reinstate the Premises.

11A. DEMOLITION

11A.1 Application

This clause only applies if the proposed demolition is to occur at any time on or after 1.5 years from the Commencement Date.

11A.2 Definition

For the purposes of this clause:

"**Demolish**" includes any repair, renovation or reconstruction of the Site that cannot be carried out practicably without vacant possession of the Premises and demolition has a corresponding meaning.

"**Site**" means any part of the site (being contained in certificate of title 22/569501 and known as 2 Factory Street, Granville) and includes the Land and Premises.

11A.2 Demolition

(a) if the Lessor or a third party proposes to Demolish, then the Lessor may terminate this Lease after the expiration of at least six (6) months written notice of termination to the Lessee. For the avoidance of doubt, the first time notice may be given under this clause is 12 months from the Commencement Date; and

(b) the Lessee acknowledges that it must continue to comply with all of the obligations under this Lease for the period of the notice referred to in clause 11A.2(a) and the Lessee is not entitled to terminate this Lease by virtue of such notice being provided by the Lessor.

11B SALE OF PREMISES

11B.1 Application

This clause only applies if the proposed sale of any part of the 'site' is to occur on or after 1.5 years from the Commencement Date.

11B.2 Definition

"**Site**" means any part of the site (being contained in certificate of title 22/569501 and known as 2 Factory Street, Granville) and includes the Land and Premises.

11B.3 Sale

(c) If the Site or any part of the Site is proposed to be sold, the Lessor may terminate the Lease on 6 months' written notice; and

(d) the Lessee acknowledges that it must continue to comply with all of the obligations under this Lease for the period of the notice referred to in clause 11A.2(a) and the Lessee is not entitled to terminate this Lease by virtue of such notice being provided by the Lessor.

12. LESSOR'S RIGHTS AND OBLIGATIONS

12.1 Quiet Enjoyment

Subject to the Lessor's rights under this Lease, if the Lessee is not in default of this Lease, the Lessee may occupy the Premises during the Term without any interruption by the Lessor.

12.2 Payment of Outgoings

The Lessor will pay or cause to be paid as and when they fall due any Outgoings not payable by the Lessee.

13. RESERVATIONS

13.1 Viewing

The Lessor may at all reasonable times of the day allow:

(a) prospective purchasers of the Premises; and

(b) during the period of three months before the Termination Date, prospective tenants of the Premises;

to view the premises.

13.2 Head Lease or other Interests

The Lessee will at all times permit any person having any estate or interest in the Premises superior to, or concurrent with, the Lessor to exercise the Lessor's or such other person's powers to:

(a) enter and view the Premises;

(b) carry out repairs renovations maintenance and other work on the Premises; and

(c) otherwise exercise or perform their lawful rights or obligations in regard to the Premises.

13.3 Benefit of Lessee's Covenants

If a person other than the Lessor becomes entitled to receive the rents reserved by this Lease, that person will have the benefit of all covenants and agreements on the part of the Lessee under this Lease. The Lessee will, at the cost of the Lessor, enter into such covenants with such other person in this regard as the Lessor may reasonably require.

13.4 Managing Agent

The Managing Agent will represent the Lessor in all matters relating to this Lease except as the Lessor otherwise in writing directs. Any communication from the Lessor will, to the extent of any inconsistency, supersede any communication from the Managing Agent.

14. DEFAULT, TERMINATION, ETC.

14.1 Default

If:

(a) any part of the Annual Rent is in arrears for fourteen (14) days following any of the days appointed for payment (whether demanded or not); or

(b) any other moneys payable by the Lessee to the Lessor on demand have not been paid within fourteen (14) days of the due date or of demand; or

(c) the Lessee fails to perform or observe any of the covenants, conditions or agreements on

the part of the Lessee. The Lessor will provide the Lessee with 30 days from notice of the failure to remedy the failure if:

(i) the failure does not constitute a failure to comply with any Law or Requirement;
(ii) the failure is capable of being remedied; and
(iii) the allowance of such time does not (in the opinion of the Lessor acting reasonably) constitute a threat, hazard or danger to any person or property; or

(d) the Lessee fails or refuses to perform the repairs properly required by any notice given by the Lessor under this Lease or in case any such repairs are not completed by the Lessee within the time specified. The Lessor will provide the Lessee with 30 days from notice of the failure to remedy the failure if:

(i) the failure does not constitute a failure to comply with any Law or Requirement;
(ii) the failure is capable of being remedied; and
(iii) the allowance of such time does not (in the opinion of the Lessor acting reasonably) constitute a threat, hazard or danger to any person or property; or

(e) any assignment is made of the property of the Lessee for the benefit of creditors; or

(f) the Lessee (being a company) enters into liquidation, is wound up or dissolved or enters into a scheme of arrangement for creditors or is placed under official management or an administrator receiver or manager of any of its assets is appointed,

then the Lessee will be in default. The Lessor may elect to treat any such default as a repudiation of this Lease.

14.2 **Forfeiture of Lease**

If the Lessee is in default the Lessor may at its option:

(a) without any prior demand or notice re-enter into and take possession of Premises or any part of the Premises in the name of the whole (by force if necessary) and eject the lessee and all other persons from the Premises and repossess the same as of its former estate and then this Lease will be absolutely determined; or

(b) by notice in writing to the Lessee, determine this Lease and from the date of giving such notice this Lease will be determined; or

(c) by notice in writing to the Lessee, determine the Lease as from the giving of such notice and convert the unexpired portion of the Term into a tenancy from month to month.

14.3 **Lessor to Rectify**

The Lessor may, but is not be obliged to, remedy at any time without notice any default by the Lessee under this Lease. If the Lessor so elects, all reasonable costs and expenses incurred by the Lessor (including legal costs and expenses) in remedying a default will constitute a liquidated debt and will be payable by the Lessee to the Lessor on demand.

14.4 **Waiver**

(a) The Lessor's failure to enforce its rights in respect of any default or breach of covenant on the part of the Lessee is not and will not be construed as a waiver of that breach.

(b) No custom or practice arising between the parties in the course of administering this Lease will be construed to waive or to lessen the right of the Lessor to insist upon the

performance by the Lessee of any term, covenant or condition of this Lease, or to exercise any rights given to the Lessor on account of any such default.

(c) A waiver by the Lessor of a particular breach or default is not a waiver of any subsequent breach or default.

(d) The acceptance of rent by the Lessor is not a waiver of any preceding breach by the Lessee, other than the failure of the Lessee to make the particular payment or payments or rental so accepted, regardless of the Lessor's knowledge of such preceding breach at the time of acceptance of such rent.

(e) The onus of proving waiver will be on the party asserting the waiver.

14.5 **Removal by Lessor of Stock-in-Trade (THIS CLAUSE IS DELETED)**

14.6 **Tender after Determination**

Any moneys tendered by the Lessee after the determination of this Lease and accepted by the Lessor may be and (in the absence of any express election of the Lessor) will be applied firstly on account of any rental and other moneys accrued due and unpaid at the date of determination, and secondly on account of the Lessor's costs of re-entry.

14.7 **Interest on Overdue Moneys**

If any moneys payable under this Lease are due but unpaid, then (without prejudice to any other rights and remedies of the Lessor), the Lessee must pay to the Lessor interest at the rate twelve per centum (12%) per annum, calculated on a day to day basis and capitalised monthly. That interest will be computed from the due date for the payment of the moneys overdue until payment of such moneys in full.

14.8 **Damages for Breach**

(a) Each of the covenants and terms specified in this paragraph are essential and fundamental terms of this Lease and the breach or non-observance of any one or more of such covenants and terms is a fundamental breach of this Lease, **PROVIDED THAT** this clause will not mean or be construed as meaning that there are no other fundamental or essential terms:

(i) payment of Annual Rent throughout the Term at a date not later than fourteen (14) days after the due date of each instalment of Annual Rent;

(ii) payment of Lessee's contribution to Outgoings throughout the Term at a date not later than fourteen (14) days after the due date of each instalment of Lessee's contribution to Outgoings;

(iii) **clauses 10.1 and 10.2** relating to sub-letting, assignment and other interests;

(iv) the prohibition on the Lessee from carrying on any business except the Lessee's business set out in **Item 5**.

(b) The Lessee must compensate the Lessor for any breach of an essential term and the Lessor may recover damages from the Lessee in respect of such breaches. The Lessor's right under this clause is in addition to any other remedy or entitlement (including the right to terminate this Lease).

(c) If the Lessee's conduct (whether by acts or omissions) constitutes a repudiation of this

Lease, or of the Lessee's obligations under this Lease, or constitutes a breach of any term or covenant, then the Lessee must compensate the Lessor for any loss or damage suffered by reason of or arising from any such repudiation or breach;

(d) The Lessor may recover damages against the Lessee in respect of repudiation or breach of covenant for the damage suffered by the Lessor for and/or during the entire term of this Lease;

(e) The Lessor's entitlement to recover damages from the Lessee and/or any other person will not be affected or limited by any of the following:

(i) if the Lessee abandons or vacate the Premises;

(ii) if the Lessor elects to re-enter or terminate the Lease;

(iii) if the Lessor accepts the Lessee's repudiation;

(iv) if the parties' conduct (or that of any servant or agent) constitutes a surrender by operation of law.

14.9 Time to Institute Proceedings

The Lessor may at any time in the Lessor's absolute discretion institute legal proceedings claiming damages against the Lessee in respect of the entire Term (including the period before and after the abandonment, termination, repudiation or surrender by operation of law referred to in **clause 14.8**).

14.10 Mitigation of Damages

If the Lessee vacates the Premises (with or without the Lessor's consent), the Lessor will take reasonable steps to mitigate its loss and to endeavour to re-lease the Premises at a reasonable rent and on reasonable terms. Any act of the Lessor taken to mitigate damage will not constitute acceptance of the Lessee's breach, repudiation or surrender.

14.11 Amount Recoverable by Lessor

If the Lessor terminates this Lease, then (without prejudice to any other right of remedy of the Lessor) the Lessor may recover from the Lessee the difference between the aggregate of the Annual Rent and other moneys payable by the Lessee under this Lease for the unexpired residue of the term less any amount the Lessor is able to obtain or could, in the Lessor's opinion, reasonably be expected to obtain under **clause 14.10**.

15. DETERMINATION OF TERM

15.1 Lessee to Yield Up

The Lessee will at the expiration or sooner determination of the Term yield up the Premises in the order and condition, as described in **clause 9.1**.

15.2 Lessee's Obligations to Remove Fittings

The Lessee must during the last fourteen (14) days of the Term (unless the Lessor otherwise agrees in writing):

(a) remove from the Premises the Lessee's Fixtures and Fittings (other than fixtures the cost of which has been paid or subsidised by the Lessor or its predecessors in title);

(b) ensure that in the course of such removal referred to in 15.2(a), there is no damage to the Premises; and

(c) make good any damage caused to the Premises by such removal in a proper and workmanlike manner using good and sufficient materials, all damage caused to the Premises as a result of the bringing of the Lessee's Fixtures and Fittings or by their removal.

15.3 **Fittings not Removed**

If the Lessee does not remove the Lessee's Fixtures and Fittings by the Termination Date then the Lessor may at its option:

(a) cause any part of the Lessee's Fixtures and Fittings to be removed and to be stored in a public warehouse or elsewhere at the risk of the Lessee;

(b) or otherwise disposed of in such manner as the Lessor thinks fit;

(c) make good any damage to the Premises caused in such removal;

and the Lessor may recover any costs of such removal storage and making good from the Lessee as a liquidated debt payable on demand.

15.4 **Removal of Stock-in-Trade**

The Lessee must remove from the Premises all stock-in-trade and other movable chattels before the Termination Date. If this Lease is determined prior to the Termination Date, the Lessor will (if requested by the Lessee) allow the Lessee its servants and contractors access to the Premises during any one of the three days (excluding Saturdays, Sundays and public holidays) next following the date of determination between the hours of 9.00am and 5.00pm for the purpose of removing any stock-in-trade or chattels from the Premises. If the Lessee fails to remove any stock-in-trade or chattels the Lessor may at its option:

(a) cause any such stock-in-trade or chattels to be removed and stored in a public warehouse or elsewhere at the risk and at the cost of the Lessee; or

(b) treat any such stock-in-trade or chattels as if the Lessee had abandoned its interest in them and deal with the same in such manner as the Lessor will think fit.

15.5 **Indemnity**

The Lessee indemnifies and will keep indemnified the Lessor in respect of:

(a) any damage done to the Premises in or about the removal of such stock-in-trade or chattels;

(b) any costs incurred by the Lessor; and

(c) all claims demand actions costs judgements and expenses which the Lessor may suffer or incur at the suit of any person (other than the Lessee) claiming an interest in such stock-in-trade or chattels;

by reason of the Lessor acting in any manner set out in **clause 15.4** above.

15.6 **Antecedent Breaches**

The determination of this Lease will not prejudice any rights or remedies of the Lessor against the Lessee on account of any antecedent breach by the Lessee of any term or covenant of this Lease.

16. MISCELLANEOUS

16.1 Execution of Lessor's Notice

Any notice or other document or writing given by the Lessor under this Lease will be valid and effective if signed by any of the manager or secretary or attorney(s) or the Managing Agent, or solicitors for the time being of the Lessor, or any other person or persons nominated form time to time by the Lessor.

16.2 Service of Notice on Lessor

Any notice required to be served on the Lessor under this Lease must be:

(a) delivered personally at the address of the Lessor set out in this Lease; or

(b) delivered at such other address as the Lessor nominates in writing from time to time.

16.3 Service of Notice on Lessee

Any notice will be sufficiently served on the Lessee if:

(a) served personally;

(b) left addressed to the Lessee on the Premises;

(c) sent by facsimile to the Lessee's facsimile at the Premises; or

(d) forwarded by security post to the last known place of business or abode of the Lessee.

16.4 Time of Service

Any notice will be deemed to be served:

(a) if sent by post, at the time when it would be delivered in the ordinary course of post;

(b) if sent by facsimile, at the time and on the day that the whole of that notice has been transmitted from the sending machine and the answerback of the receiving machine has been received by the sending machine.

16.5 Lessee to Pay Costs and Disbursements

The Lessee must pay:

(a) the Lessor's reasonable legal and other costs and expenses incidental to the preparation and registration of this Lease and any certified copy of it required by the Lessor;

(b) costs of any consent required under the Lease, including consent to any subletting;

(c) of any surrender or termination of this Lease (other than by effluxion of time);

(d) all legal and other costs charges and expenses which the Lessor incurs in consequence of or in connection with default by the Lessee.

16.6 Lease Documentation

(a) If this Lease is not to be registered on title, the Lessor must provide the Lessee with an executed copy of the stamped Lease within one (1) month after the Lease is returned to the Lessor or the Lessor's lawyer or agent following payment of stamp duty on the Lease.

(b) If this Lease is to be registered on title, the Lessor must lodge the Lease for registration within one (1) month after the Lease is returned to the Lessor or the Lessor's lawyer or agent following payment of stamp duty on the Lease and the Lessor must provide the Lessee with an executed copy of the stamped and registered Lease within one (1) month after the Lease is returned to the Lessor or the Lessor's lawyer or agent following registration of the Lease.

(c) The periods specified in **sub-clauses 16.6(a) and (b)** are to be extended for delays attributable to the need to obtain any consent from a head lessor or mortgagee.

17. GUARANTEE AND INDEMNITY

17.1 Application of clause

This clause will not apply if **Item 12** states "not applicable" (or words to similar effect).

17.2 Guarantee

In consideration of the Lessor granting or agreeing to grant this Lease at the request of the Guarantor, the Guarantor guarantees to the Lessor:

(a) the due payment of all moneys due under this Lease or agreed to be paid:

(b) all monies otherwise payable by the Lessee in connection with its occupation of the Premises; and

(c) the due performance by the Lessee of all the covenants and terms, contained or implied in this Lease or otherwise applicable to the Lessee's occupation of the Premises.

17.3 Indemnity

The Guarantor indemnifies and will at all times keep the Lessor indemnified from and against all damages and all claims costs losses expenses or obligations direct or indirect which the Lessor may suffer or incur arising directly or indirectly out of any breach or non-observance by the Lessee of any of the terms and covenants contained or implied in this Lease, any extension or renewal of the Lease, or otherwise applicable to the Lessee's occupation of the Premises and to be performed or observed by the Lessee.

17.4 Guarantee not Prejudiced

Without limiting the generality of any other provision of this Lease, the rights of the Lessor under this **clause 17** will remain fully enforceable and the liability of the Guarantor will not be affected by any act, matter or thing including without limitation any of the following circumstances:

(a) the granting of any time, credit, forbearance, indulgence of concession at any time by the Lessor to the Lessee or any Guarantor;

(b) any absolute or partial release of, or any compromise with, the Lessee or any one or

more Guarantor;

(c) any variation, extension or renewal of this Lease and any holding over of the term or other continued occupation of the Premises by the Lessee;

(d) any composition, compromise, release, discharge, arrangement, abandonment, waiver, variation, relinquishment or renewal of any security or right by the Lessor;

(e) any assignment or sub-lease of the whole or any part of the Premises;

(f) any lack of capacity or power of the Lessee or Guarantor to enter this Lease;

(g) any exercise by the Lessor of its right of re-entry;

(h) any failure to register this Lease;

(i) any determination of this Lease;

(j) death, bankruptcy, assignment, winding up, appointment of a receiver and manager (whether by the court or under the powers contained in any instrument) or official management of the Lessee or any Guarantor or notice of any of the preceding circumstances;

(k) any act, event or omission or securities of any description which might otherwise have the effect (whether at law in equity or under statute) of reducing or discharging the liability of the Guarantor

AND EACH of the above circumstances will be construed independently and so as not to limit the meaning of any other circumstances and will not be limited by the provisions of any other clause.

17.5 **Guarantee Continuing**

(a) This Guarantee and Indemnity will be irrevocable and continuing and will extend to cover all obligations of the Lessee to the Lessor, and will remain in full force and effect until the due performance by the Lessee of all the terms and covenants on the part of the Lessee.

(b) Any payment made to the Lessor and later avoided by any statutory provision will be deemed not to have discharged the Guarantor's liability and in any such event the Lessor, the Lessee and the Guarantor will be restored to the rights which each respectively would have had if the payment had not been made.

(c) The Guarantor will not prove or claim in any such liquidation composition arrangement or assignment or in respect of the such appointment until the Lessor has received one hundred cents in the dollar in respect of moneys due, owing or payable by the Lessee to the Lessor and the Guarantor will hold in trust for the Lessor such proof of claim and any dividend received thereon.

17.6 **Transfer or assignment of Lease**

If that the Lease is transferred or assigned to any person, the benefit of this guarantee and indemnity will extend to the transferee or assignee, and the will continue concurrently for the benefit of the Lessor.

18. BANK GUARANTEE / SECURITY DEPOSIT

18.1 The Lessee shall, on or before the signing hereof, deliver to the Lessor or his agent an unconditional and irrevocable bank guarantee acceptable to the Lessor for an amount stated in **Item 13** as security for the payment by the Lessee to the Lessor of any sums which is or may become payable by the lessee to the Lessee under the Lease and for the due and punctual; observance and performance of all covenants, obligations and provision of the Lessee under the Lease.

18.2 Such bank guarantee shall also provide that payments by the financier to the Lessor shall be made without reference to the Lessee and notwithstanding any notice or direction not to make the payment that may be given by the Lessee to the financier.

18.3 If at any time any of the rent shall be overdue and unpaid or any other sum which is or may become payable by the Lessee under the Lease, the Lessor may in his discretion apply the whole or any portion of the bank guarantee to the payment of any unpaid rent or any other sum.

18.4 If at any time the Lessee fails duly and punctually to observe and perform any of the covenants obligations and provisions of this Lease to be performed by the Lessee, the Lessor may in its discretion apply so much or the whole of the bank guarantee as may be necessary in the opinion of the Lessor to compensate the Lessor for loss or damage sustained by the Lessor to compensate the Lessor for lessee or damage sustained or suffered by the Lessor by reason of such breach or default by the lessee.

18.5 Any such application by the Lessee of the bank guarantee shall not be deemed and shall not operate to waive the lessee's breach.

18.6 After each payment by the financier under its guarantee, the Lessee will restore and reinstate the bank guarantee up to the amount stated in **Item 13.**

19. GOODS AND SERVICES TAX

In this clause:

"Consideration" means any rent and other money payable pursuant to this Lease (other than this clause 20.)

"GST" means any goods and services tax or similar value added tax.

"GST Legislation" means any legislation or regulation which imposes, levies, implements or varies a GST.

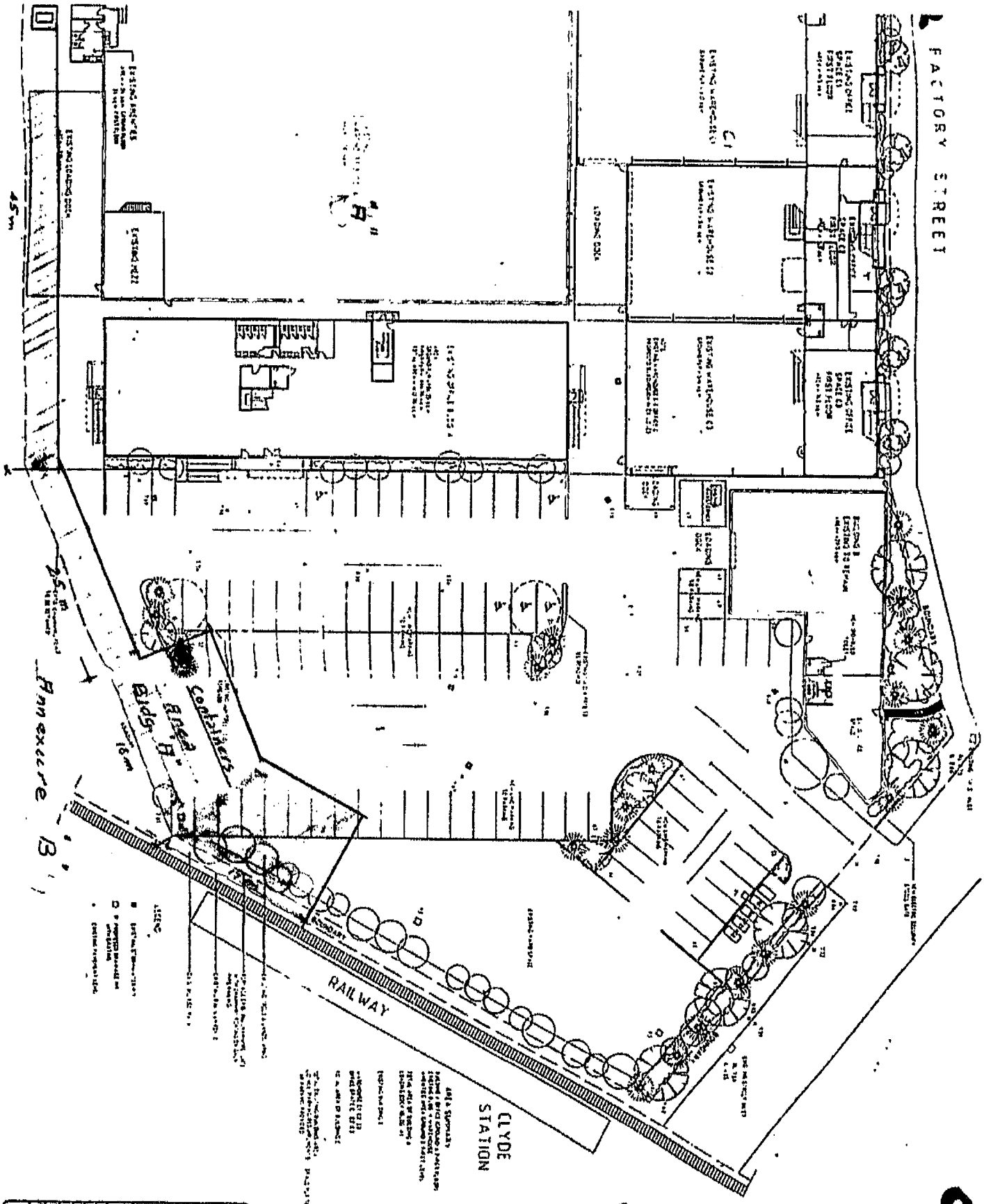
"Input Tax Credit" "supply" and **"tax invoice"** have the same meanings as defined under GST Legislation.

(a) The Consideration payable by the Lessee is exclusive of GST.

(b) In addition to the Consideration, the Lessee must pay the Lessor the GST payable in respect of any supply by the Lessor to the Lessee under or in accordance with this Lease at the same time and in the same manner as the Consideration is payable.

(c) The Lessor must comply with the GST Legislation regarding the giving of a tax invoice for any payment of GST in accordance with sub-clause (c).

(d) The amount of any applicable input tax credit is to be deducted from the Outgoings of the premises and the operating expenses of the building.


FACTORY STREET
RAILWAY
CLYDE STATION
COPY

Form: 07L
Licence: 98MT11
Edition: 0202

LEASE

New South Wales
Real Property Act 1900

AA405801E

PRIVACY NOTE: this information is legally required and will

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
21-08-2003 000156448I-001
LEASE - GENERAL
DUTIABLE AMOUNT $ **********2,100.00
DUTY $ **********

(A) **TORRENS TITLE**

Property leased: if appropriate, specify the part or premises

PART FOLIO IDENTIFIER 22/569501 AND BEING THE ~~OFFICE SPACE FRONTING 2 FACTORY STREET, GRANVILLE AND SITUATED ON THE FIRST FLOOR ABOVE WAREHOUSES C1, C2 AND C3 AT THE ABOVE ADDRESS~~. FIRST FLOOR OFFICE SPACES C1, C2 and C3 at 2 FACTORY STREET, GRANVILLE

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODE
899Q	J.J. WHEELER & Co., SOLICITORS SYDNEY DX625 PHONE: 9223-9747 Reference (optional): MR. JOHN WHEELER	L

(C) **LESSOR**

M.D.M. PTY LTD (ABN 90 001 879 849) OF 1-3 RICKETTY STREET, MASCOT NSW 2020

The lessor leases to the lessee the property referred to above.

(D) Encumbrances (if applicable): 1. SEE ANNEXURE A HERETO 2. ..... 3. .....

(E) **LESSEE**

SECTA PTY LTD (ABN 84 003 447 470) (ACN 003 447 470) OF 177 THE BOULEVARDE, STRATHFIELD NSW 2035

(F) **TENANCY:** WHOLE OF 257 THE BROADWAY SYDNEY 2007

Wynn McGufficke

(G) 1. **TERM** THREE (3) YEARS

2. **COMMENCING DATE** 1 SEPTEMBER 2003

3. **TERMINATING DATE** 31 AUGUST 2006

4. With an **OPTION TO RENEW** for a period of ONE (1) YEAR set out in ITEM 1 OF REFERENCE SCHEDULE

~~5. With an **OPTION TO PURCHASE** set out in~~ SEE CLAUSE 15 OF MEMORANDUM W401760

6. Together with and reserving the **RIGHTS** set out in ANNEXURE B HERETO

7. Incorporates the provisions or additional material set out in **ANNEXURE(S)** C hereto.

8. Incorporates the provisions set out in **MEMORANDUM** filed at Land and Property Information New South Wales as No. W401760

9. The **RENT** is set out in ~~item/clause~~ 2 of THE REFERENCE SCHEDULE HERETO SUBJECT TO ANNUAL REVIEW (ITEM 3). SEE CLAUSE 2 OF FIRST APPENDIX TO W401760

395V 15/10/03

CT produced by 395V for this Lease 15-10-03

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

CT - 395V

A set of notes on this form (07L-2) is available from Land and Property Information NSW.

DATE 11/8/2003
dd mm yyyy

(H) I certify that the lessor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this lease in my presence.

THE COMMON SEAL OF M.D.M. PTY LTD WAS HEREUNTO AFFIXED BY ORDER OF ITS BOARD OF DIRECTORS IN THE PRESENCE OF:

Signature of witness:

Name of witness:

Address of witness:

M.D.M. PTY. LIMITED A.C.N. 001 879 849 THE COMMON SEAL OF

Certified correct for the purposes of the Real Property Act 1900 by the lessor.

Signature of lessor:

MICHAEL MASCOLO SECRETARY

DOMENICO MARROCCO DIRECTOR

Note: where applicable, the lessor must complete the statutory declaration below.

I certify that the lessee, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this lease in my presence.

~~THE COMMON SEAL OF SECTA PTY LIMITED WAS HEREUNTO AFFIXED BY ORDER OF ITS BOARD OF DIRECTORS IN THE PRESENCE OF:~~

Signature of witness:

Name of witness: N/A.

Address of witness:

Certified correct for the purposes of the Real Property Act 1900 ~~by the lessee.~~ AND EXECUTED ON BEHALF OF THE CORPORATION NAMED BELOW BY THE AUTHORISED PERSONS WHOSE SIGNATURES APPEARS BELOW

~~Signature of lessee:~~ PURSUANT TO AUTHORITY SPECIFIED.

CORPORATION: SECTA PTY LTD ACN 003 447 470

AUTHORITY: S127 CORPORATION LAW

SIGNATURE OF DIRECTOR: DUNCAN MCGUFFICKE

SIGNATURE OF SECRETARY: WYNN MCGUFFICKE

(I) **STATUTORY DECLARATION ***

I .....

solemnly and sincerely declare that—

1. The time for the exercise of option to renew / option to purchase in expired lease No. ..... has ended;
2. The lessee under that lease has not exercised the option.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act 1900.

Made and subscribed at ..... in the State of .....

on ..... in the presence of—

Signature of witness: .....

Signature of lessor: .....

Name of witness: .....

Address of witness: .....

.....

Qualification of witness: *[tick one]*

- ☐ Justice of the Peace
- ☐ Practising Solicitor
- ☐ Other *[specify]* .....

* NOTE: As LPI may not be able to provide the services of a justice of the peace or other qualified witness, the statutory declaration should be signed and witnessed prior to lodgment of the form at LPI.

I certify that the guarantors, DUNCAN McGUFFICKE, JULIE ANNE McGUFFICKE and WYNN McGUFFICKE all of 2 Joubert Street, Hunters Hill NSW 2110 and DAVID JOHN ORD of 4 Challis Avenue, Dulwich Hill NSW 2203 with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this lease in my presence.

Guarantor

Guarantor

Signature of Witness

Signature of Witness

Kellie Baker
Name of Witness

Kellie Baker
Name of Witness

36/2-6 Market St
Address of Witness ROCKDALE 2216

36/2-6 Market Street
ROCKDALE 2216
Address of Witness

2

Wynn McGuffickp
Guarantor


Guarantor


Signature of Witness


Signature of Witness

Kellie Baker
Name of Witness

Kellie Baker
Name of Witness

36/2-6 Market Street
Address of Witness ROCKDALE 2216

36/2-6 Market Street
ROCKDALE 2216
Address of Witness

Annexure A

Encumbrances (Item (D) on front Page)

1. Reservations and conditions in the Crown Grant
2. F784995 Right of Footway appurtenant to land.
3. DP569501 Right of Footway appurtenant to land.
4. T358113 Easement for underground mains affecting land.
5. T472771 Easement for electricity purposes affecting the land.
6. 8234402 Mortgage to Perpetual Nominees Ltd.

THE COMMON SEAL of MDM PTY LIMITED was hereto affixed by Order of its Board of Directors in the presence of:

MDM US PTY. LIMITED A.C.N. 002 639 698 THE COMMON SEAL OF

MICHAEL MASLOUD SECRETARY

DOMENICO MARROUD DIRECTOR

Executed on behalf of the corporation named below by the authorized persons whose signature appear below pursuant to authority specified

~~THE COMMON SEAL of SECTA PTY LTD~~ was hereunto affixed by Order of its Board of Directors in ~~the presence of:~~

SECTA PTY LTD (ACN 003467470) AUTHORITY S 127 CORPORATIONS LAW

DUNCAN MCGUFFICKE DIRECTOR

WYNN MCGUFFICKE SECRETARY

Kellie BAKER

Signed by the Guarantors in the presence of:

Kellie BAKER

Wynn McGufficke

Annexure B

1. During lessee's tenancy of the demised premises the lessor grants full and free right for the lessee, its employees, agents, invitees and other persons authorised by it to go pass and repass at all times over the land.

2. The lessor reserves to itself, its employees, agents, invitees and *other persons* authorised by it full and free right to go, pass and repass at all times and for all purposes, with or without animals or vehicles or both, over the land.

3. The lessor reserves to itself the rights to allow other lessees and other licensees and their respective employees, agents, invitees and persons authorised by such other lessees and such other licensees full and free right to go, pass and repass at all times over the land with or without vehicles, for the purpose of access, ingress and egress to other demised premises, other premises let on license and public streets adjoining the land.

4. The lessor reserves to itself the right from time to time to effect alterations or additions (including additional improvements) to the land or to sell, transfer, lease, *subdivide* (including conversion to strata title or community title entirely at the expense of the lessor) mortgage or otherwise deal with the land and in particular but without in any way limiting the generality of the foregoing to change the location of common areas or the nature or location of the facilities therein or change the direction area or level of any driveways or the traffic patterns over the land or relocate vehicular entrances and exits to and from the land and in exercising the aforesaid rights the lessor may temporarily interrupt water, gas, electrical, air-conditioning, telephone or other services to the demised premises provided that in exercising the aforesaid rights (except temporarily during the course of the works) the ingress and egress to and from the demised premises by foot and by vehicle from and to a public street adjoining the land shall be adequate and provided further that in exercising any such rights, the lessor will endeavour to cause as little inconvenience to the lessee as is practicable in circumstances and will not unreasonable interfere with the conduct of the lessee's business and the estate or interest of the lessee under this lease shall be subject to all such reservations.

5. If a person other than the lessor becomes entitled to receive rents hereby reserved either by operation or law or otherwise such person shall have the benefit and burden of all covenants and agreements on the part of the lessee hereunder and the lessee at the lessor's cost shall enter into such covenants with such other person in this regard as the lessor may reasonably require.

6. (a) The lessor shall be at liberty to terminate this lease at any time subject to the lessor giving to the lessee not less than three (3) months' prior written notice of such termination and specifying the termination date in such notice.

   (b) If the lease is terminated pursuant to this clause the lessor shall not be held liable to the lessee for costs, damages and expenses caused to the lessee in relation to the termination of this lease, the relocation of the lessee's business and/or expenditure incurred by the lessee in relation to the demised premises or its business.

THE COMMON SEAL of MDM PTY LIMITED was hereto affixed by Order of its Board of Directors in the presence of:

M.D.M. PTY. LIMITED ACN 001 879 849 THE COMMON SEAL OF

Executed on behalf of the corporation named below by the authorised persons whose signatures appear below pursuant to authority specified

SECTA PTY LTD (ACN 003467670)

AUTHORITY S 127 CORPORATIONS LAW

MICHAEL MASCORD SECRETARY

DOMENICO MURRONI DIRECTOR

DUNCAN McGUFFICKE DIRECTOR

WYNN McGUFFICKE SECRETARY

~~THE COMMON SEAL of SECTA~~ PTY LTD was ~~hereunto~~ affixed by Order of its ~~Board~~ of Directors in ~~the presence of:~~

Kellie BAKER

Signed by the Guarantors in the presence of:

Kellie BAKER

wynn McGufficke

Annexure C

1. (a) During the whole of the term and any holding over thereunder the lessee will provide and maintain at their cost a Bank Guarantee in favour of the lessor in an amount equivalent to two (2) months' rent for the time being plus GST thereon. Such Bank Guarantee shall specify that the Bank will undertake unconditionally to pay forthwith to the lessor any sum or sums of money up to the limit of the Bank Guarantee which may be demanded by the lessor from time to time in satisfaction of rent and any other moneys whatsoever that may be due and payable to the lessor by the lessee pursuant to the covenants of this lease. Such Bank Guarantee shall also provide that the aforesaid payments by the Bank to the lessor shall be made forthwith and without reference to the lessee and notwithstanding any notice or direction not to make such payment that may be given by the lessee to the Bank. After each payment by the Bank under its Guarantee the lessee will restore and reinstate the said Bank Guarantee up to the sum equivalent to two (2) months' rent for the time being plus GST thereon.

   (b) AS AN ALTERNATIVE TO CLAUSE 1(A) ABOVE, the lessee shall, on or before the signing hereof, pay to the lessor by bank cheque and thereafter maintain by further payments to the lessor a security deposit in an amount equivalent to two (2) month's rent payable from time to time under the lease plus GST thereon (which security deposit shall be held by the lessor without liability to the lessee for interest thereon and so that all interest thereon will accrue for the benefit of the lessor) as security for the payment by the lessee to the lessor of any other sum or sums which is or may become payable by the lessee to the lessor hereunder and for the due and punctual observance and performance of all covenants obligations and provisions on the lessee's part herein contained. If at any time any of the rent hereby reserved shall be overdue and unpaid or any other sum which is or may become payable by the lessee to the lessor hereunder shall be overdue and unpaid the lessor may in his discretion appropriate and apply the whole or any proportion of the security deposit to the payment of any such overdue and unpaid rent or any such other sum. If at any time the lessee fails duly and punctually to observe and perform any of the covenants obligations and provisions of this lease to be observed and performed by the lessee then the lessor may in their discretion appropriate and apply so much or the whole of the security deposit as may be necessary in the opinion of the lessor to compensate the lessor for loss or damage sustained or suffered by the lessor by reason of such breach or default by the lessee. Any such appropriation or application by the lessor of the security deposit or any part thereof hereunder shall not be deemed and shall not operate to waive the lessee's breach. After each such appropriation or application by the lessor the lessee shall pay a further amount equivalent thereto to the lessor by way of reinstatement of the security deposit to be held pursuant to this clause.

2. The lessor shall not be required by the lessee to repair or replace any carpet or floor coverings at or for the demised premises.

3. The lessee will cause instalments of rent and GST from time to time payable by the lessee to the lessor under the lease to be made directly to the credit of the lessor's bank account No. 032036 611061 at Westpac Banking Corporation, Newtown Branch, New South Wales. The lessee will supply to the lessor a signed order for periodical payments on the lessee's Bank directing such Bank to debit the lessee's Bank account with instalments of rent and GST from time to time payable by the lessee to the lessor under the lease and to credit such instalments to the lessor's Bank account. All Bank charges of the lessee's Bank in relation to the aforesaid debits and credits shall be borne by the lessee.

4. Notwithstanding anything herein contained and any notice given by either party hereto to the other, if, at the date that the lessee's tenancy of the demised premises is specified or scheduled to terminate ('the terminating date'), the lessee has:

(i) failed to deliver the keys of the premises to the lessor; or
(ii) failed to carry out its obligations to carry out work at, maintain, replace, make good, repair and restore the demised premises in the terms of this lease.

THEN the lessee shall be deemed to continue to use and occupy the demised premises after the terminating date and shall be required to compensate the lessor therefor and to observe the terms and conditions of this lease pending the date ('the restoration date') which is the later of:

(i) the date of delivery of the keys of the premises by the lessee to the lessor, and
(ii) the date of completion by the lessee of his obligations to maintain, replace, restore and repair the demised premises in the terms of the lease.

UNLESS the lessor has given to the lessee written notice of express waiver by the lessor of its rights under this clause.

The compensation payable by the lessee to the lessor under this clause shall be an amount which is calculated from month to month and is equivalent to the rent payable by the lessee immediately prior to the terminating date. Such amount shall accrue and fall due for payment from month to month in advance on the dates that rent would have been payable had the lessee continued to hold over as a monthly tenant under the lease. Should the restoration date occur after a monthly amount has accrued and fallen due for payment as aforesaid no part of such amount shall be refundable by the lessor to the lessee. The lessee acknowledges that the payment to the lessor of compensation in the circumstances and on the terms outlined above is fair and reasonable.

5. (a) This clause 5 applies if, during the term, the lessor becomes liable to pay GST in relation to any supply under the lease (a "Taxable Supply).
(b) The Lessor may issue an invoice to the Lessee for the amount of GST referable to any Taxable Supply whether the value of that supply is calculated by reference to the rent or any other consideration payable by the Lessee under this Lease. The amount of GST shall be calculated in accordance with the relevant legislation establishing the GST.
(c) In addition to any consideration payable under this Lease, the Lessee must pay the amount of GST specified in an invoice under this clause 5 hereto (without deduction or set off of any other amount) to the Lessor within ten (10) business days of the invoice being given.
(d) In this clause 5, a reference to "GST" means:

A tax (including without limitation a levy charge withholding a deduction, howsoever described) that is imposed by any governmental, local governmental, semi-governmental or other competent authority calculated by reference to the price or value of anything supplied, provided or performed by the Lessor (excluding a tax imposed on net income).

6. The lessee shall refrain from causing and/or placing any obstruction, rubbish or matter on the common areas and/or driveways.

7. The lessee at its cost will undertake its own fitout works at works at the premises, including the installation of air conditioning systems, in relation to its operations at and use of the premises.

8. At or prior to the expiration of the lessee's tenancy the lessee will take, remove and carry away from the premises, all fittings, plant, equipment, the air conditioning systems, and fixtures and fittings brought upon the demised premises by the lessee but the lessee in the course of such removal shall do no damage to the demised premises or the Building and shall make good, in a proper and workmanlike manner using good and sufficient materials, all damaged caused to the demised premises and the building as a result of the bringing of the said plant, equipment, cool room facilities and fittings onto the demised premises or by their removal.

9. In addition to rental instalments, the lessor will pay to the lessee an amount reasonably estimated by the lessor for the lessee's electricity consumed at the demised premises for the first two months of the lease to establish a base rate of contribution that the lessee will pay towards electricity charges on a regular basis but subject to further adjustments. The amount payable by the lessee for electricity charges shall be further monitored from time to time by the lessor and lessee by reference to any production of various electricity meter readings and consumption records and the lessee's payments to the lessor by way of contribution towards electricity charges may be adjusted from time to time by way of increase r decrease to cover both present, part and future periods.

10. Notwithstanding anything herein contained the lessor will reduce the rent for the first year of the initial term of the lease from thirty thousand dollars ($30,000.00) per annum plus GST to twenty thousand dollars ($20,000.00) per annum plus GST PROVIDED THAT:

    (a) this clause shall not appear in any renewed lease,
    (b) the amounts of the bank guarantee and security deposit referred to in clauses 1(a) and (b) of this annexure shall be calculated for the first year of this lease by reference to a rental of thirty thousand dollars ($30,000.00) per annum plus GST, and
    (c) on the first rent review date the amount of "A" (referred to in clause 2.1 of first appendix to W401760 and clause 11(l) below) shall be thirty thousand dollars ($30,000.00)

11. Notwithstanding anything herein contained, Memorandum W401760 is subject to the following amendments in so far as it applies to this lease:

    (a) In the definition of "Building" in clause 1.1 thereof, the words "(of which the demised premises form part)" shall be inserted immediately after the words "means the Building".
    (b) In clause 1.1 thereof the definition of "Common Areas" shall be deleted and the following definition inserted in lieu thereof:

        "Common Areas" means the common property, those parts of the land as are used the purposes of ingress and egress to and from the land, the building, the demised premises and public streets and/or the provision of any landscaping and gardens and/or the provision of any services to or for the land, building and demised premises".

    (c) Deletion of the word "without" from clause 7.2 thereof and the substitution therefor of the words "notwithstanding the exception for reasonable wear and tear and without otherwise".
    (d) Deletion therefrom of clauses 4.2(c), 7.2(d), 19 and 20.
    (e) In clause 13.4 thereof the word "is" where lastly appearing therein shall read "in".
    (f) In clause 14.9 thereof the words "subject to subsequent variation pursuant to clauses 1 and 2 of the First Appendix hereto and" shall be inserted after the words "(as the case may be)" therein.
    (g) In clause 16.2(f) thereof the word "name" shall read "same".
    (h) In the fifth line of clause 1.1 of the First Appendix thereto, the word "of" where secondly appearing in such line shall read "on".

(i) In the definition of "Review Date" in clause 2.1 of the First Appendix thereto the words after "holding over" shall be deemed to be deleted therefrom.

(j) In the definition of "Valuer" in clause 2.1 of the First Appendix thereto the words "Institute of Valuers" shall be deemed to be deleted therefrom and the words "Property Institute Inc. New South Wales Division" substituted therefor.

(k) The definition of "Current Market Rent" in clause 2.1 of the First Appendix thereto shall be deemed to be deleted.

(l) Clause 2.2 of the First Appendix thereto shall be deemed to be varied as follows:

- Deletion therefrom of clause 2.2(ii)
- Deletion of the words and letter "of A" in clause 2.2(iii) and the substitution therefor of the following words and figures "calculated in accordance with the formula $\frac{A \times 104}{100}$"

(m) Deletion therefrom of clauses 2.3, 2.7, 3 and 4 of the First Appendix thereto.

THE COMMON SEAL of MDM PTY LIMITED was hereto affixed by Order of its Board of Directors in the presence of:)

As sealed on behalf of the corporation named below by the authorised persons whose signatures appear below pursuant to authority granted
CORPORATION SECTA PTY LTD
(ACN 003 467 470)
AUTHORITY S 127 CORPORATIONS LAW

~~THE COMMON SEAL of SECTA~~ PTY LTD was hereunto affixed by Order of its Board of Directors in the ~~presence of:~~)

DUNCAN McGUFFICKE
DIRECTOR

Wynn McGufficke
WYNN McGUFFICKE
SECRETARY

Kellie BAKER

Signed by the Guarantors in the presence of:)

Kellie BAKER

Wynn McGufficke

This page is an Annexure to the lease between M.D.M. PTY LIMITED (lessor) and SECTA PTY LTD (lessee) dated this 11 day of August 2003.

REFERENCE SCHEDULE

ITEM 1:	OPTION OF RENEWAL:	One period of One (1) year.
ITEM 2:	BASE RENT:	$30,000.00 gross per annum plus GST.
ITEM 3:	RENT REVIEW:	On each anniversary date of lease commencement date.
ITEM 4:	OUTGOINGS:	Inapplicable.
ITEM 5:	PERMITTED USE OF PREMISES:	Training Offices.
ITEM 6:	CLEANING:	The Lessee is responsible for cleaning.
ITEM 7:	GUARANTORS:	DUNCAN McGUFFICKE, JULIE ANNE McGUFFICKE and WYNN McGUFFICKE all of 2 Joubert Street, Hunters Hill NSW 2110 and DAVID JOHN ORD of 4 Challis Avenue, Dulwich Hill NSW 2203
ITEM 8:	DATE:	Inapplicable.

THE COMMON SEAL of MDM PTY LIMITED was hereto affixed by Order of its Board of Directors in the presence of:

M.D.M. PTY. LIMITED ACN 078 618 100 COMMON SEAL

Executed on behalf of the corporation named below by the authorised persons whose signatures appear below pursuant to authority specified

CORPORATION SECTA PTY LTD (ACN 003 467 470)

AUTHORITY S127 CORPORATIONS LAW

MICHAEL MARROCCO SECRETARY

DOMENICO MARROCCO DIRECTOR

~~THE COMMON SEAL of SECTA PTY LTD was hereunto affixed by Order of its Board of Directors in the presence of:~~

DUNCAN McGUFFICKE DIRECTOR

WYNN McGUFFICKE SECRETARY

Kellie Baker

Signed by the Guarantors in the presence of:

Kellie BAKER

Wynn McGufficke

Form: 01T
Licence: 98M111
Edition: 0011

TRANSFER

New South Wales
Real Property Act 1900

8234401X

PRIVACY NOTE: this information is legally required and will be

STAMP DUTY Office of State Revenue use only

NEW SOUTH WALES DUTY
22-10-2001 0000781761-001
SECTION 18(2)
DUTY $ ********2.00

(A) **TORRENS TITLE** If appropriate, specify the part transferred

FOLIO IDENTIFIER 22/569501

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODES
395V	HEIDTMAN & CO. SOLICITORS DX 13013 SYDNEY MARKET STREET PHONE: 9[illegible] Reference (optional): mdm/RERP	T TW (Sheriff)

(C) **TRANSFEROR** BARINU PTY LTD (ACN 002 900 423)

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 3,125,000.00 and as regards

(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple.

(F) **SHARE TRANSFERRED** WHOLE

(G) Encumbrances (if applicable): RESERVATIONS & CONDITIONS IN THE CROWN GRANT 1. F733495 RIGHT OF FOOTWAY APPURTENANT TO THE LAND ABOVE SPECIFIED AFFECTING THE S-TE 2. PARCH. PARCEL SHOWN IN DP380918 3. DP380918 RIGHT OF FOOTWAY APPURTENANT TO THE LAND ABOVE DESCRIBED 4. EASEMENT FOR UNDERGROUND MAINS AFFECTING THE LAND SHOWN SO BURDENED IN DP117514 5. EASEMENT FOR ELECTRICITY PURPOSES AFFECTING THE LAND SHOWN SO BURDENED IN DP117514

(H) **TRANSFEREE** M.O.M. Pty. Ltd. (ACN 001 879 849)

(I) **TENANCY:** 1/1

DATE ..... / ..... / .....
dd mm yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

The Common Seal of Barinu Pty Ltd was hereunto affixed by authority of the Board of Directors in the presence of:

Signature of witness:

Name of witness: S. Leyda

Address of witness: Director

BARINU PTY. LTD. A.C.N. 002 900 423 Common Seal

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:

Joan Leyda
Director

I certify that the transferee, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness:

Name of witness:

Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the transferee.

Signature of transferee:

JOSEPH WHEELER
155 Kent St
Sydney 2000

If signed on the transferee's behalf by a solicitor or licensed conveyancer, insert the signatory's full name and capacity below:

Transferee's Solicitor

All handwriting must be in block capitals.

Page 1 of 1 number additional pages sequentially

A set of notes on this form (01T-2) is available from Land and Property Information NSW.

97-07L

LEASE

Real Property Act, 1900

3641142 A

Office of

B

N.S.W. STAMP DUTY
$297.50
030997 3004 11 00215252/01

(A) PROPERTY LEASED

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

Folio Identifier 22/569501

(B) LODGED BY

L.T.O. Box	Name, Address or DX and Telephone
956F	S. Warner - Ames Dx 552 REFERENCE (max. 15 characters): BARINU P/L

(C) LESSOR

BARINU PTY LIMITED ACN 002 900 423

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

1. Mortgage E.286694 2. ..... 3. ..... 4. .....

(E) LESSEE

L

CLYDE INDUSTRIES LTD ACN 000 002 031

(F)

as joint tenants/tenants in common

(G)

1. **TERM:** Two (2) Years
2. **COMMENCING DATE:** 1 October 1996
3. **TERMINATING DATE:** 30 September 1998
4. With an **OPTION TO RENEW** for a period of Two (2) Years set out in Clause 14.
5. ~~With an **OPTION TO PURCHASE** set out in~~
6. ~~Together with and reserving the **RIGHTS** set out in~~
7. Incorporates the provisions set out in **ANNEXURE** Schedules hereto.
8. ~~Incorporates the provisions set out in **MEMORANDUM No.** filed in the Land Titles Office.~~

OFF L 896652.

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

CHECKED BY (office use only)

CT Prodby 374

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

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

The COMMON SEAL of BARINU PTY LIMITED was hereunto affixed by authority of the Board in the presence of:

.....
~~Signature of Witness~~

.....
~~Name of Witness (BLOCK LETTERS)~~

Company Secretary

.....
~~Address of Witness~~

BARINU PTY. LTD. A.C.N. 002 900 423 Common Seal

.....
~~Signature of Lessor~~

Company Director

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

The COMMON SEAL of CLYDE INDUSTRIES LIMITED was hereunto affixed by authority of the Board in the presence of:

.....
~~Signature of Witness~~

.....
Name of Witness (BLOCK LETTERS)

Company Secretary

.....
~~Address of Witness~~

Common CLYDE INDUSTRIES LIMITED A.C.N. 000 002 031 Seal

.....
~~Signature of Lessee~~

Company Director

I am a Director of Barinu Pty Limited

(I) I solemnly and sincerely declare that the time for the exercise of the Option to Renew/Purchase in expired lease No.U964652..... has ended and the lessee under that lease has not exercised the option.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900.

Made and subscribed at ..... in the State of ..... on ..... 19.....

in the presence of

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

.....
Signature of Lessor

THIS AND THE FOLLOWING PAGES COMPRISE THE ANNEXURES REFERRED TO IN A LEASE MADE BETWEEN BARINU PTY LIMITED (AS LESSOR) AND CLYDE INDUSTRIES LIMITED (AS LESSEE)

SCHEDULE ONE

The Lessor reserves unto itself the following rights and liberties:

The uninterrupted installation passage and use of pipes cables conducts, antennae and satellite discs on and through the Demised Premises and the running of all substances and materials through the same provided always that in exercising such rights the Lessor shall use its best endeavours to minimise any disturbance caused to the Lessee in its use and occupation of the Demised Premises.

SCHEDULE TWO

PART 1

SECTION 1: DEFINITION AND INTERPRETATION

1.1 Definitions

In this Lease except to the extent that such interpretation shall be excluded by or be repugnant to the context:

Building "No. 1" means the Building erected on the Land and known as Building "No. 1" in Lease Registered Number X836031.
Building "No. 2" means the Building erected on the Land and known as Building "No. 2" in Lease Registered Number X836031.
Building "No. 3" means the Building erected on the Land and known as Building "No. 3" in Lease Registered Number X836031.

"Building or Buildings" means all and each of the buildings and other improvements erected on the Land.

"Demised Premises" means the premises referred to in ITEM 3 of the Reference Schedule and includes the Land and all Buildings and improvements erected thereon or on some portion thereof AND TOGETHER with and subject to all rights and easements and appurtenances licenses and permits all the lessors fixtures fittings plant machinery and equipment located thereon exclusively serving the Demised Premises.

"Land" means and includes the land hereinbefore in this Lease described against the marginal heading "Property Leased"

"Lessee" means and includes the Lessee referred to in ITEM 1 of the Reference Schedule its successors and permitted assigns or, being a person, his executors administrators and permitted assigns and where not repugnant to the context the servants agents and invitees of the Lessee.

"LESSOR" means and includes the Lessor referred to in ITEM 2 of the Reference Schedule its successors and assigns or, being a person, his executors administrators and assigns and where not repugnant to the context the servants agents and contractors of the Lessor.

"this Lease" means this Lease including any Schedules and Annexures hereto.

"the Property Report" means the property report prepared by Bishops Australia Pty Limited dated 14th April, 1988 in respect of the Demised Premises.

"the Reference Schedule"means the Reference Schedule annexed hereto.

"Term" means the term of this Lease referred to in ITEM 5 of the Reference Schedule.

1.2 Interpretation

Number Gender and Persons

Words importing the singular number include the plural and the masculine gender the feminine or neuter and vice versa and works importing persons include corporations and vice versa.

Joint and Several Covenants

Any covenant or agreement on the part of two or more persons shall be deemed to bind them jointly and severally.

Statutes

References to a statute or ordinance includes all regulations under and amendments to that statute or ordinance whether by subsequent statute or otherwise and a statute or ordinance passed in substitution for the statute or ordinance referred to or incorporating any of its provisions.

Headings

Headings have been inserted for guidance only and do not form any part of the context of this Lease.

PART 2

EXCLUSION OF STATUTORY PROVISIONS

2.1 No Implied Covenants

The covenants and powers implied in every lease by virtue of Sections 84, 84A and 85 of the Conveyancing Act, 1919 as amended are hereby expressly negatived.

2.2 To the extent permitted by law the application to this Lease of any moratorium or other Act whether State or Federal having the effect of extending the Term, reducing or postponing the payment of rent or otherwise affecting the operation of the terms of this Lease is expressly excluded and negatived.

2.3 The employment in this Lease of words in any of the form of words contained in the first column of part II of the Schedule IV to the Conveyancing Act 1919 shall not imply any covenant under Section 86 of that Act.

PART 3

RENT

3.1 Rent

The Lessee will during the Term duly and punctually pay on or before the first day of each and every month to the Lessor free of all deductions in each year the Annual Rent and other payments specified calculated and payable in the manner provided in Schedule A.

3.2 Termination or abatement on Damage

If either the whole or any part of the Demised premises shall be resumed or compulsorily acquired by any competent authority or the whole or any part of the Demised Premises shall be destroyed or damaged by fire, flood, lightning, storm, tempest, civil commotion, act of God. explosion, riots, impact by aircraft and other vehicles and earthquake or other disabling cause so as (in either case) to render the Demised Premises during the term substantially unfit for the use and occupation of the Lessee, or so as (in either case) to deprive the Lessee of substantial use of the same, or so as (in the latter case only) to render the rebuilding or reconstruction of the Demised premises in its previous form impracticable of undesirable in the opinion of the Lessor then:

(a) this Lease may be terminated by either the Lessor or the Lessee by notice in writing to the other without compensation provided always that (in the latter case) the Lessor shall have failed to notify the Lessee within twelve (12) weeks of the event of damage or destruction of its intention to rebuild the Demised Premises;

(b) any such termination as aforesaid shall be without prejudice to the rights of either party in respect of any antecedent breach matter or thing;

(c) nothing contained or implied in this Lease shall be deemed to impose any obligation upon the Lessor to rebuild or reinstate or make fit for use and occupation the Demised premises;

(d) upon the happening of any such damage or destruction as aforesaid the total yearly rent hereby reserved (which for the purposes of this clause 3.2 shall be deemed to mean all moneys payable by the Lessee under this Lease or a proportionate part thereof according to the nature and extent of the damage sustained) shall abate until the Demised Premises shall have been rebuilt or reinstated or made fit for use and occupation or until this Lease shall be terminated pursuant to the provisions of sub-clause (a) of this Clause as the case may be; and

(e) in the event of any dispute arising out of this Clause the same shall be referred to an expert to be appointed by agreement between the Lessor and the Lessee or if they are unable to agree to such appointment within a period of fourteen (14) days then either party may request the President of the New South Wales Division of the Australian Institute of Valuers to appoint an expert acting as an expert and not as an arbitrator and the decision of such expert (including any decision as to costs of such determination) shall be final and binding on the parties hereto.

3.3 Damage to the Building and the Estate

If the whole or any part of the Buildings are destroyed or damaged by any of the disabling causes listed in clause 3.2 so as to deprive the Lessee of substantial use of the Demised Premises then upon the happening of any such damage or destruction as aforesaid the total Annual Rent hereby reserved (which for the purposes of this Clause 3.3 shall be deemed to include all moneys payable by the Lessee under Clause 3.1) or a proportionate part thereof according to the nature and extent of the inability of the Lessee to use

the Demised Premises shall abate until the Demised Premises are able to be used once again by the Lessee PROVIDED THAT notwithstanding anything in this clause expressed or implied the Lessee shall have no right of termination and Annual Rent shall not abate if, as a direct or indirect consequence of any act or omission on the part of the Lessee or any servant, agent or invitee of the Lessee the Lessor does not receive the full benefit of the loss of gross revenue policy of insurance taken out and effected by the Lessee as contemplated by Clause 7.1 hereof.

PART 4

USE OF THE DEMISED PREMISES AND ASSIGNMENT

4.1 Permitted Use

The Lessee will not use or permit to be used the Demised Premises for any purpose other than as set out in ITEM 6 of the Reference Schedule and will not permit or suffer the use of the same for any residential purpose whether temporary or permanent.

4.2 No Noxious Use

The Lessee will not permit any noxious, immoral, noisome, offensive or illegal act, trade, business, occupation or calling at any time during the Term to be exercised, carried on, permitted or suffered in or upon the Demised Premises and will not permit any act, matter or thing whatsoever at any time during the Term to be done in or upon the Demised Premises which shall or may cause annoyance, nuisance, grievance, damage or disturbance to other persons.

4.3 Restrictions on assignments and Sub-letting

The Lessee will not during the continuance of this Lease assign, transfer, demise, part with or share the possession of, or grant any licence affecting, or otherwise deal with or dispose of the Demised Premises or any part thereof or the Lessee's interest therein or by any act or deed procure any of the foregoing. Notwithstanding the above a subletting or assignment or transfer parting or sharing with possession or grant of any licence affecting the Demised Premises or any part thereof shall be deemed not to be a breach of the foregoing provisions of this Clause if:

(a) the Lessee is not at the time of applying for consent or thereafter in default in the due and punctual observance and performance of the covenants and agreements on the Lessee's part herein contained or implied;

(b) the Lessee pays to the Lessor all costs incurred by the Lessor (whether or not the proposed assignment or sub-lease proceeds to completion) including the Lessor's administrative and other expenses and legal costs of and incidental to the giving of its consent;

(c) the Lessee has proved to the reasonable satisfaction of the Lessor that the proposed assignee, transferee or sublessee (hereinafter called the "Ingoing Tenant") is a respectable responsible and solvent person capable of adequately carrying on the business permitted under this Lease to be carried on in the Demised Premises:

(d) in the case of a sub-lease the Lessee has established to the satisfaction of the Lessor that the rent payable by the proposed sub-lessee under the proposed sub-lease is at a rate not less than the then current market rate of rent for the Demised Premises;

(e) the Ingoing Tenant has entered into a covenant with the Lessor in the form reasonably required by the Lessor that he will duly perform and observe the covenants and agreements on the Lessee's part contained in this Lease;

(f) except in the case of an Ingoing Tenant the shares of which are listed on the Australian Stock Exchange Limited the Ingoing Tenant has furnished the Lessor with such guarantee or guarantees of the performance of his obligations under this Lease as the Lessor shall reasonably require; and

(g) in the case of an assignment or transfer and without prejudice to a party's rights in respect of any antecedent breach matter or thing, the Lessee has entered into a deed in the form required by the Lessor under which the Lessee releases the Lessor from all claims against the Lessor in respect of, or in any way arising from, this Lease.

PART 5

MAINTENANCE REPAIR AND ALTERATIONS

5.1 Lessee to Keep in Repair

The Lessee shall during the whole of the Term and otherwise so long as the Lessee may remain in possession or occupation of the Demised Premises when where and so often as need be maintain replace repair and keep the Demised Premises in good and substantial repair order and condition (having regard to their condition at the commencement of the Lessee's occupation of the premises and having regard to the observations contained in the Property Report and reasonable wear and tear to the Premises from the date of the Lessee's occupation of the Premises and following the commissioning of the Property Report) damage by explosion,

earthquake, aircraft, riot, civil commotion, fire, flood, lightning, storm, tempest and reasonable wear and tear, act of God and war damage only excepted unless any insurance moneys are irrecoverable through the neglect, default or misconduct of the Lessee. This covenant shall not impose on the Lessee any obligation in respect of any structural replacement or repair except when the same is rendered necessary by any act neglect default or omission of the Lessee or by the particular nature of the Lessee's use or occupancy of the Demised Premises. The Lessee acknowledges that subject to the observations contained in the Property Report and subject to reasonable wear and tear to the Premises from the date of the Lessee's occupation of the Premises and following the commissioning of the Property Reprort, the Demised Premises were in good and substantial repair order and condition at the commencement of the Lessee's occupation of the premises.

5.2 Redecoration by Lessee

Without prejudice to the provisions of Clauses 5.1 and 10.5, the Lessee will:-

(a) Upon determination of the Term (or any renewed term granted pursuant to Clause 14 hereof) and from time to time if necessary or reasonably required by the Lessor, clean or otherwise appropriately treat in a proper and workmanlike manner such part of the Demisted premises so treated as at the date of commencement of this Lease or of the Lessee's occupation of the Premises; and

(b) paint or repaint the interior of the building throughout to the satisfaction of the Lessor acting reasonably on or before the later of the expiration of the term or any renewed term granted pursuant to Clause 14 hereof.

5.3 To Keep Clean and Maintain Lessee's Equipment

(a) The Lessee will during the Term cause the Demised Premises to be kept clean and free from dirt and rubbish and particularly shall store and keep all refuse and garbage in proper receptacles and arrange for the regular removal of the same from the Demised Premises.

(b) The Lessee will at all times during the Term keep and maintain clean and in good and substantial repair working order and condition all machinery plant equipment fixtures fittings and furnishings of the Lessee.

5.4 Broken Glass etc

The Lessee will immediately repair and replace all broken glass with glass of the same or similar quality and all damaged or broken lighting electrical equipment installed upon the Demised Premises.

5.5 Lessor May Inspect

The Lessor may at all reasonable times upon giving to the Lessee reasonable notice (except in the case of emergency when no notice shall be required) enter upon the Demised Premises and view the state of repair of the same and may serve upon the Lessee a notice in writing of any defect for the repair of which the Lessee may be responsible hereunder requiring the Lessee within a reasonable time to repair the same.

5.6 Lessor May Repair

The Lessor may at all reasonable times upon giving to the Lessee reasonable notice (except in the case of emergency when no notice shall be required) enter upon the Demised Premises with workmen and others and all necessary materials for the purpose of complying with any request, requirement, notification or order of any authority having jurisdiction or authority over or in respect of the Demised Premises for which the Lessee is not liable under its covenants contained in this Lease or for carrying out such reinstatement repairs renovations modifications extensions or alterations to the Demised Premises deemed necessary or desirable by the Lessor provided always that in the exercise of any such power under this Clause as little inconvenience as practicable shall be caused to the Lessee.

5.7 Alterations

The Lessee shall not make or cause to be made any alterations, additions or improvements or install or cause to installed in the Demised Premises any trade fixtures, plumbing fixtures or partitions without the prior written consent of the Lessor, and shall in the course of such partitioning, alterations or additions made with the consent of the Lessor observe and comply with all reasonable requirements of the Lessor and the requirements of public authorities. Without limiting the foregoing provisions of this Clause, any proposed installation of racking systems or other means of storing heavy or concentrated loads, requires the prior written consent of the Lessor. Without prejudice to the foregoing provisions of this Clause, the Lessee will when applying for the Lessor's approval to any partitioning, alterations or additions to the Demised premises submit with the application drawings and specifications in respect thereof prepared by a qualified consultant or consultants approved by the Lessor. Work in respect of partitioning, alterations or additions to the Demised Premises approved by the Lessor shall only be carried out by contractors or qualified tradesmen approved by the Lessor and if required by the Lessor the Lessee shall on completion of such work hand to the Lessor a certificate by a consultant approved

by the Lessor to the effect that such work has been carried out in accordance with the drawings and specifications relating thereto and in accordance with the requirements of all relevant public authorities. The Lessor shall be entitled to obtain the advice of its architects in respect thereof and any fees payable by the Lessor to such architects shall be paid by the Lessee to the Lessor on demand.

PART 6

GENERAL LESSEE'S COVENANTS

6.1 Services

The Lessee will as and when the same become due for payment pay all accounts for the supply of water gas electricity telephone and other services to or from the Demised Premises.

6.2 Requirements of Public Authorities

The Lessee will forthwith comply with all present or future statutes, ordinances, proclamations, orders and regulations affecting or relating to the Demised Premises or the use thereof, and with all requirements which may be made or notices or orders which may be given by any governmental, semi-governmental, city, municipal, health, licensing or any other authority having jurisdiction or authority in respect of the Demised Premises or the use thereof PROVIDED ALWAYS that the Lessee shall be under no liability in respect of any structural alteration required by any such authority unless the relevant authority's requirement arises out of the particular nature of the Lessee's use or occupancy of the Demised Premises.

6.3 Floor Over-Loading

The Lessee will not do nor permit or suffer to be done upon the Building anything in the nature of overloading any floor of the Building whereby the building may be strained or any walls or floors may be caused to sag or deflect from the right line or whereby the Demised premises may be otherwise damaged.

6.4 Use of Lavatories etc

The Lessee will not use nor permit nor suffer to be used the lavatories sinks and drainage and other plumbing facilities in the Demised Premises for any purposes other than those for which they were constructed or provided and shall not deposit or permit to be deposited therein any sweepings rubbish or other matter and any damage thereto caused by misuse shall be made good by the lessee forthwith.

6.5 Pest Control

The Lessee will take all reasonable precautions to keep the Demised Premises free of rodents vermin insects pests birds and animals and in the event of failing so to do will if so required by the Lessor but at the cost of the Lessee employ from time to time pest exterminators approved by the Lessor.

6.6 Infectious Illness

The lessee will in the event of it becoming aware of any infectious illness occurring in the Demised premises forthwith give notice of that illness to the Lessor and to the proper public authorities and at the expense of the Lessee will thoroughly fumigate and disinfect the Demised Premises to the satisfaction of the Lessor and such public authorities and otherwise comply with their lawful requirements in regard to the same.

6.7 Notice of Defects

The lessee will give to the Lessor prompt notice in writing of any accident to or defect or want of repair in any services or fixtures fittings plant or equipment in the Demised Premises and of any circumstances likely to be or to cause any danger risk or hazard to the Demised Premises or to any person therein or thereon.

6.8 Signs

(a) The Lessee shall not erect, display, affix or exhibit on or to the Demised premises any signs, lightings, embellishments, advertisements, names and/or notices visible from the outside of the Demised Premises. At the expiration or sooner determination of the Term the Lessee shall at its own expense remove all lettering signs and other distinctive marks from the Demised Premises and make good any damage caused by such removal.

(b) Notwithstanding the provisions of Clause 6.8(a) hereof the Lessee shall with the consent of the Lessor, which consent shall not be unreasonably withheld and with the consent of all appropriate statutory authorities, be entitled to erect such pole signs and signs as are approved by the Lessor on the Building.

PART 7

INSURANCE MATTERS

7.1 Building Insurance

The lessee will during the term and during such further time as the Lessee shall hold the Demised premises or any part thereof keep insured at all times the Demised Premises or any part thereof and shall effect and maintain the following policies of insurance relating to the Demised Premises and the Buildings:

(a) a policy under which the Buildings are insured for their full indemnity and replacement value against fire and the extraneous risks of storm and tempest, explosion, earthquake, riots, civil commotion and malicious acts, impact, aircraft, damage by rain water and water discharge from pipes or systems and flood and against such other risks as may from time to time be reasonably required by the Lessor;

(b) a policy or policies against sprinkler leakage, machinery breakdown as applicable (excluding any air-conditioning plant) or boiler explosion (including third party cover) if such installations or any of them are made in the buildings at any time during the said Term;

(c) a policy under which the Lessor is insured against loss of rent for a minimum period of twelve (12) months;

(d) insurance on cost of removal of debris in such amount as the Lessor may from time to time deem necessary.

7.2 Contents, Public risk, Plate Glass

(a) The Lessee will during the Term insure and keep insured at all times the contents of the Demised Premises (including all air-conditioning and other plant equipment fixtures and fittings from time to time being part thereof) against damage or destruction by fire, water, earthquake, theft, attempted theft, lightning, explosion, storm, tempest, riot, strikes, civil commotion, malicious damage, sprinkler leakage, impact by vehicles or aircraft or articles dropped therefrom, loss of rental and from such other insurable risks required by the Lessor or the Lessee in not less than their full insurable value on a replacement and/or reinstatement basis including extra costs reinstatement.

(b) The Lessee will effect and keep effected in respect of the Demised Premises adequate public risk insurance in an amount of five million dollars ($5,000,000) for any single event or such higher amount as may be notified in writing by the Lessor from time to time and will, if required by the Lessor, notify the Lessor of the details thereof. The Lessee shall ensure that such insurance covers the indemnities referred to in the following part and otherwise conforms with the reasonable requirements from time to time of the Lessor of which the Lessee is given notice.

(c) The Lessee will insure and keep insured in such amount (not being less than the full insurable value) and against breakage from any cause whatsoever and against such other risks as the Lessor may from time to time reasonably require all plate glass forming part of the Demised Premises together with the exterior windows of the Demised Premises.

7.3 Application of Insurance Moneys

In the case of any loss or damage to any of the items referred to in the preceding Clause arising from any cause covered by such insurances the Lessee will immediately apply for and expend the moneys received by virtue of such insurances in restoring, replacing, repairing or reinstating the same and in case such moneys shall be insufficient for that purpose it will pay the balance out of its own money.

7.4 Policies

Notwithstanding anything expressed or implied in this Lease, the following provisions apply to all policies of insurance required to be effected by the Lessee pursuant to its obligations under this Lease:-

(a) All policies are to be placed with an insurer acceptable to the Lessor (whose acceptance will not be unreasonably withheld) and shall be for such amounts and cover such risks and contain such conditions endorsements and exclusions as are reasonably acceptable to or reasonably required by the Lessor. No exclusions endorsements or alterations thereto are to be made unless first approved in writing by the Lessor.

(b) All policies are to be taken out in the names of the Lessor as owner noting the interest thereon of the Lessor's Mortgagee and the Lessee for their respective rights and interests.

(c) Certificates of Currency of all insurances must be obtained and are to be lodged by the Lessee with the Lessor immediately upon receipt by the Lessee.

(d) All premiums in respect of all such policies and renewals of policies are to be paid punctually by the Lessee and the receipt for each premium payable in respect of each policy (or other proof of payment to the Lessor's satisfaction) is to be produced by the Lessee to the Lessor at least fourteen (14) days before the due date for renewal thereof.

(e) All policies required to be effected by the Lessee pursuant to its obligations under this Lease must be in full force and effect as at the commencement date of this Lease.

7.5 Heating

The Lessee will not use or permit or suffer tc be used any method of heating or lighting the Demised Premises in contravention of any policy of insurance in respect of the Demised Premises.

7.6 Insurance Not to be Avoided

The Lessee will not at any time during the Term do or suffer to be done or allowed any act matter or thing upon the Demised Premises or bring or keep anything therein whereby any insurance relating to the Demised Premises against damage by fire and other risks as aforesaid may be rendered void or voidable or whereby the rate of premium on such insurance shall be liable to be increased and that in case the Lessor shall approve in writing of any proposal of the Lessee to increase any risk the Lessee will pay all additional premiums of insurance on the Demised Premises (if any) required on account of the additional risk caused by the use to which the Demised Premises are put by the Lessee with the consent aforesaid.

7.7 No Inflammable Substances

Without prejudice to the generality of the preceding Clause the Lessee will not (other than in accordance with the specified use of the Demised Premises approved by the Lessor) store chemicals inflammable liquids acetylene gas or alcohol volatile or explosive oils compounds or substances upon the Demised Premises or use any of such substances or fluids in the Demised Premises for any purpose.

7.8 Fire Regulations

The Lessee will comply with insurance sprinkler and fire alarm regulations in respect of any partitions which may be erected by the Lessee upon the Demised Premises and the Lessee will pay to the Lessor the cost of any alterations to the sprinkler and fire alarm installation which may become necessary by reason of the non-compliance by the

Lessee with the said regulations or the requirements of the Insurance Council of Australia or the requirements of the insurer.

PART 8

INDEMNITIES

8.1 The lessee's Indemnities

(a) The Lessee agrees to occupy and use and keep the Demised Premises at the risk of the Lessee and hereby releases to the full extent permitted by law the Lessor and its contractors employees and agents from all claims and demands of every kind resulting from any accident or damage to property or death of or injury to any person of whatsoever kind in or near the Demised Premises other than as may be caused by the negligence, default or wilful act or omission of the Lessor its contractors or employees and the Lessee agrees that the Lessor shall have no responsibility or liability for any loss of or damage to fixtures or personal property of the Lessee other than as may be caused by the negligence, default or wilful act or omission of the Lessor its contractors or employees.

(b) The lessee shall take and be subject to the same responsibilities in regard to damage or injury to persons and property and otherwise to which the Lessee would be subject if during the Term the Lessee were the owner of the freehold of the Demised Premises PROVIDED ALWAYS that the extent of any liability pursuant to this sub-clause (b) shall be limited to and shall not exceed the extent of any liability imposed upon the Lessee pursuant to sub-clauses (a), (c) and (d) hereof.

(c) Without prejudice to the generality of the foregoing provisions, to the extent that any moneys paid to the Lessor out of insurances effected by the Lessee do not fully indemnify the Lessor against the same and except where the same is caused by the negligence default or wilful act or omission of the Lessor its contractors or employees the Lessee will indemnify and keep indemnified the Lessor its contractors and employees from and against all such actions, claims, demands, notices, losses, damages, costs and expenses incurred by the Lessor or for which the Lessor or its contractors or employees may be or become liable in respect of any damage to property or death of or injury to any person which may be suffered or sustained in, upon or near the Demised Premises.

(d) Without limiting the generality of sub-clauses (a), (b) and (c) the Lessee will and does hereby indemnify the Lessor from and against all actions, claims, demands, losses, damages, costs and expenses for which Lessor may be or become liable in respect of or arising from:

(i) the negligent or careless use, misuse, waste or abuse by the Lessee or any contractor, sub-contractor, licensee, invitee, client, customer or visitor of the Lessee or any person claiming through or under the Lessee of the water, gas, electricity, lighting or other services and facilities to the Demised Premises or arising from any faulty fitting or fixture of the Lessee; or

(ii) overflow or leakage of water (including rain water) in or from the Demised Premises but originating from the Demised Premises and other fluids in, into or from the Demised premises or caused or materially contributed to by any act or omission on the part of the Lessee or other persons as aforesaid; or

(iii) Loss, damage or injury from any cause whatsoever to property or person caused or contributed to by the use of the Demised premises by the Lessee or other persons as aforesaid; or

(iv) loss, damage or injury from any cause whatsoever to the Demised Premises or to any property or person within or without the Demised Premises occasioned or contributed to by any act, omission, neglect, breach or default of the Lessee or other persons as aforesaid.

PART 9

QUIET ENJOYMENT, REMOVAL OF LESSEES FIXTURES AND HOLDING OVER

9.1 Quiet Enjoyment

The Lessee paying the rent hereby reserved and duly and punctuality observing and performing the covenants obligations and provisions in this Lease on the part of the Lessee to be observed and performed shall and may peaceably possess and enjoy the Demised Premises during the Term without any interruption or disturbance from the Lessor or any other person or persons lawfully claiming by from or under the Lessor.

9.2 Removal of Lessee's Fixtures

The Lessee may prior to, at or within forty eight (48) hours after the determination of this Lease (and will if so required by the Lessor at or immediately following the expiration or sooner determination of the Term) take remove and carry away from the Demised Premises all fixtures fittings plant equipment or other articles upon the Demised Premises in the nature of trade or tenants fixtures brought upon the Demised Premises by the Lessee with the consent of the Lessor but the Lessee shall in such removal do not damage to the Demised Premises or shall forthwith make good any such damage.

9.4 Lessee's Fixture Not Removed

If the Lessee does not remove and carry away any of its fixtures, fittings, plant, equipment and other articles or items at or immediately following the determination of this Lease the Lessor may at the expense of the Lessee remove and dispose of the same and any of such fixtures, fittings, plant, equipment and other articles or items not removed by the Lessee as aforesaid shall become the property of the Lessor.

9.5 Holding Over

In the event of the Lessee holding over after the expiration or sooner determination of the Term with the consent of the Lessor the Lessee shall become a monthly tenant only of the Lessor at a monthly rental equivalent to a monthly proportion of the total annual rental payable by the Lessee under this Lease at the expiration or sooner determination of the Term or at such other monthly rental as advised in writing by the Lessor to the Lessee and otherwise on the same terms and conditions as those herein contained so far as applicable.

PART 10

DEFAULT, TERMINATION, ETC

10.1 Re-entry or Surrender

In the event that:-

(a) any rent or any other moneys payable under this Lease remain unpaid for fourteen (14) days next after the date appointed for payment of the same (although no formal or legal demand shall have been made therefor); or

(b) the Lessee fails to perform or observe any one or more of the covenants or provisions on the part of the Lessee expressed or implied in this lease unless the non-performance or non-observance has been waived or excused by the Lessor in writing; or

(c) any event occurs entitling the holder or proprietor of any charge over the whole of the assets and undertaking of the Lessee to exercise the security constituted by such charge; or

(d) the Lessee being a corporation, an order is made or a resolution is effectively passed for the winding up of the Lessee (other than for the purposes of amalgamation or reconstruction) or the Lessee ceases to carry on business; or

(e) the Lessee being a corporation (other than one whose shares are listed on any Australian Stock Exchange or a wholly owned subsidiary of such corporation), if any persons who between them beneficially hold or control at the date of this Lease more than fifty per centum (50%) of the voting, income or capital participation rights therein subsequently cease to hold or control more than fifty per centum (50%) of such rights without the prior written consent of the Lessor which consent shall not be unreasonably withheld;

THEN in any one or more of such events the Lessor may at any time thereafter but without prejudice to any claim which the Lessor may have against the Lessee in respect of any breach of the covenants and provisions in this Lease on the part of the Lessee to be observed or performed either re-enter into and repossess and enjoy the Demised Premises as of its former estate (anything herein contained to the contrary notwithstanding) and thereupon this Lease shall absolutely determine, or call for an immediate surrender of the Lessee's estate and interest under this Lease and for the more effectual enforcement of this right the Lessee hereby irrevocably appoints the Lessor its true and lawful attorney to surrender or cause to be surrendered this Lease and to sign all notices deeds and documents for the purpose of such surrender in the name of the Lessee and upon such surrender the Lessor shall be freed and discharged from any action suit claim or demand by or obligation to the Lessee under or by virtue of this Lease.

10.2 Essential Terms

Without prejudice to any other right or remedy of the Lessor contained or implied in this Lease, it is expressly agreed and declared that should the Lessee fail to pay any moneys properly payable by the Lessee to the Lessor pursuant to this Lease within fourteen (14) days of written demand by the Lessor given after the due date for payment or shall fail to fully comply with each or any of its covenants and obligations referred to in Parts 3, 4, 5 and 7 hereof then the Lessee shall be deemed to be in breach of an essential and fundamental term of this Lease. If the Lesser elects to terminate this Lease by reason of that breach and provided that the Lessee does not obtain relief against forfeiture in which event the Lessor's right to damages shall be determined in accordance with the general law, then the Lessee shall pay to the lessor upon demand liquidated damages for such breach being the aggregate of the several rentals and all other amounts (including legal costs and disbursements in connection with the default)

payable to the Lessor pursuant to this Lease which would have been payable by the Lessee for the unexpired residue of the Term but for such termination less the aggregate of the several rentals and other amounts which the Lessor using reasonable endeavours actually receives by reletting the Demised Premises for the unexpired residue of the Term and less any rebate in respect of the balance of rents not then accrued (after deduction of the several rentals received by the Lessor from the said reletting) determined by applying a discount rate per annum, equal to the Westpac Indicator Rate as at the date the Lessor terminates this Lease, to each rent instalment over the period by which the date for payment is accelerated.

10.3 Lessor's Remedy of Lessee's Defaults

If the Lessee omits or neglects to pay any money or to do or effect anything which the Lessee has in this Lease covenanted to pay do or effect then on each and every such occasion it shall be lawful for but not obligatory upon the Lessor and without prejudice to any rights or powers arising from such default to pay such money or to do or effect such thing by itself as if it were the Lessee and for that purpose the Lessor may enter upon the Demised Premises and there remain for the purpose of doing or effecting any such thing and without prejudice to the rights powers and remedies of the Lessor otherwise under this Lease the Lessee will pay to the Lessor interest at the rate of the higher of fourteen per centum (14%) per annum or the rate of interest charged by the Commonwealth Bank of Australia in respect of overdraft loans in excess of $100,000.00 on any moneys due by the Lessee to the Lessor on any account whatsoever pursuant to this Lease but unpaid for fourteen (14) days such interest to be computed from the due date for the payment of the moneys in respect of which the interest is chargeable until payment of such moneys in full and be recoverable in like manner as rent in arrears.

10.4 Yielding Up

The Lessee will forthwith upon the expiration of the Term or sooner determination of this Lease peaceably surrender and yield up to the Lessor the Demised Premises clean and free from rubbish and in good and substantial repair and condition in all respects and as nearly as possible in the same condition as at the commencement of the Term or in the event of any part thereof having been replaced or renewed during the Term as nearly as possible in the same condition as at the date of such replacement or renewal having regard to the age thereof damage by explosion, earthquake, aircraft, riot, civil commotion, fire, flood, lightning, storm, tempest, reasonable wear and tear, act of God, malicious damage and war damage only excepted.

10.5 Opportunity to Rectify

Notwithstanding anything expressed or implied in this Lease the Lessor will not re-enter upon the Demised premises or determine or forfeit or require a surrender of this Lease or the Term unless the Lessor shall have first given to the Lessee notice of breach of default or non-observance on which the Lessor relies in seeking to act as aforementioned PROVIDED ALWAYS that:

(a) in the case of a breach, default or non-observance remediable by payment of money if the Lessee pays to the Lessor within fourteen (14) days of service of such notice all moneys necessary to remedy such breach, default or non-observance; or

(b) in the case of a breach, default or non-observance remediable other than by the payment of moneys, if the Lessee within twenty-eight (28) days of the service of such notice undertakes in writing to the Lessor to remedy the breach, default or non-observance and so remedies the same within a reasonable time having regard to the nature and extent thereof; or

(c) in the case of a breach, default or non-observance which cannot be remedied if the Lessee within twenty eight (28) days of the service of such notice pays or undertakes to pay and does in fact pay to the Lessor within three (3) months thereafter (or such further period as the Lessor shall determine in its absolute discretion) reasonable compensation to the satisfaction of the Lessor in respect of such breach, default or non-observance having regard to the nature and extent hereof;

THEN the Lessor shall not be entitled to rely upon the breach, default or non-observance set out in the notice to the Lessee as a ground for re-entry, determination, forfeiture or requiring surrender and the same shall be absolutely waived by the Lessor and this Lease shall continue in full force and effect as if no such breach, default or non-observance had occurred.

PART 11

MISCELLANEOUS

11.1 Exclusion of Warranties

The Lessee acknowledges and declares that no promise representation warranty or undertaking has been given by or on behalf of the Lessor in respect to the suitability of the Demised Premises for any business to be carried on in the Demised Premises.

11.2 Whole Agreement

The covenants and provisions contained in this Lease and in any Agreement pursuant to which this Lease was granted expressly or by statutory implication cover and comprise the whole of the agreement between the parties and it is expressly agreed and declared that no further or other covenants or provisions whether in respect of the Demised Premises or otherwise shall be deemed to be implied herein or to arise between the parties by way of collateral or other agreement by reason of any promise representation warranty or undertaking given or made by any party to another on or prior to the execution hereof and the existence of any such implication or collateral or other agreement is hereby negative.

11.3 Waiver

No waiver by the Lessor of one breach by the Lessee of any obligation on its part contained in this Lease shall operate as a waiver of another breach of the same or of any other obligation contained or implied in this Lease.

11.4 No Premium

Save as herein contained no premium or other consideration has been or is to be paid to the Lessor hereunder by the Lessee or any other person.

11.5 Cost of Lease etc

The Lessee will pay the Lessor's reasonable legal costs and all duties, fees, charges and expenses of or incidental to the preparation completion stamping and registration of this Lease and any renewal and any application for the consent of the Lessor hereunder and of or incidental to any and every breach or default by the Lessee hereunder and in or incidental to the exercise or attempted exercise of any right power privilege authority or remedy of the Lessor under or by virtue of this Lease and reasonable fees of all professional consultants properly incurred by the Lessor in consequence of or in connection with breach or default by the Lessee hereunder.

11.6 Lessee not to Cause Rent Reductions

The Lessee will not without the written consent of the Lessor by any act matter or deed or by any failure or omission impair reduce or diminish directly or indirectly the rent hereby reserved or impose or cause indirectly the rent hereby reserved or impose or cause or permit to be imposed on the Lessor any liability of the Lessee under or by virtue of this Lease even though entitled so to do whether by statute ordinance proclamation order regulation or moratorium (present or future) or otherwise.

11.7 Notices

All demands requisitions consents elections or notices shall be in writing and may be given to or served upon a party by being left at that party's registered office or principal place of business in the State in which the Demised Premises are situated or by being posted in a prepaid certified or registered envelope. Any demand requisition consent election or notice if posted shall be deemed duly served at the expiration of three (3) business days after the time of posting. In proving the giving of the same it shall be sufficient to prove the envelope containing the same was properly addressed stamped and registered and put into a post office box in the Commonwealth of Australia. Any demand requisition consent election or notice may be signed by the Lessor or on its behalf by the Solicitor, the Secretary or other authorised officer for the time being of the Lessor.

11.8 Non-merger

None of the terms or conditions of this Lease nor any act matter or thing done under or by virtue of or in connection with this Lease or any other agreement between the parties shall operate as a merger of any of the rights and remedies of the parties in or under this Lease or in or under any such other agreement all of which shall continue in full force and effect.

11.9 Supply failure

The Lessor will not be under any liability for any loss injury or damage sustained by the Lessee or any other person at any time as a result of or arising in any way out of the failure of the electricity or water supply or any other services or facilities enjoyed by the Lessee in connection with the Demised Premises.

11.10 Moratorium

Unless application is mandatory by law no statute ordinance proclamation order regulation or moratorium present or future shall apply to this Lease so as to abrogate extinguish impair diminish further delay or otherwise prejudicially affect any rights powers remedies or discretions given or accruing to the Lessor.

11.11 "For Sale" and "To Let" Notices

The Lessee will at all reasonable times permit the Lessor to exhibit to prospective purchasers the Demised Premises and exhibit where the Lessor shall think fit the usual "For Sale" notice and will at all times within the three (3) months immediately

preceding the termination of this Lease permit the Lessor to exhibit to prospective tenants the Demised Premises and to affix and exhibit where the Lessor shall think fit the usual "To Let" notice and in each case with the name and address of the Lessor and/or its agent thereon and the Lessee will not remove any such notice without the written consent of the Lessor.

11.12 Consents

In any case where pursuant to this Lease the doing or execution of any act or thing by the Lessee is dependent upon the consent or approval of the Lessor such consent or approval may be given conditionally or unconditionally or withheld by the Lessor in its absolute uncontrolled discretion unless otherwise herein provided.

11.13 Easements etc

The Lessor shall be entitled for the purpose of the provision of public or private access to and egress from the Demised Premises, or support of structures hereafter erected on or from adjoining lands or of services (including water, drainage, gas and electricity supply and telephonic and electronic communication services) to grant easements or enter into any arrangement or agreement with any of the owners, lessees, tenants or occupiers or others interested in any land adjacent or near to the Demised Premises or with any public authority or private company as the Lessor thinks fit and it may likewise for such aforesaid purpose dedicate land or transfer grant or create any easement privilege or other right in favour of such parties or in favour of any such adjoining or neighbouring land or any public authority or private company over or affecting the Demised Premises and this Lease shall be deemed to be subject to any such agreement arrangement right easement or privilege. Notwithstanding the reservation contained in this Clause, the Lessor in the exercise of the rights herein conferred shall not dedicate land or transfer, grant or create any easement privilege or other right to any other person which shall substantially and permanently derogate from the enjoyment of rights conferred on the Lessee by this Lease.

11.14 Lessee's Obligations

Whenever the Lessee is obliged or required hereunder to do or effect any act matter or thing then the doing of such act matter or thing shall, unless this Lease otherwise provides, be at the sole risk and expense of the Lessee.

11.15 Reimbursement of Lessor's Expenses

To the extent permissible at law the Lessee will forthwith upon demand pay to the Lessor by way of additional rent an amount equivalent to any moneys paid by the Lessor in respect of any liability imposed on the Lessee under or by virtue of this Lease notwithstanding that any statute ordinance proclamation order regulation or moratorium present or future directly or indirectly imposes such liability upon the Lessor.

11.16 Breakages

The Lessee will immediately make good any breakage or damage to the Demised Premises or to any adjoining premises or any facility or appurtenance thereof occasioned by want of care misuse or abuse on the part of the Lessee or its invitees or otherwise occasioned by any breach or default of the Lessee hereunder.

11.17 Electrical Fittings

The Lessee will promptly at its own cost and expense properly replace all broken or faulty light bulbs, tubes and associated fittings in or about the Demised Premises.

11.18 Locks, Keys, etc

The Lessee will at all times during the Term and at its own cost and expense keep and maintain the doors, locks and window fittings of the Demised Premises in good and efficient working order and at the expiration or sooner determination of the Term return all keys of the Demised Premises to the Lessor.

11.19 No Mortgage, etc, without Consent

The Lessee will not mortgage, charge or otherwise encumber its estate or interest in this Lease without the prior consent in writing of the Lessor which consent shall not be unreasonably withheld.

11.20 Secure Premises

The Lessee will cause all exterior doors and windows of the Demised Premises to be securely locked and fastened at all times when the Demised Premises are not being used and hereby authorises the Lessor's representative from time to time to enter the Premises for the purpose of locking any such door or window left unlocked or unfastened.

11.21 Removal of Lessee's Equipment on Default

Notwithstanding the provisions of Clause 9.4 hereof the Lessor may upon re-entry or determination as the case may be remove from the Demised Premises any contents of every description including but without limiting the generality of the foregoing the Lessee's fixtures and stock in trade. Such contents shall be stored in a public warehouse or elsewhere at the cost of the Lessee without the Lessor being deemed guilty of conversion or becoming liable for any loss or damage occasioned by or during removal or storage. Any costs incurred by the Lessor in or about such removal and/or storage shall be paid by the Lessee to the Lessor on demand.

11.22 Fencing

The Lessor agrees that if reasonably required by the Lessee, it will replace and/or repair any Fencing surrounding the Demised Premises in the event that any such Fencing shall require replacement and/or repair at no cost to the Lessee PROVIDED THAT the Lessor shall not be required to repair any Fencing that is damaged or destroyed as a result of any negligent act or omission on behalf of the Lessee its servants and/or agents.

11.23 Carpark Area

The Lessor agrees that it will be responsible for the general maintenance, repair and upkeep of the carparking area during the term of the Lease occasioned as a result of normal fair wear and tear at no cost to the Lessee.

11.24 The Lessor acknowledges and agrees that the Overhead Travelling Cranes (2) installed in the premises known as Building No. 2 are the property of the Lessee, and as such are tenants fixures.

PART 12

HEADLEASE AND/OR OTHER INTERESTS

Entry and View

12.1 The Lessee at all times during the Term will permit the Lessor and any person having any estate or interest in the Demised Premises superior to or concurrent with the Lessor upon giving twenty-four (24) hours prior notice (except in cases of emergency) to exercise the Lessor's powers to enter and view the Demised Premises and to carry out repairs, renovations maintenance and other work thereon and otherwise to exercise or perform their lawful rights or obligations in regard thereto.

PART 13

AIR CONDITIONING

13.1 Where any plant, machinery or equipment for heating, cooling or circulating air (all of which are herein included in the expression "air-conditioning plant") is provided or installed in or to the Demised Premise by the Lessor then the following provisions shall apply:

(a) The Lessee shall be responsible for the repair and maintenance of the air-conditioning plant that may become necessary to ensure the efficient operation of the air-conditioning plant;

(b) Non-Interference

The Lessee will at all times comply with and observe the reasonable requirements of the Lessor in regard to the air-conditioning plant and will not do or permit to be done anything in relation to the same or otherwise which might interfere with or impair the efficient operation of the air-conditioning plant.

(c) Failure

If the air-conditioning plant fails to function for any reason the Lessee shall not by reason of such failure be entitled to determine this Lease.

(d) The cost of major or capital works required in respect of the air conditioning plant shall be borne by the Lessor.

PART 14

OPTIONS

14.1 Term and Rent

If the Lessee shall desire to take a renewed lease of the Demised Premises granted to it for the further term of years set out in ITEM 7 of the Reference Schedule from the expiration of this Lease and gives to the Lessor not less than three (3) nor more than six (6) months previous notice in writing to that effect and provided the Lessee is not then in default under the provisions of this Lease the Lessor shall at the cost and expense of the Lessee grant to the Lessee a renewal of this Lease for the further term of years aforesaid commencing on the day next following the expiration of the Term hereby granted. The annual rent for such option term shall be determined by indexation at the beginning of the option by reference to Consumer Price Index.

(a) In this case:

(i) take the yearly rent as at the commencement date ($X)

(ii) divide that rent by the Consumer Price Index Number for Sydney (All Groups) for the quarter ended just before that date (CPI 1)

(iii) multiply the result by the Consumer Price Index Number for Sydney (All Groups) for the quarter ended just before the review date (CPI 2)

The product is the new rent for the year beginning on the review date ($Y), written as a formula:

$$\frac{\$X}{CPI\ 1} \times CPI\ 2 = \$Y$$

(b) The landlord must calculate the new rent after each review date and give the tenant written notice of the new rent.

(c) If the Australian Bureau of Statistics makes a change in the reference base of the index and there is a published co-relation between the old and new base then the published co-relation is to be applied to convert the CPI 1 figure to the new reference base. If there is none then the landlord and the tenant agree to accept the calculations of the landlord's solicitor who must be retained to determine a fair co-relation between the old and the new series of numbers.

(d) If the index used to calculate the new rent is discontinued the landlord may substitute another index that, as nearly as practicable, serves the same purpose.

and otherwise upon the same terms and conditions as are contained in this Lease PROVIDED THAT renewed lease which shall be granted shall not contain this clause.

SCHEDULE A

RENT

The rent payable by the Lessee to the Lessor pursuant to this Lease shall be calculated and paid in the following manner:

A.1 RENT

(a) The Lessee will during the Term pay to the Lessor without demand from the Lessor and without any deduction whatsoever the Annual Rent referred to in ITEM 4 of the Reference Schedule such rent to be paid in advance by regular and consecutive monthly payments each equal to one-twelfth (1/12) of the Annual Rent each on the first day of each month in each year during the Term (except the first and last payments which if necessary will be proportionate) the first being computed from and payable on the date of commencement of this Lease as the Lessor may specify in writing to the Lessee

B. LESSEE'S REIMBURSEMENT OF OUTGOINGS OF THE BUILDING

1. In addition to the rent hereby reserved and any other charges payable by the Lessee to the Lessor hereunder the Lessee shall pay or reimburse to the Lessor within fourteen (14) days of demand in writing by the Lessor the percentage set out in Item of the Reference Schedule of the actual amount of all such rates, taxes, assessments and outgoings incurred by the Lessor in respect of the Buildings and the Demised Premises for each calendar year for the duration of this Lease or any holding over or any renewal or renewals thereof.

2. (a) For the purpose of this Lease "the outgoings of the Buildings and the Demised Premises" shall mean the total sum of all rates, taxes, costs and expenses of the Lessor properly or reasonably assessed or assessable, paid or payable, charged or chargeable or otherwise incurred in respect of the Demised Premises and in relation to the control, management and maintenance of the Demised Premises and without limiting the generality of the foregoing shall include:

(i) all rates, taxes (excluding income tax) charges assessments, duties, impositions and fees at any time or from time to time payable to any Government, local Government, semi-Government or other competent authority in respect of the Building and the Demised Premises irrespective of the ownership thereof;

(ii) all charges for and costs in relation to the supply of water, sewerage and drainage;

(iii) the reasonable cost of operating, supplying maintaining, repairing and renovating all services including inter alia air conditioning from time to time provided by the Lessor for the Demised Premises including the plant and equipment required for any such services provided however, that the Lessee shall not be responsible for the cost of major or capital works required in respect of the air-conditioning plant other than as occasioned by the Lessee's negligence or default;

(iv) all charges for lighting, power, heating air conditioning and ventilation incurred in connection with the Building;

(v) the reasonable cost of general repairs servicing and maintenance of the Building and its appurtenances including fees paid to specialist contractors;

(vi) the costs of the removal of all waste and garbage from the Building and the cost of cleaning the Building and the Demised Premises;

(vii) the cost of purchasing, hiring, maintaining and servicing all landscaped areas;

(viii) the costs of cleaning the external surface of the Building;

(ix) land tax calculated on a single holding basis.

(x) all insurance premiums (if any) payable by the Lessor in respect of the Buildings and the Demised Premises the fittings and fixtures (including plate glass) of the Lessor therein in their full insurable reinstatement value against fire, flood, lighting, storm and tempest and in respect of insurance of the Building and the Lessor against all other risks (referrable to the Land and the Buildings or the Lessor in relation to the Lessor's ownership or interest in the Land and the Building) as the Lessor may deem necessary or desirable (including loss of rent or gross revenue insurance in respect of a period of not less than twelve (12) months, machinery breakdown, public risk and consequential loss);

(xi) any other expenditure properly and reasonably incurred from time to time by the Lessor in the management operation and maintenance of the Buildings generally;

But excluding all costs expenses and outgoings which under the terms of this Lease or any schedule hereto are to be borne by the Lessor or which are incurred by the Lessor in performing or complying with its obligations hereunder.

THE REFERENCE SCHEDULE

ITEM 1: THE LESSEE

Clyde Industries Limited of ~~140 Arthur Street, North Sydney~~ 12 Boundary St. Sth. Brisbane.

ITEM 2: THE LESSOR

Barinu Pty Limited

ITEM 3: DESCRIPTION OF THE DEMISED PREMISES

All of the land comprised in Folio Identifier 22/569501 together with those Building and other improvements erected upon the Land and known as "Clyde Industries", Factory Street, Granville.

ITEM 4: ANNUAL RENT

Three hundred and fifty eight thousand four hundred and sixty four dollars ($358,464.00)

ITEM 5: TERM OF LEASE

Two (2) years

ITEM 6: PERMITTED USE

Warehouse and Office, factory and manufacturing plant

ITEM 7: OPTION FOR RENEWAL

Two (2) years

ITEM 8: LESSEE'S CONTRIBUTION TO OUTGOINGS

100%

BARINU PTY. LTD. A.C.N. 002 900 423 Common Seal

THE COMMON SEAL of)
BARINU PTY LIMITED)
was hereunto affixed in)
accordance with its Articles of)
Association in the presence of:)

Director Joan Leyda

Secretary Anna Leyda

Common CLYDE INDUSTRIES LIMITED A.C.N. 000 002 031 Seal

THE COMMON SEAL of)
CLYDE INDUSTRIES LIMITED)
was hereunto affixed in)
accordance with its Articles of)
Association in the presence of:)

Director

Secretary

CONSENT TO LEASE

R.P.A.

WESTPAC BANKING CORPORATION ARBN 007 457 141 (hereinafter called "the Bank") being the Mortgagee under Mortgage No E286694 of the premises demised by the within Lease hereby consents to such Lease as from the registration thereof and not otherwise and subject to the following conditions and provisions namely:

1. THAT this consent shall be without prejudice to the rights powers and remedies of the Bank and its assigns under the said Mortgage which shall remain in full force and effect as if this consent had not been given except that so long as the covenants and provisions of the said Lease are duly observed and performed the Bank will in the event of the exercise of the power of sale or other power or remedy of the Bank or its assigns on default under the said Mortgage exercise the same subject to the then subsisting rights of the Lessee his executors administrators and assigns under the said Lease.

2. THAT so long as the Bank or its assigns is or are registered as Mortgagee of the said premises the Lessee shall obtain the consent or approval of the Bank or its assigns in addition to the consent or approval of the Lessor in all cases where under the said Lease the consent or approval of the Lessor is required.

3. THAT upon the Bank or its assigns giving notice to the Lessee of demanding to enter into receipt of the rents and profits of the said premises the covenants on the part of the Lessee expressed or implied in the said Lease shall be deemed to have been entered into by the Lessee with the Bank and its assigns and all the rights powers and remedies of the Lessor under the said Lease shall vest in and be exercisable by the Bank and its assigns until such notice be withdrawn or the said Mortgage be discharged.

4. The Bank shall in no way be bound to perform and shall not incur any liability in respect of the covenants and agreements expressed or implied in the said Lease and on the part of the Lessor to be performed and observed.

5. The word "Lessee" where used herein shall mean and include the Lessee his executors administrators or permitted assigns.

DATED this 18 November 1997 .

Signed for and on behalf of
WESTPAC BANKING CORPORATION

ANTON JAYARATNAM
.....
(Full name of Attorney)
its Attorney who is personally known to me

.....
(Witness Signature)
MICHAEL ANDERSON
BANK OFFICER
1 KING ST. CONCORD WEST

WESTPAC BANKING CORPORATION by its Attorney who states that at the time of executing this instrument no notice of revocation has been received of the Power of Attorney registered in the Land Titles Office Book 4059 No.831 under the authority of which this Instrument has been executed.

.....
Supervisor, NSW Service Centre

17 /Req:B650617 /Doc:DL U964652 /Rev:12-Mar-2010 /Sts:OK.SC /Prt:10-May-2012 11:47 /Pgs:ALL /Seq:1 of 36

RP1

LEASE

Real Property Act, 1900

U 964652 X

Offn.

211294 5122 11 20089898/01 $224?.00

B

$ 22??.00

(A) PROPERTY LEASED

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

FOLIO IDENTIFIER: 22/569501

OFFICE U
OFF: L
X836031

(B) LODGED BY

L.T.O. Box	Name, Address or DX and Telephone
1003 M.	KARL ZACCA & Co DX 3814 CAMPSIE
	REFERENCE (max. 15 characters):

(C) LESSOR BARINU PTY LIMITED (A.C.N. 002 960 423)

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

1. Mortgage E286694. 2. ..... 3. ..... 4. .....

(E) LESSEE

L

CLYDE INDUSTRIES LTD (A.C.N. 000 002 031)

(F) as joint tenants/tenants in common

(G)

1. **TERM:** Two (2) Years
2. **COMMENCING DATE:** 30 June 1994
3. **TERMINATING DATE:** 29 June 1996
4. With an **OPTION TO RENEW** for a period of Three (3) Years set out in Clause 14
5. ~~With an **OPTION TO PURCHASE** set out in~~
6. ~~Together with and reserving the **RIGHTS** set out in~~
7. Incorporates the provisions set out in **ANNEXURE** Schedules hereto.
8. ~~Incorporates the provisions set out in **MEMORANDUM No.** filed in the Land Titles Office.~~

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

CHECKED BY (office use only) 10

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900 DATE OF EXECUTION ...1/11/95.....

Signed in my presence by the lessor who is personally known to me
THE COMMON SEAL OF BARINU PTY LIMITED
was hereunto affixed by authority of the
Board in the presence of:

.....
~~Signature of Witness~~

.....
~~Name of Witness (BLOCK LETTERS)~~
COMPANY SECRETARY

.....
~~Address of Witness~~

BARINU PTY. LTD. A.C.N. 002 900 423 Common Seal

.....Joan Leyda.....
COMPANY DIRECTOR.

.....
~~Signature of Lessor~~

Signed in my presence by the lessee who is personally known to me
THE COMMON SEAL OF CLYDE INDUSTRIES LIMITED
was hereunto affixed by authority of the
Board in the presence of:

.....
~~Signature of Witness~~

.....
~~Name of Witness (BLOCK LETTERS)~~
COMPANY SECRETARY

.....
~~Address of Witness~~

Common CLYDE INDUSTRIES LIMITED A.C.N. 000 002 031 Seal

.....
COMPANY DIRECTOR

.....
~~Signature of Lessee~~

(I) I solemnly and sincerely declare that the time for the exercise of the Option to Renew/Purchase in expired lease No.....
has ended and the lessee under that lease has not exercised the option.
I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900,
Made and subscribed at ..... in the State of ..... on ..... 19.....
in the presence of

.....
Signature of Witness

.....
~~Name of Witness (BLOCK LETTERS)~~

.....
~~Address of Witness~~

BARINU PTY. LTD. A.C.N. 002 900 423 Common Seal

.....Joan Leyda.....
Signature of Lessor

THIS AND THE FOLLOWING PAGES COMPRISE THE ANNEXURES REFERRED TO IN A LEASE MADE BETWEEN BARINU PTY LIMITED (AS LESSOR) AND CLYDE INDUSTRIES LIMITED (AS LESSEE)

SCHEDULE ONE

The Lessor reserves unto itself the following rights and liberties:

The uninterrupted installation passage and use of pipes cables conducts, antennae and satellite discs on and through the Demised Premises and the running of all substances and materials through the same provided always that in exercising such rights the Lessor shall use its best endeavours to minimise any disturbance caused to the Lessee in its use and occupation of the Demised Premises.

SCHEDULE TWO

PART 1

SECTION 1: DEFINITION AND INTERPRETATION

1.1 Definitions

In this Lease except to the extent that such interpretation shall be excluded by or be repugnant to the context:

Building "No. 1" means the Building erected on the Land and known as Building "No. 1" in Lease Registered Number X836031.
Building "No. 2" means the Building erected on the Land and known as Building "No. 2" in Lease Registered Number X836031.
Building "No. 3" means the Building erected on the Land and known as Building "No. 3" in Lease Registered Number X836031.

"Building or Buildings" means all and each of the buildings and other improvements erected on the Land.

"Demised Premises" means the premises referred to in ITEM 3 of the Reference Schedule and includes the Land and all Buildings and improvements erected thereon or on some portion thereof AND TOGETHER with and subject to all rights and easements and appurtenances licenses and permits all the lessors fixtures fittings plant machinery and equipment located thereon exclusively serving the Demised Premises.

"Land" means and includes the land hereinbefore in this Lease described against the marginal heading "Property Leased"

"Lessee" means and includes the Lessee referred to in ITEM 1 of the Reference Schedule its successors and permitted assigns or, being a person, his executors administrators and permitted assigns and where not repugnant to the context the servants agents and invitees of the Lessee.

"LESSOR" means and includes the Lessor referred to in ITEM 2 of the Reference Schedule its successors and assigns or, being a person, his executors administrators and assigns and where not repugnant to the context the servants agents and contractors of the Lessor.

"this Lease" means this Lease including any Schedules and Annexures hereto.

"the Property Report" means the property report prepared by Bishops Australia Pty Limited dated 14th April, 1988 in respect of the Demised Premises.

"the Reference Schedule"means the Reference Schedule annexed hereto.

"Term" means the term of this Lease referred to in ITEM 5 of the Reference Schedule.

1.2 Interpretation

Number Gender and Persons

Words importing the singular number include the plural and the masculine gender the feminine or neuter and vice versa and works importing persons include corporations and vice versa.

Joint and Several Covenants

Any covenant or agreement on the part of two or more persons shall be deemed to bind them jointly and severally.

Statutes

References to a statute or ordinance includes all regulations under and amendments to that statute or ordinance whether by subsequent statute or otherwise and a statute or ordinance passed in substitution for the statute or ordinance referred to or incorporating any of its provisions.

Headings

Headings have been inserted for guidance only and do not form any part of the context of this Lease.

PART 2

EXCLUSION OF STATUTORY PROVISIONS

2.1 No Implied Covenants

The covenants and powers implied in every lease by virtue of Sections 84, 84A and 85 of the Conveyancing Act, 1919 as amended are hereby expressly negatived.

2.2 To the extent permitted by law the application to this Lease of any moratorium or other Act whether State or Federal having the effect of extending the Term, reducing or postponing the payment of rent or otherwise affecting the operation of the terms of this Lease is expressly excluded and negatived.

2.3 The employment in this Lease of words in any of the form of words contained in the first column of part II of the Schedule IV to the Conveyancing Act 1919 shall not imply any covenant under Section 86 of that Act.

PART 3

RENT

3.1 Rent

The Lessee will during the Term duly and punctually pay on or before the first day of each and every month to the Lessor free of all deductions in each year the Annual Rent and other payments specified calculated and payable in the manner provided in Schedule A.

3.2 Termination or abatement on Damage

If either the whole or any part of the Demised premises shall be resumed or compulsorily acquired by any competent authority or the whole or any part of the Demised Premises shall be destroyed or damaged by fire, flood, lightning, storm, tempest, civil commotion, act of God, explosion, riots, impact by aircraft and other vehicles and earthquake or other disabling cause so as (in either case) to render the Demised Premises during the term substantially unfit for the use and occupation of the Lessee, or so as (in either case) to deprive the Lessee of substantial use of the same, or so as (in the latter case only) to render the rebuilding or reconstruction of the Demised premises in its previous form impracticable of undesirable in the opinion of the Lessor then:

(a) this Lease may be terminated by either the Lessor or the Lessee by notice in writing to the other without compensation provided always that (in the latter case) the Lessor shall have failed to notify the Lessee within twelve (12) weeks of the event of damage or destruction of its intention to rebuild the Demised Premises;

(b) any such termination as aforesaid shall be without prejudice to the rights of either party in respect of any antecedent breach matter or thing;

(c) nothing contained or implied in this Lease shall be deemed to impose any obligation upon the Lessor to rebuild or reinstate or make fit for use and occupation the Demised premises;

(d) upon the happening of any such damage or destruction as aforesaid the total yearly rent hereby reserved (which for the purposes of this clause 3.2 shall be deemed to mean all moneys payable by the Lessee under this Lease or a proportionate part thereof according to the nature and extent of the damage sustained) shall abate until the Demised Premises shall have been rebuilt or reinstated or made fit for use and occupation or until this Lease shall be terminated pursuant to the provisions of sub-clause (a) of this Clause as the case may be; and

(e) in the event of any dispute arising out of this Clause the same shall be referred to an expert to be appointed by agreement between the Lessor and the Lessee or if they are unable to agree to such appointment within a period of fourteen (14) days then either party may request the President of the New South Wales Division of the Australian Institute of Valuers to appoint an expert acting as an expert and not as an arbitrator and the decision of such expert (including any decision as to costs of such determination) shall be final and binding on the parties hereto.

3.3 Damage to the Building and the Estate

If the whole or any part of the Buildings are destroyed or damaged by any of the disabling causes listed in clause 3.2 so as to deprive the Lessee of substantial use of the Demised Premises then upon the happening of any such damage or destruction as aforesaid the total Annual Rent hereby reserved (which for the purposes of this Clause 3.3 shall be deemed to include all moneys payable by the Lessee under Clause 3.1) or a proportionate part thereof according to the nature and extent of the inability of the Lessee to use

the Demised Premises shall abate until the Demised Premises are able to be used once again by the Lessee PROVIDED THAT notwithstanding anything in this clause expressed or implied the Lessee shall have no right of termination and Annual Rent shall not abate if, as a direct or indirect consequence of any act or omission on the part of the Lessee or any servant, agent or invitee of the Lessee the Lessor does not receive the full benefit of the loss of gross revenue policy of insurance taken out and effected by the Lessee as contemplated by Clause 7.1 hereof.

PART 4

USE OF THE DEMISED PREMISES AND ASSIGNMENT

4.1 Permitted Use

The Lessee will not use or permit to be used the Demised Premises for any purpose other than as set out in ITEM 6 of the Reference Schedule and will not permit or suffer the use of the same for any residential purpose whether temporary or permanent.

4.2 No Noxious Use

The Lessee will not permit any noxious, immoral, noisome, offensive or illegal act, trade, business, occupation or calling at any time during the Term to be exercised, carried on, permitted or suffered in or upon the Demised Premises and will not permit any act, matter or thing whatsoever at any time during the Term to be done in or upon the Demised Premises which shall or may cause annoyance, nuisance, grievance, damage or disturbance to other persons.

4.3 Restrictions on assignments and Sub-letting

The Lessee will not during the continuance of this Lease assign, transfer, demise, part with or share the possession of, or grant any licence affecting, or otherwise deal with or dispose of the Demised Premises or any part thereof or the Lessee's interest therein or by any act or deed procure any of the foregoing. Notwithstanding the above a subletting or assignment or transfer parting or sharing with possession or grant of any licence affecting the Demised Premises or any part thereof shall be deemed not to be a breach of the foregoing provisions of this Clause if:

(a) the Lessee is not at the time of applying for consent or thereafter in default in the due and punctual observance and performance of the covenants and agreements on the Lessee's part herein contained or implied;

(b) the Lessee pays to the Lessor all costs incurred by the Lessor (whether or not the proposed assignment or sub-lease proceeds to completion) including the Lessor's administrative and other expenses and legal costs of and incidental to the giving of its consent;

(c) the Lessee has proved to the reasonable satisfaction of the Lessor that the proposed assignee, transferee or sublessee (hereinafter called the "Ingoing Tenant") is a respectable responsible and solvent person capable of adequately carrying on the business permitted under this Lease to be carried on in the Demised Premises:

(d) in the case of a sub-lease the Lessee has established to the satisfaction of the Lessor that the rent payable by the proposed sub-lessee under the proposed sub-lease is at a rate not less than the then current market rate of rent for the Demised Premises;

(e) the Ingoing Tenant has entered into a covenant with the Lessor in the form reasonably required by the Lessor that he will duly perform and observe the covenants and agreements on the Lessee's part contained in this Lease;

(f) except in the case of an Ingoing Tenant the shares of which are listed on the Australian Stock Exchange Limited the Ingoing Tenant has furnished the Lessor with such guarantee or guarantees of the performance of his obligations under this Lease as the Lessor shall reasonably require; and

(g) in the case of an assignment or transfer and without prejudice to a party's rights in respect of any antecedent breach matter or thing, the Lessee has entered into a deed in the form required by the Lessor under which the Lessee releases the Lessor from all claims against the Lessor in respect of, or in any way arising from, this Lease.

PART 5

MAINTENANCE REPAIR AND ALTERATIONS

5.1 Lessee to Keep in Repair

The Lessee shall during the whole of the Term and otherwise so long as the Lessee may remain in possession or occupation of the Demised Premises when where and so often as need be maintain replace repair and keep the Demised Premises in good and substantial repair order and condition (having regard to their condition at the commencement of the Lessee's occupation of the premises and having regard to the observations contained in the Property Report and reasonable wear and tear to the Premises from the date of the Lessee's occupation of the Premises and following the commissioning of the Property Report) damage by explosion,

earthquake, aircraft, riot, civil commotion, fire, flood, lightning, storm, tempest and reasonable wear and tear, act of God and war damage only excepted unless any insurance moneys are irrecoverable through the neglect, default or misconduct of the Lessee. This covenant shall not impose on the Lessee any obligation in respect of any structural replacement or repair except when the same is rendered necessary by any act neglect default or omission of the Lessee or by the particular nature of the Lessee's use or occupancy of the Demised Premises. The Lessee acknowledges that subject to the observations contained in the Property Report and subject to reasonable wear and tear to the Premises from the date of the Lessee's occupation of the Premises and following the commissioning of the Property Reprort, the Demised Premises were in good and substantial repair order and condition at the commencement of the Lessee's occupation of the premises.

5.2 Redecoration by Lessee

Without prejudice to the provisions of Clauses 5.1 and 10.5, the Lessee will:-

(a) Upon determination of the Term (or any renewed term granted pursuant to Clause 14 hereof) and from time to time if necessary or reasonably required by the Lessor, clean or otherwise appropriately treat in a proper and workmanlike manner such part of the Demisted premises so treated as at the date of commencement of this Lease or of the Lessee's occupation of the Premises; and

(b) paint or repaint the interior of the building throughout to the satisfaction of the Lessor acting reasonably on or before the later of the expiration of the term or any renewed term granted pursuant to Clause 14 hereof.

5.3 To Keep Clean and Maintain Lessee's Equipment

(a) The Lessee will during the Term cause the Demised Premises to be kept clean and free from dirt and rubbish and particularly shall store and keep all refuse and garbage in proper receptacles and arrange for the regular removal of the same from the Demised Premises.

(b) The Lessee will at all times during the Term keep and maintain clean and in good and substantial repair working order and condition all machinery plant equipment fixtures fittings and furnishings of the Lessee.

5.4 Broken Glass etc

The Lessee will immediately repair and replace all broken glass with glass of the same or similar quality and all damaged or broken lighting electrical equipment installed upon the Demised Premises.

5.5 Lessor May Inspect

The Lessor may at all reasonable times upon giving to the Lessee reasonable notice (except in the case of emergency when no notice shall be required) enter upon the Demised Premises and view the state of repair of the same and may serve upon the Lessee a notice in writing of any defect for the repair of which the Lessee may be responsible hereunder requiring the Lessee within a reasonable time to repair the same.

5.6 Lessor May Repair

The Lessor may at all reasonable times upon giving to the Lessee reasonable notice (except in the case of emergency when no notice shall be required) enter upon the Demised Premises with workmen and others and all necessary materials for the purpose of complying with any request, requirement, notification or order of any authority having jurisdiction or authority over or in respect of the Demised Premises for which the Lessee is not liable under its covenants contained in this Lease or for carrying out such reinstatement repairs renovations modifications extensions or alterations to the Demised Premises deemed necessary or desirable by the Lessor provided always that in the exercise of any such power under this Clause as little inconvenience as practicable shall be caused to the Lessee.

5.7 Alterations

The Lessee shall not make or cause to be made any alterations, additions or improvements or install or cause to installed in the Demised Premises any trade fixtures, plumbing fixtures or partitions without the prior written consent of the Lessor, and shall in the course of such partitioning, alterations or additions made with the consent of the Lessor observe and comply with all reasonable requirements of the Lessor and the requirements of public authorities. Without limiting the foregoing provisions of this Clause, any proposed installation of racking systems or other means of storing heavy or concentrated loads, requires the prior written consent of the Lessor. Without prejudice to the foregoing provisions of this Clause, the Lessee will when applying for the Lessor's approval to any partitioning, alterations or additions to the Demised premises submit with the application drawings and specifications in respect thereof prepared by a qualified consultant or consultants approved by the Lessor. Work in respect of partitioning, alterations or additions to the Demised Premises approved by the Lessor shall only be carried out by contractors or qualified tradesmen approved by the Lessor and if required by the Lessor the Lessee shall on completion of such work hand to the Lessor a certificate by a consultant approved

by the Lessor to the effect that such work has been carried out in accordance with the drawings and specifications relating thereto and in accordance with the requirements of all relevant public authorities. The Lessor shall be entitled to obtain the advice of its architects in respect thereof and any fees payable by the Lessor to such architects shall be paid by the Lessee to the Lessor on demand.

PART 6

GENERAL LESSEE'S COVENANTS

6.1 Services

The Lessee will as and when the same become due for payment pay all accounts for the supply of water gas electricity telephone and other services to or from the Demised Premises.

6.2 Requirements of Public Authorities

The Lessee will forthwith comply with all present or future statutes, ordinances, proclamations, orders and regulations affecting or relating to the Demised Premises or the use thereof, and with all requirements which may be made or notices or orders which may be given by any governmental, semi-governmental, city, municipal, health, licensing or any other authority having jurisdiction or authority in respect of the Demised Premises or the use thereof PROVIDED ALWAYS that the Lessee shall be under no liability in respect of any structural alteration required by any such authority unless the relevant authority's requirement arises out of the particular nature of the Lessee's use or occupancy of the Demised Premises.

6.3 Floor Over-Loading

The Lessee will not do nor permit or suffer to be done upon the Building anything in the nature of overloading any floor of the Building whereby the building may be strained or any walls or floors may be caused to sag or deflect from the right line or whereby the Demised premises may be otherwise damaged.

6.4 Use of Lavatories etc

The Lessee will not use nor permit nor suffer to be used the lavatories sinks and drainage and other plumbing facilities in the Demised Premises for any purposes other than those for which they were constructed or provided and shall not deposit or permit to be deposited therein any sweepings rubbish or other matter and any damage thereto caused by misuse shall be made good by the lessee forthwith.

6.5 Pest Control

The Lessee will take all reasonable precautions to keep the Demised Premises free of rodents vermin insects pests birds and animals and in the event of failing so to do will if so required by the Lessor but at the cost of the Lessee employ from time to time pest exterminators approved by the Lessor.

6.6 Infectious Illness

The lessee will in the event of it becoming aware of any infectious illness occurring in the Demised premises forthwith give notice of that illness to the Lessor and to the proper public authorities and at the expense of the Lessee will thoroughly fumigate and disinfect the Demised Premises to the satisfaction of the Lessor and such public authorities and otherwise comply with their lawful requirements in regard to the same.

6.7 Notice of Defects

The lessee will give to the Lessor prompt notice in writing of any accident to or defect or want of repair in any services or fixtures fittings plant or equipment in the Demised Premises and of any circumstances likely to be or to cause any danger risk or hazard to the Demised Premises or to any person therein or thereon.

6.8 Signs

(a) The Lessee shall not erect, display, affix or exhibit on or to the Demised premises any signs, lightings, embellishments, advertisements, names and/or notices visible from the outside of the Demised Premises. At the expiration or sooner determination of the Term the Lessee shall at its own expense remove all lettering signs and other distinctive marks from the Demised Premises and make good any damage caused by such removal.

(b) Notwithstanding the provisions of Clause 6.8(a) hereof the Lessee shall with the consent of the Lessor, which consent shall not be unreasonably withheld and with the consent of all appropriate statutory authorities, be entitled to erect such pole signs and signs as are approved by the Lessor on the Building.

PART 7

INSURANCE MATTERS

7.1 Building Insurance

The lessee will during the term and during such further time as the Lessee shall hold the Demised premises or any part thereof keep insured at all times the Demised Premises or any part thereof and shall effect and maintain the following policies of insurance relating to the Demised Premises and the Buildings:

(a) a policy under which the Buildings are insured for their full indemnity and replacement value against fire and the extraneous risks of storm and tempest, explosion, earthquake, riots, civil commotion and malicious acts, impact, aircraft, damage by rain water and water discharge from pipes or systems and flood and against such other risks as may from time to time be reasonably required by the Lessor;

(b) a policy or policies against sprinkler leakage, machinery breakdown as applicable (excluding any air-conditioning plant) or boiler explosion (including third party cover) if such installations or any of them are made in the buildings at any time during the said Term;

(c) a policy under which the Lessor is insured against loss of rent for a minimum period of twelve (12) months;

(d) insurance on cost of removal of debris in such amount as the Lessor may from time to time deem necessary.

7.2 Contents, Public risk, Plate Glass

(a) The Lessee will during the Term insure and keep insured at all times the contents of the Demised Premises (including all air-conditioning and other plant equipment fixtures and fittings from time to time being part thereof) against damage or destruction by fire, water, earthquake, theft, attempted theft, lightning, explosion, storm, tempest, riot, strikes, civil commotion, malicious damage, sprinkler leakage, impact by vehicles or aircraft or articles dropped therefrom, loss of rental and from such other insurable risks required by the Lessor or the Lessee in not less than their full insurable value on a replacement and/or reinstatement basis including extra costs reinstatement.

(b) The Lessee will effect and keep effected in respect of the Demised Premises adequate public risk insurance in an amount of five million dollars ($5,000,000) for any single event or such higher amount as may be notified in writing by the Lessor from time to time and will, if required by the Lessor, notify the Lessor of the details thereof. The Lessee shall ensure that such insurance covers the indemnities referred to in the following part and otherwise conforms with the reasonable requirements from time to time of the Lessor of which the Lessee is given notice.

(c) The Lessee will insure and keep insured in such amount (not being less than the full insurable value) and against breakage from any cause whatsoever and against such other risks as the Lessor may from time to time reasonably require all plate glass forming part of the Demised Premises together with the exterior windows of the Demised Premises.

7.3 Application of Insurance Moneys

In the case of any loss or damage to any of the items referred to in the preceding Clause arising from any cause covered by such insurances the Lessee will immediately apply for and expend the moneys received by virtue of such insurances in restoring, replacing, repairing or reinstating the same and in case such moneys shall be insufficient for that purpose it will pay the balance out of its own money.

7.4 Policies

Notwithstanding anything expressed or implied in this Lease, the following provisions apply to all policies of insurance required to be effected by the Lessee pursuant to its obligations under this Lease:-

(a) All policies are to be placed with an insurer acceptable to the Lessor (whose acceptance will not be unreasonably withheld) and shall be for such amounts and cover such risks and contain such conditions endorsements and exclusions as are reasonably acceptable to or reasonably required by the Lessor. No exclusions endorsements or alterations thereto are to be made unless first approved in writing by the Lessor.

(b) All policies are to be taken out in the names of the Lessor as owner noting the interest thereon of the Lessor's Mortgagee and the Lessee for their respective rights and interests.

(c) Certificates of Currency of all insurances must be obtained and are to be lodged by the Lessee with the Lessor immediately upon receipt by the Lessee.

(d) All premiums in respect of all such policies and renewals of policies are to be paid punctually by the Lessee and the receipt for each premium payable in respect of each policy (or other proof of payment to the Lessor's satisfaction) is to be produced by the Lessee to the Lessor at least fourteen (14) days before the due date for renewal thereof.

(e) All policies required to be effected by the Lessee pursuant to its obligations under this Lease must be in full force and effect as at the commencement date of this Lease.

7.5 Heating

The Lessee will not use or permit or suffer to be used any method of heating or lighting the Demised Premises in contravention of any policy of insurance in respect of the Demised Premises.

7.6 Insurance Not to be Avoided

The Lessee will not at any time during the Term do or suffer to be done or allowed any act matter or thing upon the Demised Premises or bring or keep anything therein whereby any insurance relating to the Demised Premises against damage by fire and other risks as aforesaid may be rendered void or voidable or whereby the rate of premium on such insurance shall be liable to be increased and that in case the Lessor shall approve in writing of any proposal of the Lessee to increase any risk the Lessee will pay all additional premiums of insurance on the Demised Premises (if any) required on account of the additional risk caused by the use to which the Demised Premises are put by the Lessee with the consent aforesaid.

7.7 No Inflammable Substances

Without prejudice to the generality of the preceding Clause the Lessee will not (other than in accordance with the specified use of the Demised Premises approved by the Lessor) store chemicals inflammable liquids acetylene gas or alcohol volatile or explosive oils compounds or substances upon the Demised Premises or use any of such substances or fluids in the Demised Premises for any purpose.

7.8 Fire Regulations

The Lessee will comply with insurance sprinkler and fire alarm regulations in respect of any partitions which may be erected by the Lessee upon the Demised Premises and the Lessee will pay to the Lessor the cost of any alterations to the sprinkler and fire alarm installation which may become necessary by reason of the non-compliance by the

Lessee with the said regulations or the requirements of the Insurance Council of Australia or the requirements of the insurer.

PART 8

INDEMNITIES

8.1 The lessee's Indemnities

(a) The Lessee agrees to occupy and use and keep the Demised Premises at the risk of the Lessee and hereby releases to the full extent permitted by law the Lessor and its contractors employees and agents from all claims and demands of every kind resulting from any accident or damage to property or death of or injury to any person of whatsoever kind in or near the Demised Premises other than as may be caused by the negligence, default or wilful act or omission of the Lessor its contractors or employees and the Lessee agrees that the Lessor shall have no responsibility or liability for any loss of or damage to fixtures or personal property of the Lessee other than as may be caused by the negligence, default or wilful act or omission of the Lessor its contractors or employees.

(b) The lessee shall take and be subject to the same responsibilities in regard to damage or injury to persons and property and otherwise to which the Lessee would be subject if during the Term the Lessee were the owner of the freehold of the Demised Premises PROVIDED ALWAYS that the extent of any liability pursuant to this sub-clause (b) shall be limited to and shall not exceed the extent of any liability imposed upon the Lessee pursuant to sub-clauses (a), (c) and (d) hereof.

(c) Without prejudice to the generality of the foregoing provisions, to the extent that any moneys paid to the Lessor out of insurances effected by the Lessee do not fully indemnify the Lessor against the same and except where the same is caused by the negligence default or wilful act or omission of the Lessor its contractors or employees the Lessee will indemnify and keep indemnified the Lessor its contractors and employees from and against all such actions, claims, demands, notices, losses, damages, costs and expenses incurred by the Lessor or for which the Lessor or its contractors or employees may be or become liable in respect of any damage to property or death of or injury to any person which may be suffered or sustained in, upon or near the Demised Premises.

(d) Without limiting the generality of sub-clauses (a), (b) and (c) the Lessee will and does hereby indemnify the Lessor from and against all actions, claims, demands, losses, damages, costs and expenses for which Lessor may be or become liable in respect of or arising from:

(i) the negligent or careless use, misuse, waste or abuse by the Lessee or any contractor, sub-contractor, licensee, invitee, client, customer or visitor of the Lessee or any person claiming through or under the Lessee of the water, gas, electricity, lighting or other services and facilities to the Demised Premises or arising from any faulty fitting or fixture of the Lessee; or

(ii) overflow or leakage of water (including rain water) in or from the Demised Premises but originating from the Demised Premises and other fluids in, into or from the Demised premises or caused or materially contributed to by any act or omission on the part of the Lessee or other persons as aforesaid; or

(iii) Loss, damage or injury from any cause whatsoever to property or person caused or contributed to by the use of the Demised premises by the Lessee or other persons as aforesaid; or

(iv) loss, damage or injury from any cause whatsoever to the Demised Premises or to any property or person within or without the Demised Premises occasioned or contributed to by any act, omission, neglect, breach or default of the Lessee or other persons as aforesaid.

PART 9

QUIET ENJOYMENT, REMOVAL OF LESSEES FIXTURES AND HOLDING OVER

9.1 Quiet Enjoyment

The Lessee paying the rent hereby reserved and duly and punctuality observing and performing the covenants obligations and provisions in this Lease on the part of the Lessee to be observed and performed shall and may peaceably possess and enjoy the Demised Premises during the Term without any interruption or disturbance from the Lessor or any other person or persons lawfully claiming by from or under the Lessor.

9.2 Removal of Lessee's Fixtures

The Lessee may prior to, at or within forty eight (48) hours after the determination of this Lease (and will if so required by the Lessor at or immediately following the expiration or sooner determination of the Term) take remove and carry away from the Demised Premises all fixtures fittings plant equipment or other articles upon the Demised Premises in the nature of trade or tenants fixtures brought upon the Demised Premises by the Lessee with the consent of the Lessor but the Lessee shall in such removal do not damage to the Demised Premises or shall forthwith make good any such damage.

9.4 Lessee's Fixture Not Removed

If the Lessee does not remove and carry away any of its fixtures, fittings, plant, equipment and other articles or items at or immediately following the determination of this Lease the Lessor may at the expense of the Lessee remove and dispose of the same and any of such fixtures, fittings, plant, equipment and other articles or items not removed by the Lessee as aforesaid shall become the property of the Lessor.

9.5 Holding Over

In the event of the Lessee holding over after the expiration or sooner determination of the Term with the consent of the Lessor the Lessee shall become a monthly tenant only of the Lessor at a monthly rental equivalent to a monthly proportion of the total annual rental payable by the Lessee under this Lease at the expiration or sooner determination of the Term or at such other monthly rental as advised in writing by the Lessor to the Lessee and otherwise on the same terms and conditions as those herein contained so far as applicable.

PART 10

DEFAULT, TERMINATION, ETC

10.1 Re-entry or Surrender

In the event that:-

(a) any rent or any other moneys payable under this Lease remain unpaid for fourteen (14) days next after the date appointed for payment of the same (although no formal or legal demand shall have been made therefor); or

(b) the Lessee fails to perform or observe any one or more of the covenants or provisions on the part of the Lessee expressed or implied in this lease unless the non-performance or non-observance has been waived or excused by the Lessor in writing; or

(c) any event occurs entitling the holder or proprietor of any charge over the whole of the assets and undertaking of the Lessee to exercise the security constituted by such charge; or

(d) the Lessee being a corporation, an order is made or a resolution is effectively passed for the winding up of the Lessee (other than for the purposes of amalgamation or reconstruction) or the Lessee ceases to carry on business; or

(e) the Lessee being a corporation (other than one whose shares are listed on any Australian Stock Exchange or a wholly owned subsidiary of such corporation), if any persons who between them beneficially hold or control at the date of this Lease more than fifty per centum (50%) of the voting, income or capital participation rights therein subsequently cease to hold or control more than fifty per centum (50%) of such rights without the prior written consent of the Lessor which consent shall not be unreasonably withheld;

THEN in any one or more of such events the Lessor may at any time thereafter but without prejudice to any claim which the Lessor may have against the Lessee in respect of any breach of the covenants and provisions in this Lease on the part of the Lessee to be observed or performed either re-enter into and repossess and enjoy the Demised Premises as of its former estate (anything herein contained to the contrary notwithstanding) and thereupon this Lease shall absolutely determine, or call for an immediate surrender of the Lessee's estate and interest under this Lease and for the more effectual enforcement of this right the Lessee hereby irrevocably appoints the Lessor its true and lawful attorney to surrender or cause to be surrendered this Lease and to sign all notices deeds and documents for the purpose of such surrender in the name of the Lessee and upon such surrender the Lessor shall be freed and discharged from any action suit claim or demand by or obligation to the Lessee under or by virtue of this Lease.

10.2 Essential Terms

Without prejudice to any other right or remedy of the Lessor contained or implied in this Lease, it is expressly agreed and declared that should the Lessee fail to pay any moneys properly payable by the Lessee to the Lessor pursuant to this Lease within fourteen (14) days of written demand by the Lessor given after the due date for payment or shall fail to fully comply with each or any of its covenants and obligations referred to in Parts 3, 4, 5 and 7 hereof then the Lessee shall be deemed to be in breach of an essential and fundamental term of this Lease. If the Lesser elects to terminate this Lease by reason of that breach and provided that the Lessee does not obtain relief against forfeiture in which event the Lessor's right to damages shall be determined in accordance with the general law, then the Lessee shall pay to the lessor upon demand liquidated damages for such breach being the aggregate of the several rentals and all other amounts (including legal costs and disbursements in connection with the default)

payable to the Lessor pursuant to this Lease which would have been payable by the Lessee for the unexpired residue of the Term but for such termination less the aggregate of the several rentals and other amounts which the Lessor using reasonable endeavours actually receives by reletting the Demised Premises for the unexpired residue of the Term and less any rebate in respect of the balance of rents not then accrued (after deduction of the several rentals received by the Lessor from the said reletting) determined by applying a discount rate per annum, equal to the Westpac Indicator Rate as at the date the Lessor terminates this Lease, to each rent instalment over the period by which the date for payment is accelerated.

10.3 Lessor's Remedy of Lessee's Defaults

If the Lessee omits or neglects to pay any money or to do or effect anything which the Lessee has in this Lease covenanted to pay do or effect then on each and every such occasion it shall be lawful for but not obligatory upon the Lessor and without prejudice to any rights or powers arising from such default to pay such money or to do or effect such thing by itself as if it were the Lessee and for that purpose the Lessor may enter upon the Demised Premises and there remain for the purpose of doing or effecting any such thing and without prejudice to the rights powers and remedies of the Lessor otherwise under this Lease the Lessee will pay to the Lessor interest at the rate of the higher of fourteen per centum (14%) per annum or the rate of interest charged by the Commonwealth Bank of Australia in respect of overdraft loans in excess of $100,000.00 on any moneys due by the Lessee to the Lessor on any account whatsoever pursuant to this Lease but unpaid for fourteen (14) days such interest to be computed from the due date for the payment of the moneys in respect of which the interest is chargeable until payment of such moneys in full and be recoverable in like manner as rent in arrears.

10.4 Yielding Up

The Lessee will forthwith upon the expiration of the Term or sooner determination of this Lease peaceably surrender and yield up to the Lessor the Demised Premises clean and free from rubbish and in good and substantial repair and condition in all respects and as nearly as possible in the same condition as at the commencement of the Term or in the event of any part thereof having been replaced or renewed during the Term as nearly as possible in the same condition as at the date of such replacement or renewal having regard to the age thereof damage by explosion, earthquake, aircraft, riot, civil commotion, fire, flood, lightning, storm, tempest, reasonable wear and tear, act of God, malicious damage and war damage only excepted.

10.5 Opportunity to Rectify

Notwithstanding anything expressed or implied in this Lease the Lessor will not re-enter upon the Demised premises or determine or forfeit or require a surrender of this Lease or the Term unless the Lessor shall have first given to the Lessee notice of breach of default or non-observance on which the Lessor relies in seeking to act as aforementioned PROVIDED ALWAYS that:

(a) in the case of a breach, default or non-observance remediable by payment of money if the Lessee pays to the Lessor within fourteen (14) days of service of such notice all moneys necessary to remedy such breach, default or non-observance; or

(b) in the case of a breach, default or non-observance remediable other than by the payment of moneys, if the Lessee within twenty-eight (28) days of the service of such notice undertakes in writing to the Lessor to remedy the breach, default or non-observance and so remedies the same within a reasonable time having regard to the nature and extent thereof; or

(c) in the case of a breach, default or non-observance which cannot be remedied if the Lessee within twenty eight (28) days of the service of such notice pays or undertakes to pay and does in fact pay to the Lessor within three (3) months thereafter (or such further period as the Lessor shall determine in its absolute discretion) reasonable compensation to the satisfaction of the Lessor in respect of such breach, default or non-observance having regard to the nature and extent hereof;

THEN the Lessor shall not be entitled to rely upon the breach, default or non-observance set out in the notice to the Lessee as a ground for re-entry, determination, forfeiture or requiring surrender and the same shall be absolutely waived by the Lessor and this Lease shall continue in full force and effect as if no such breach, default or non-observance had occurred.

PART 11

MISCELLANEOUS

11.1 Exclusion of Warranties

The Lessee acknowledges and declares that no promise representation warranty or undertaking has been given by or on behalf of the Lessor in respect to the suitability of the Demised Premises for any business to be carried on in the Demised Premises.

11.2 Whole Agreement

The covenants and provisions contained in this Lease and in any Agreement pursuant to which this Lease was granted expressly or by statutory implication cover and comprise the whole of the agreement between the parties and it is expressly agreed and declared that no further or other covenants or provisions whether in respect of the Demised Premises or otherwise shall be deemed to be implied herein or to arise between the parties by way of collateral or other agreement by reason of any promise representation warranty or undertaking given or made by any party to another on or prior to the execution hereof and the existence of any such implication or collateral or other agreement is hereby negative.

11.3 Waiver

No waiver by the Lessor of one breach by the Lessee of any obligation on its part contained in this Lease shall operate as a waiver of another breach of the same or of any other obligation contained or implied in this Lease.

11.4 No Premium

Save as herein contained no premium or other consideration has been or is to be paid to the Lessor hereunder by the Lessee or any other person.

11.5 Cost of Lease etc

The Lessee will pay the Lessor's reasonable legal costs and all duties, fees, charges and expenses of or incidental to the preparation completion stamping and registration of this Lease and any renewal and any application for the consent of the Lessor hereunder and of or incidental to any and every breach or default by the Lessee hereunder and in or incidental to the exercise or attempted exercise of any right power privilege authority or remedy of the Lessor under or by virtue of this Lease and reasonable fees of all professional consultants properly incurred by the Lessor in consequence of or in connection with breach or default by the Lessee hereunder.

11.6 Lessee not to Cause Rent Reductions

The Lessee will not without the written consent of the Lessor by any act matter or deed or by any failure or omission impair reduce or diminish directly or indirectly the rent hereby reserved or impose or cause indirectly the rent hereby reserved or impose or cause or permit to be imposed on the Lessor any liability of the Lessee under or by virtue of this Lease even though entitled so to do whether by statute ordinance proclamation order regulation or moratorium (present or future) or otherwise.

11.7 Notices

All demands requisitions consents elections or notices shall be in writing and may be given to or served upon a party by being left at that party's registered office or principal place of business in the State in which the Demised Premises are situated or by being posted in a prepaid certified or registered envelope. Any demand requisition consent election or notice if posted shall be deemed duly served at the expiration of three (3) business days after the time of posting. In proving the giving of the same it shall be sufficient to prove the envelope containing the same was properly addressed stamped and registered and put into a post office box in the Commonwealth of Australia. Any demand requisition consent election or notice may be signed by the Lessor or on its behalf by the Solicitor, the Secretary or other authorised officer for the time being of the Lessor.

11.8 Non-merger

None of the terms or conditions of this Lease nor any act matter or thing done under or by virtue of or in connection with this Lease or any other agreement between the parties shall operate as a merger of any of the rights and remedies of the parties in or under this Lease or in or under any such other agreement all of which shall continue in full force and effect.

11.9 Supply failure

The Lessor will not be under any liability for any loss injury or damage sustained by the Lessee or any other person at any time as a result of or arising in any way out of the failure of the electricity or water supply or any other services or facilities enjoyed by the Lessee in connection with the Demised Premises.

11.10 Moratorium

Unless application is mandatory by law no statute ordinance proclamation order regulation or moratorium present or future shall apply to this Lease so as to abrogate extinguish impair diminish further delay or otherwise prejudicially affect any rights powers remedies or discretions given or accruing to the Lessor.

11.11 "For Sale" and "To Let" Notices

The Lessee will at all reasonable times permit the Lessor to exhibit to prospective purchasers the Demised Premises and exhibit where the Lessor shall think fit the usual "For Sale" notice and will at all times within the three (3) months immediately

preceding the termination of this Lease permit the Lessor to exhibit to prospective tenants the Demised Premises and to affix and exhibit where the Lessor shall think fit the usual "To Let" notice and in each case with the name and address of the Lessor and/or its agent thereon and the Lessee will not remove any such notice without the written consent of the Lessor.

11.12 Consents

In any case where pursuant to this Lease the doing or execution of any act or thing by the Lessee is dependent upon the consent or approval of the Lessor such consent or approval may be given conditionally or unconditionally or withheld by the Lessor in its absolute uncontrolled discretion unless otherwise herein provided.

11.13 Easements etc

The Lessor shall be entitled for the purpose of the provision of public or private access to and egress from the Demised Premises, or support of structures hereafter erected on or from adjoining lands or of services (including water, drainage, gas and electricity supply and telephonic and electronic communication services) to grant easements or enter into any arrangement or agreement with any of the owners, lessees, tenants or occupiers or others interested in any land adjacent or near to the Demised Premises or with any public authority or private company as the Lessor thinks fit and it may likewise for such aforesaid purpose dedicate land or transfer grant or create any easement privilege or other right in favour of such parties or in favour of any such adjoining or neighbouring land or any public authority or private company over or affecting the Demised Premises and this Lease shall be deemed to be subject to any such agreement arrangement right easement or privilege. Notwithstanding the reservation contained in this Clause, the Lessor in the exercise of the rights herein conferred shall not dedicate land or transfer, grant or create any easement privilege or other right to any other person which shall substantially and permanently derogate from the enjoyment of rights conferred on the Lessee by this Lease.

11.14 Lessee's Obligations

Whenever the Lessee is obliged or required hereunder to do or effect any act matter or thing then the doing of such act matter or thing shall, unless this Lease otherwise provides, be at the sole risk and expense of the Lessee.

11.15 Reimbursement of Lessor's Expenses

To the extent permissible at law the Lessee will forthwith upon demand pay to the Lessor by way of additional rent an amount equivalent to any moneys paid by the Lessor in respect of any liability imposed on the Lessee under or by virtue of this Lease notwithstanding that any statute ordinance proclamation order regulation or moratorium present or future directly or indirectly imposes such liability upon the Lessor.

11.16 Breakages

The Lessee will immediately make good any breakage or damage to the Demised Premises or to any adjoining premises or any facility or appurtenance thereof occasioned by want of care misuse or abuse on the part of the Lessee or its invitees or otherwise occasioned by any breach or default of the Lessee hereunder.

11.17 Electrical Fittings

The Lessee will promptly at its own cost and expense properly replace all broken or faulty light bulbs, tubes and associated fittings in or about the Demised Premises.

11.18 Locks, Keys, etc

The Lessee will at all times during the Term and at its own cost and expense keep and maintain the doors, locks and window fittings of the Demised Premises in good and efficient working order and at the expiration or sooner determination of the Term return all keys of the Demised Premises to the Lessor.

11.19 No Mortgage, etc, without Consent

The Lessee will not mortgage, charge or otherwise encumber its estate or interest in this Lease without the prior consent in writing of the Lessor which consent shall not be unreasonably withheld.

11.20 Secure Premises

The Lessee will cause all exterior doors and windows of the Demised Premises to be securely locked and fastened at all times when the Demised Premises are not being used and hereby authorises the Lessor's representative from time to time to enter the Premises for the purpose of locking any such door or window left unlocked or unfastened.

11.21 Removal of Lessee's Equipment on Default

Notwithstanding the provisions of Clause 9.4 hereof the Lessor may upon re-entry or determination as the case may be remove from the Demised Premises any contents of every description including but without limiting the generality of the foregoing the Lessee's fixtures and stock in trade. Such contents shall be stored in a public warehouse or elsewhere at the cost of the Lessee without the Lessor being deemed guilty of conversion or becoming liable for any loss or damage occasioned by or during removal or storage. Any costs incurred by the Lessor in or about such removal and/or storage shall be paid by the Lessee to the Lessor on demand.

11.22 Fencing

The Lessor agrees that if reasonably required by the Lessee, it will replace and/or repair any Fencing surrounding the Demised Premises in the event that any such Fencing shall require replacement and/or repair at no cost to the Lessee PROVIDED THAT the Lessor shall not be required to repair any Fencing that is damaged or destroyed as a result of any negligent act or omission on behalf of the Lessee its servants and/or agents.

11.23 Carpark Area

The Lessor agrees that it will be responsible for the general maintenance, repair and upkeep of the carparking area during the term of the Lease occasioned as a result of normal fair wear and tear at no cost to the Lessee.

11.24 The Lessor acknowledges and agrees that the Overhead Travelling Cranes (2) installed in the premises known as Building No. 2 are the property of the Lessee, and as such are tenants fixures.

PART 12

HEADLEASE AND/OR OTHER INTERESTS

Entry and View

12.1 The Lessee at all times during the Term will permit the Lessor and any person having any estate or interest in the Demised Premises superior to or concurrent with the Lessor upon giving twenty-four (24) hours prior notice (except in cases of emergency) to exercise the Lessor's powers to enter and view the Demised Premises and to carry out repairs, renovations maintenance and other work thereon and otherwise to exercise or perform their lawful rights or obligations in regard thereto.

PART 13

AIR CONDITIONING

13.1 Where any plant, machinery or equipment for heating, cooling or circulating air (all of which are herein included in the expression "air-conditioning plant") is provided or installed in or to the Demised Premises by the Lessor then the following provisions shall apply:

(a) The Lessee shall be responsible for the repair and maintenance of the air-conditioning plant that may become necessary to ensure the efficient operation of the air-conditioning plant.

(b) Non-Interference

The Lessee will at all times comply with and observe the reasonable requirements of the Lessor in regard to the air-conditioning plant and will not do or permit to be done anything in relation to the same or otherwise which might interfere with or impair the efficient operation of the air-conditioning plant.

(c) Failure

If the air-conditioning plant fails to function for any reason the Lessee shall not by reason of such failure be entitled to determine this Lease.

(d) The cost of major or capital works required in respect of the air conditioning plant shall be borne by the Lessor.

PART 14

OPTIONS

14.1 Term and Rent

If the Lessee shall desire to take a renewed lease of the Demised Premises granted to it for the further term of years set out in ITEM 7 of the Reference Schedule from the expiration of this Lease and gives to the Lessor not less than three (3) nor more than six (6) months previous notice in writing to that effect and provided the Lessee is not then in default under the provisions of this Lease the Lessor shall at the cost and expense of the Lessee grant to the Lessee a renewal of this Lease for the further term of years aforesaid commencing on the day next following the expiration of the Term hereby granted upon the greater of the yearly rent payable during the last year of the Term of this Lease and the Revised Annual Market Rental calculated in accordance with Schedule A hereto and otherwise upon the same terms and conditions as are contained in this Lease PROVIDED THAT the renewed lease which shall be granted shall not contain this clause.

SCHEDULE A

RENT

The rent payable by the Lessee to the Lessor pursuant to this Lease shall be calculated and paid in the following manner:-

A.1 RENT

(a) The Lessee will during the Term pay to the Lessor without demand from the Lessor and without any deduction whatsoever the Annual Rent referred to in ITEM 4 of the Reference Schedule such rent to be paid in advance by regular and consecutive monthly payments each equal to one-twelfth (1/12) of the Annual Rent each on the first day of each month in each year during the Term (except the first and last payments which if necessary will be proportionate) the first being computed from and payable on the date of commencement of this Lease as the Lessor may specify in writing to the Lessee:

A.2 RENT REVIEWS

(a) Calculation of Revised Annual (Market Rental)

The parties agree that the revised annual market rental of the Demised Premises shall be the total of the amount of the then current annual open market rental that could have been obtained for each of respectively Building "No. 1", Building "No.2" and Building "No.3" had each Building been reviewed separately and independently on the basis that such Building was the only Building the subject of this Lease and otherwise based on this Lease for a term equal to the Option Term assuming:

(i) it is between a willing but not anxious lessor and a willing but not anxious lessee;

(ii) taking account of rent payable in respect of other premises substantially similar to the relevant part of the Demised Premises under consideration, (but excluding consideration of any lessor approved lessee fixtures or fittings) without limiting comparison,in location, type, facility and service and reflecting the use(s) and extent of use(s) of that part of the Demised premises or any better legal use potential as at the end of the current term;

(iii) excluding consideration of any deleterious condition of the relevant part of the Demised Premises under consideration if such condition results from any breach of any term of this Lease by the Lessee; and

(iv) making no reduction on account of any period attributable to securing a tenant or any period of rental abatement offered as an inducement to a lessee by a lessor to enter into a lease agreement on then market terms and conditions.

(b) The Lessor shall be entitled to notify the Lessee in writing of the amount which the Lessor considers to be the Revised Annual Market Rental appropriate to the Demised Premises. Should the parties be unable to agree on the rent to apply the Lessee may notify the Lessor in writing within the time specified in Clause A.3(a) that the Lessee requires such rent to be determined in accordance with Clause A.3. Unless such notice is given by the Lessee within the time specified in Clause A.3(a) then the amount stated in the Lessor's notice given under Clause A.2(a) shall become the rent in substitution for the amount appearing in Item 4 of the Reference Schedule.

Annual Rent Disputes - Determination Procedure

A.3 Should the Lessee disagree with the Lessor's assessment of the Annual Rent (or any part thereof) notified by the Lessor under Clause A.2 of this Schedule A then the following procedure shall apply:-

(a) The Lessee shall within twenty-eight (28) days of the delivery of the Lessor's assessment of Annual Rent pursuant to Clause A.2(a) of this Schedule A or within such further period as may be agreed between the Lessor and the Lessee give written notice to the Lessor (the "dispute notice") that the Lessee disputes the Annual Rent assessed by the Lessor and within twenty-eight (28) days of the date on which the dispute notice is given (which period of twenty-eight (28) days shall be referred to as the "nomination period") shall in writing nominate to the Lessor a valuer qualified in the manner provided in sub-clause A.3 (f);

(b) Within twenty-eight (28) days of the expiry of the nomination period the Lessor shall nominate in writing to the Lessee a valuer qualified in the manner provided in sub-clause A.3 (f);

(c) Subject to sub-clause A.3 (g) the valuers so nominated shall within a period of twenty-eight (28) days of the expiration of the nomination period or within such extended period as the Lessor and the Lessee may agree jointly determine the Annual Rent of the Demised Premises as at that particular review date which joint determination shall apply as from the relevant review date;

(d) Should the Lessee fail to nominate a valuer pursuant to sub-clause A.3 (a) within the nomination period the Annual Rent shall be as stated in the Lessor's notice given under sub-clause A.2 (a) and shall be payable by the Lessee accordingly;

(e) Should the Lessor fail to nominate a valuer pursuant to sub-clause A.3 (b) within the period specified the determination of the Annual Rent shall be made by the Lessee's valuer within twenty-eight (28) days of the expiration of the nomination period and his determination shall be final and binding on both parties as if he had been appointed by consent. Such valuer shall act as an expert and (subject to the proviso to Clause A.3 (i) the cost of his determination shall be apportioned equally as between the Lessor and the Lessee;

(f) A valuer nominated by either party under this Clause A.3 shall be a full member of not less than five (5) years standing of the Australian Institute of Valuers and Land Economists(Inc) and shall be the holder of a licence to practise as a valuer of the kind of premises demised by this Lease and shall have at least three (3) year's experience in valuing such kind of premises and be active in that market at the time of his appointment;

(g) Should the valuers be unable to agree on the Annual Rent of the Premises within the period referred to in sub-clause A.3(c) or within such extended period as the Lessor and the Lessee may agree then:-

(i) If the Annual Rent as assessed by the valuer nominated by the Lessee is more than that assessed by the valuer nominated by the Lessor then Annual Rent of the Demised Premises shall be as determined by the Lessee's valuer;

(ii) In all circumstances other than that covered by the preceding sub-clause A.3(g)(i) the valuers shall agree upon and appoint a valuer also being qualified in the manner provided in sub-clause A.3(g) (herein referred to as "the umpire"), and obtain the umpire's acceptance in writing of his appointment and who as a condition of his acceptance will undertake to hand down his determination of the Annual Rent within twenty-eight (28) days of his being instructed to proceed with his determination;

(iii) If the valuers are unable to agree upon the nomination of the umpire within a further sever (7) days following the twenty-eight (28) days referred to in sub-clause A.3(c) or within such extended period as the Lessor and the Lessee may agree or if either or both valuers have failed to assess the Annual Rent of the Demised Premises within the period referred to in sub-clause A.3(c) or within such extended period as the Lessor and the Lessee may agree, then either valuer or either party may request the President or other senior officer of the New South Wales Division of the Australian Institute of Valuers to make an appointment of the umpire (also being a valuer qualified in the manner provided in sub-clause A.3(f) and who as a condition of his acceptance of his appointment undertakes to hand down his determination of the Annual Rent within twenty-eight (28) days of his being instructed to proceed with his determination);

(iv) Should it be necessary for the umpire to determine the Annual Rent of the Premises, his determination shall be final and binding on the parties hereto, but in considering his determination, the umpire shall have due regard to any evidence submitted by the valuers as to their assessments of the Annual Rent of the Demised Premises. The umpire shall give his determination and the reasons therefor in writing.

(h) In determining the Annual Rent of the Demised Premises any valuer or valuers (including the umpire) shall determine the current annual open market rental of the Demised Premises in accordance with clauses A.2(a) and (b) of this Schedule A and shall be deemed to be acting as an expert(s) and not as an arbitrator(s);

(i) Except as provided in clause A.3(e) but subject to the proviso hereto, the costs incurred in the determination pursuant to Clause A.3 of the Annual Rent shall be borne by the parties in the following manner:-

(i) the costs of each valuer appointed by a party - by the party so appointing the valuer;

(ii) the costs of the umpire - by the parties equally.

PROVIDED THAT in all cases if the Annual Rent to apply from the review date as finally determined hereunder is equal to or exceeds the Annual Rent nominated in the Lessor's notice pursuant to Clause A.2(a) then all costs of both valuers and the umpire (if applicable) shall be borne by the Lessee alone;

(j) Notwithstanding any other provision of this Lease the Annual Rent payable for the period from any review date until the next ensuring review date or lease expiry date as appropriate shall be the greater of either (I) the Annual Rent determined pursuant to Clause A.2 or A.3 as the case may and (II) the Annual Rent Payable for the Review Period immediately prior to such review date;

(k) Any variation in the Annual Rent resulting from a determination under Clause A.1 and/or Clause A.3 as the case may be shall take effect on and from that particular review date;

(l) Where a review pursuant to Clause A.2 and/or Clause A.3 of the Annual Rent reserved by this Lease is completed after the relevant review date, then

(i) Annual Rent from the review date shall be paid by the Lessee at the rate specified in the notice delivered by the Lessor pursuant to Clause A.2, and

(ii) on completion of the review:-

(A) If the rent payable in respect of the period commencing on the review date is determined by the valuers or the umpire to be less than that specified in the notice delivered by the Lessor pursuant to clause A.2 then the Lessor shall refund to the Lessee any excess rent so paid by the Lessee within twenty-eight (28) days of the date of determination of the Annual Rent by the valuer or the umpire together with interest on that amount calculated at the rate specified in Clause 11.22 hereof from the date(s) upon which the said amount as so overpaid until the date of payment to the Lessee; or

(B) If the rent payable in respect of the period commencing on the review date is determined by the valuers or the umpire to be greater than that specified in the notice delivered by the Lessor pursuant to Clause A(1) then the Lessee shall pay to the Lessor the deficiency in rent so paid within twenty-eight (28) days of the date of determination of the Annual Rent by the valuers or the umpire together with the interest on that amount calculated at the rate specified in Clause 11.22 hereof underpaid until the date of payment to the Lessor.

B. LESSEE'S REIMBURSEMENT OF OUTGOINGS OF THE BUILDING

1. In addition to the rent hereby reserved and any other charges payable by the Lessee to the Lessor hereunder the Lessee shall pay or reimburse to the Lessor within fourteen (14) days of demand in writing by the Lessor the percentage set out in Item 12 of the Reference Schedule of the actual amount of all such rates, taxes, assessments and outgoings incurred by the Lessor in respect of the Buildings and the Demised Premises for each calendar year for the duration of this Lease or any holding over or any renewal or renewals thereof.

2. (a) For the purpose of this Lease "the outgoings of the Buildings and the Demised Premises" shall mean the total sum of all rates, taxes, costs and expenses of the Lessor properly or reasonably assessed or assessable, paid or payable, charged or chargeable or otherwise incurred in respect of the Demised Premises and in relation to the control, management and maintenance of the Demised Premises and without limiting the generality of the foregoing shall include:

(i) all rates, taxes (excluding income tax) charges assessments, duties, impositions and fees at any time or from time to time payable to any Government, local Government, semi-Government or other competent authority in respect of the Building and the Demised Premises irrespective of the ownership thereof;

(ii) all charges for and costs in relation to the supply of water, sewerage and drainage;

(iii) the reasonable cost of operating, supplying maintaining, repairing and renovating all services including inter alia air conditioning from time to time provided by the Lessor for the Demised Premises including the plant and equipment required for any such services provided however, that the Lessee shall not be responsible for the cost of major or capital works required in respect of the air-conditioning plant other than as occasioned by the Lessee's negligence or default;

(iv) all charges for lighting, power, heating air conditioning and ventilation incurred in connection with the Building;

(v) the reasonable cost of general repairs servicing and maintenance of the Building and its appurtenances including fees paid to specialist contractors;

(vi) the costs of the removal of all waste and garbage from the Building and the cost of cleaning the Building and the Demised Premises;

(vii) the cost of purchasing, hiring, maintaining and servicing all landscaped areas;

(viii) the costs of cleaning the external surface of the Building;

(ix) land tax calculated on a single holding basis.

(x) all insurance premiums (if any) payable by the Lessor in respect of the Buildings and the Demised Premises the fittings and fixtures (including plate glass) of the Lessor therein in their full insurable reinstatement value against fire, flood, lighting, storm and tempest and in respect of insurance of the Building and the Lessor against all other risks (referrable to the Land and the Buildings or the Lessor in relation to the Lessor's ownership or interest in the Land and the Building) as the Lessor may deem necessary or desirable (including loss of rent or gross revenue insurance in respect of a period of not less than twelve (12) months, machinery breakdown, public risk and consequential loss);

(xi) any other expenditure properly and reasonably incurred from time to time by the Lessor in the management operation and maintenance of the Buildings generally;

But excluding all costs expenses and outgoings which under the terms of this Lease or any schedule hereto are to be borne by the Lessor or which are incurred by the Lessor in performing or complying with its obligations hereunder.

THE REFERENCE SCHEDULE

ITEM 1: THE LESSEE

Clyde Industries Limited of 140 Arthur Street, North Sydney.

ITEM 2: THE LESSOR

Barinu Pty Limited

ITEM 3: DESCRIPTION OF THE DEMISED PREMISES

All of the land comprised in Folio Identifier 22/569501 together with those Building and other improvements erected upon the Land and known as "Clyde Industries", Factory Street, Granville.

ITEM 4: ANNUAL RENT

Three hundred and Twelve thousand dollars ($312,000.00)

ITEM 5: TERM OF LEASE

Two (2) years

ITEM 6: PERMITTED USE

Warehouse and Office, factory and manufacturing plant .

ITEM 7: OPTION FOR RENEWAL

Three (3) years.

ITEM 8: LESSEE'S CONTRIBUTION TO OUTGOINGS

100%

THE COMMON SEAL of BARINU PTY LIMITED was hereunto affixed in accordance with its Articles of Association in the presence of:

BARINU PTY. LTD. A.C.N. 002 900 423 Common Seal

Director

Secretary

THE COMMON SEAL of CLYDE INDUSTRIES LIMITED was hereunto affixed in accordance with its Articles of Association in the presence of:

Common Seal CLYDE INDUSTRIES LIMITED A.C.N. 000 002 [illegible]

Director

Secretary

* Westpac Banking Corporation/ mortgagee under mortgage registered number E286694 as hereby consents and agrees to the within lease but as from registration thereof only and without prejudice to and reserving to the said Bank all its rights and remedies against the lands comprised in the said mortgage and also subject to the condition that the said Bank whether or not it has entered into possession of the said lands, shall in no way be bound to perform and shall not incur any liability in respect of the covenants and agreements expressed or implied in the said lease and on the part of the lessor to be observed and performed and that the lessee shall obtain the consent or approval of the said Bank or its assigns in addition to that of the lessor in all cases where under the said lease the consent or approval of the lessor is required.

Dated this 1ST day of DECEMBER 19 94

Signed Sealed and Delivered
for and on behalf of
WESTPAC BANKING CORPORATION
A.R.B.N. 007 457 141
BRUCE LEONARD ROBERTSON
by
its duly constituted
Attorney who is
* personally known to me

RICHARD JAMES KALNIN
BELLEVUE HILL
BANK OFFICER

WESTPAC BANKING CORPORATION
A.R.B.N. 007 457 141
by its Attorney

who hereby states that at the time of executing this Instrument no notice of revocation has been received of the Power of Attorney registered in the office of the Registrar General No. 538 Book 4005 under the authority of which this Instrument has been executed

R C EASTON 8.8.95.

* Branch * Office
* Manager
* Deputy Manager
* Assistant Manager
* Officer in Charge Regional Securities
* District Commercial Manager
* Commercial Manager
* District Operations Controller
* Assistant District Operations Controller

* Delete as applicable

RP 13
1985

STAMP DUTY

[redacted]

Maitland L.G.

OFFICE USE ONLY

E
286693 M

TRANSFER

REAL PROPERTY ACT, 1900

T

of

$

DESCRIPTION OF LAND Note (a)	Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
	Folio Identifier 22/569501	WHOLE	At Clyde

TRANSFEROR Note (b)

P C DEVELOPMENTS PTY LIMITED A.C.N. 003 098 379 and
BAYMILL CORPORATION PTY LIMITED A.C.N. 003 209 596

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 2,870,000-00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

BARINU PTY LIMITED AS TRUSTEE FOR THE ABERGLASSLYN TRUST
A.C.N. 002 900 423
C/- Esplins, Level 5, 105 Pitt Street SYDNEY NSW 2000

OFFICE USE ONLY

TENANCY Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. LEASE X836031 2. ..... 3. .....

DATE 10th February 1992

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

EXECUTION Note (g)

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

THE COMMON SEAL of P C DEVELOPMENTS PTY LIMITED (ACN 003 098 379) was hereunto affixed by ~~Signature of Witness~~ authority of the Board of Directors in the presence of:

~~Name of Witness (BLOCK LETTERS)~~

Director Secretary

THE COMMON SEAL of BAYMILL CORPORATION PTY LIMITED (ACN 003 209 596) was hereunto affixed by authority of the Board of Directors in the presence of:

~~Signature and occupation of Witness~~

Note (g)

~~Signature of the transferor who is personally known to me~~

Director Secretary

Director ~~Signature of Witness~~ Secretary

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Signature of Transferee's solicitor
Mark Fraser

LODGED BY	LOCATION OF DOCUMENTS		
~~ESPLINS Solicitors~~ Level 5, 105 Pitt Street SYDNEY ~~NSW~~ 2000 DX 346 SYDNEY ~~TEL: 232 2666~~ Westpac 37y	CT	OTHER	
	✓	DM, M	Herewith.
			In L.T.O. with
			Produced by

Delivery Box Number ~~694K~~ 2S17541874c6

Checked	Passed	REGISTERED - -19	Secondary Directions			
1634						
Signed	Extra Fee		Delivery Directions			

WESTPAC TRANSFER

APPENDIX N

PREVIOUS REPORT



LOT 2 DP 569501
FACTORY STREET
GRANVILLE, NSW

Preliminary Environmental Site Assessment

For:
BARINU PTY LTD
Care of COMRES PROPERTY SERVICES

May 2001
101135RP1

Environmental Resources Management Australia Pty Ltd A.C.N. 002 773 248 www.erm.com

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Chapter 1

INTRODUCTION

1.1 BACKGROUND

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned by Comres Property Services, on behalf of Barinu Pty Ltd, to undertake a preliminary environmental site assessment of a parcel of land described as Lot 22 in DP 569501 Factory Street, Granville, NSW (the site). The site is currently owned by Barinu Pty Ltd and is zoned for industrial use.

1.2 OBJECTIVES

The objective of this Preliminary Environmental Assessment is to establish the current and historical land uses at the site and to determine any potential impacts that may affect the site's ongoing use for industrial purposes.

1.3 SCOPE OF WORKS

The assessment comprised of the following:

- review of sources of historical and background information including:
  - Department of Land and Water Conservation (DLWC) aerial photographs
  - DLWC registered groundwater bore data
  - Land Titles history
  - Geological, Topographic and Soil Landscape maps;
- a comprehensive site inspection and interview with the client;
- drilling of twelve boreholes to a depth of two metres at targeted and randomly placed locations across the site and soil sampling throughout these boreholes;
- laboratory analysis of one soil sample from each borehole for a full range of environmental analytes; and

- the preparation of a report outlining results and conclusions of the assessment.

All work was conducted in accordance with ERM's quality assured standard operating procedures for environmental assessments.

1.4 LIMITATIONS OF THE USE OF THIS REPORT

The findings of this report are based on the Scope of Work outlined above. ERM performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties, express or implied, are made.

Subject to the Scope of Work, ERM's assessment is limited strictly to identifying typical environmental conditions associated with the subject property and does not evaluate structural conditions of any buildings on the subject property, nor any other issues. Although normal standards of professional practice have been applied, the absence of any identified hazardous or toxic materials on the subject property should not be interpreted as a guarantee that such materials do not exist on the site.

This assessment is based on a site inspection conducted by ERM personnel, sampling and analyses described in the report, and information provided by the property owner or other people with a knowledge of site conditions. All conclusions and recommendations made in the report are the professional opinions of the ERM personnel involved with the project and, while normal checking of the accuracy of data has been conducted, ERM assumes no occurrences outside the scope of this project. ERM targeted areas of potential concern within access restrictions. Given lack of direct access to some specific operational features, it is possible that higher levels of contamination may exist. We believe, however, that we have assessed this site to a high level of confidence in spite of these limitations.

ERM is not engaged in environmental assessment and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. The client acknowledges that this report is for the exclusive use of the client, its representatives and advisors and any investors, lenders, underwriters and financiers who agreed to execute the reliance letter, and the client agrees that ERM's report or correspondences will not be, except as set forth herein, used or reproduced in full or in parts for such promotional purposes, and may not be used or relied upon in any prospectus or offering circular.

Chapter 2

SITE DESCRIPTION

2.1 SITE LOCATION

The site is located at the northern end of Factory Street, Granville, approximately 2.6 kilometres south east of the Parramatta City CBD. *Figure 2.1* shows the site location. The area immediately north of the site is occupied by Clyde Railway Station and the main western railway line. A majority of the land in Factory Street is used for commercial or industrial purposes.

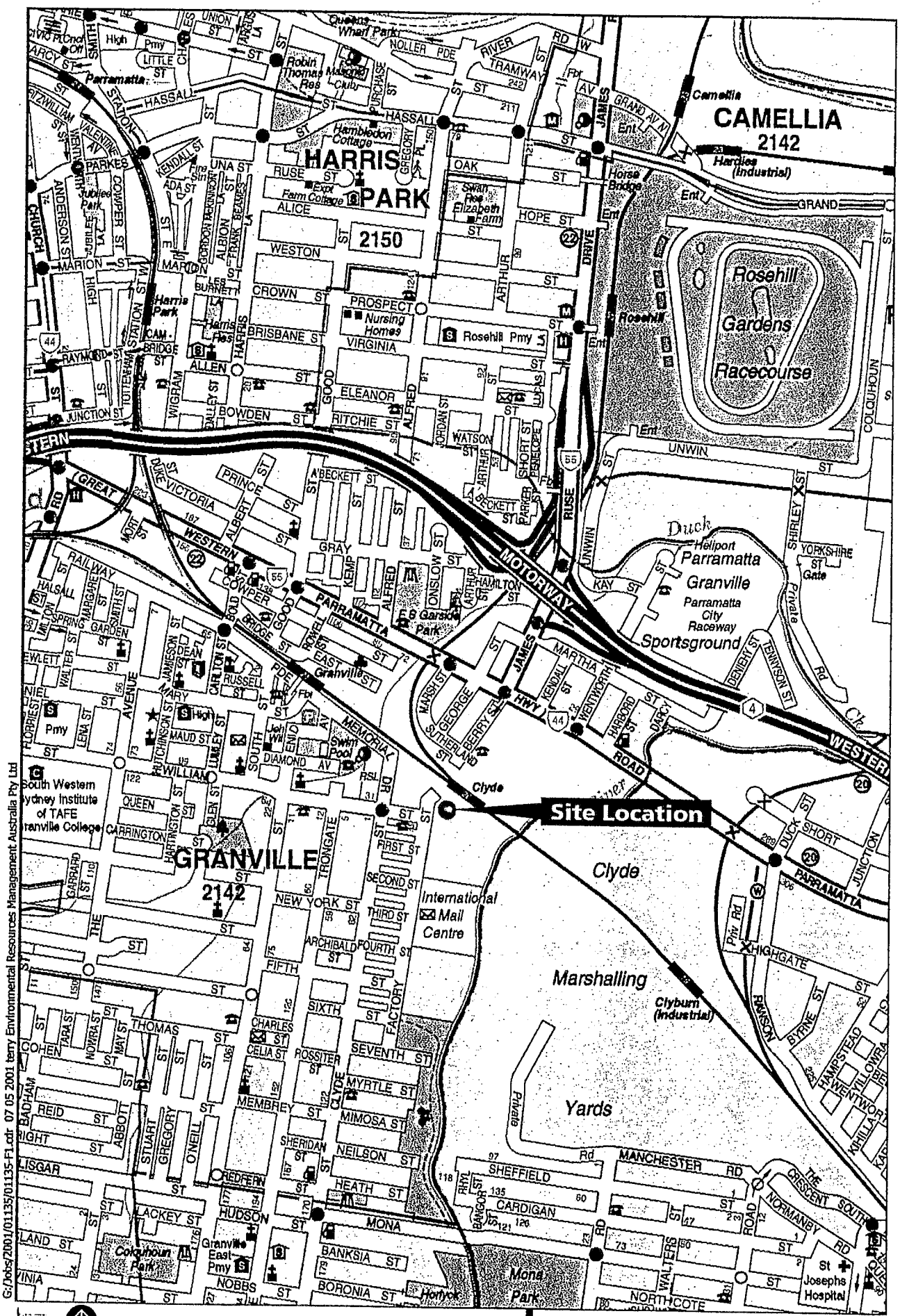
Table 2.1 SUMMARY OF SITE INFORMATION

	Description
Street Address	2 Factory Street, Granville
Lot and DP Number	Lot 22 DP 569501
Geographical Coordinates (AMG)	East 316350 North 6253950

2.2 SITE LAYOUT AND FEATURES

The site consists of two warehouse buildings, an office building and a gatehouse. The site layout is shown in *Figure 2.2*. The site can be split into two halves. The buildings are located on the southern side of the site while the northern side of the site is relatively open and serves as an access and parking area. A rail line runs in an east west direction across the northern half of the site. Past land uses required site access for trains from the main western railway line. The surfaces of the site to the south of the rail line are all sealed with concrete except for some small garden areas, which are treed and grassed. The surface of the site to the north of the rail line is covered in asphalt except for a small patch of grass on the western side.

All buildings on the site are currently unused, except for the Jacques Workshop which is situated in part of Warehouse (2). This section of the warehouse contains several metal working machines, some office space and storage areas.

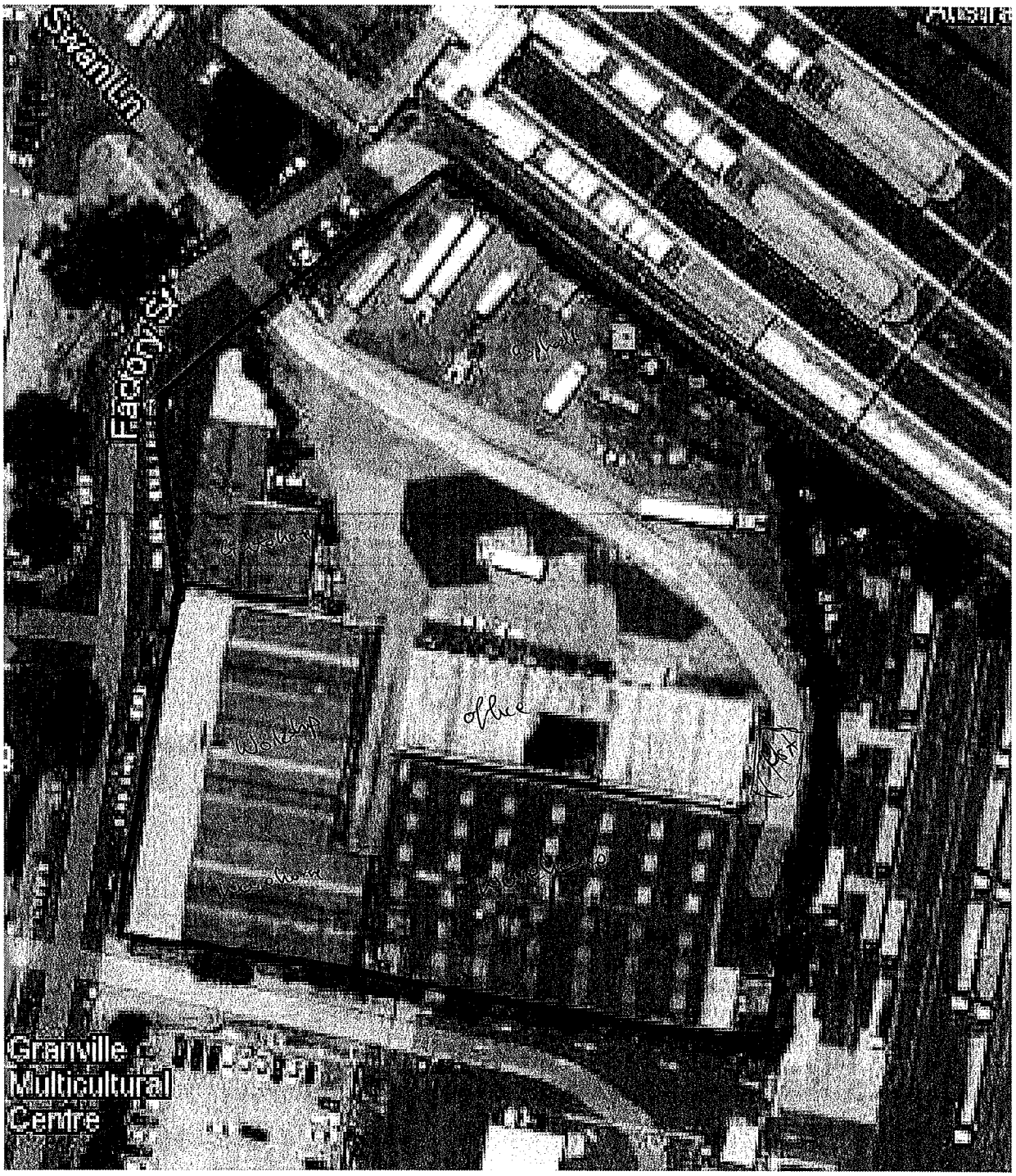


G:/Jobs/2001/01135/01135-F1.cdr 07 05 2001 terry Environmental Resources Management Australia Pty Ltd

ERM

Figure 1 **Site Location**

Preliminary Environmental Site Assessment - Granville


Granville
Multicultural
Centre

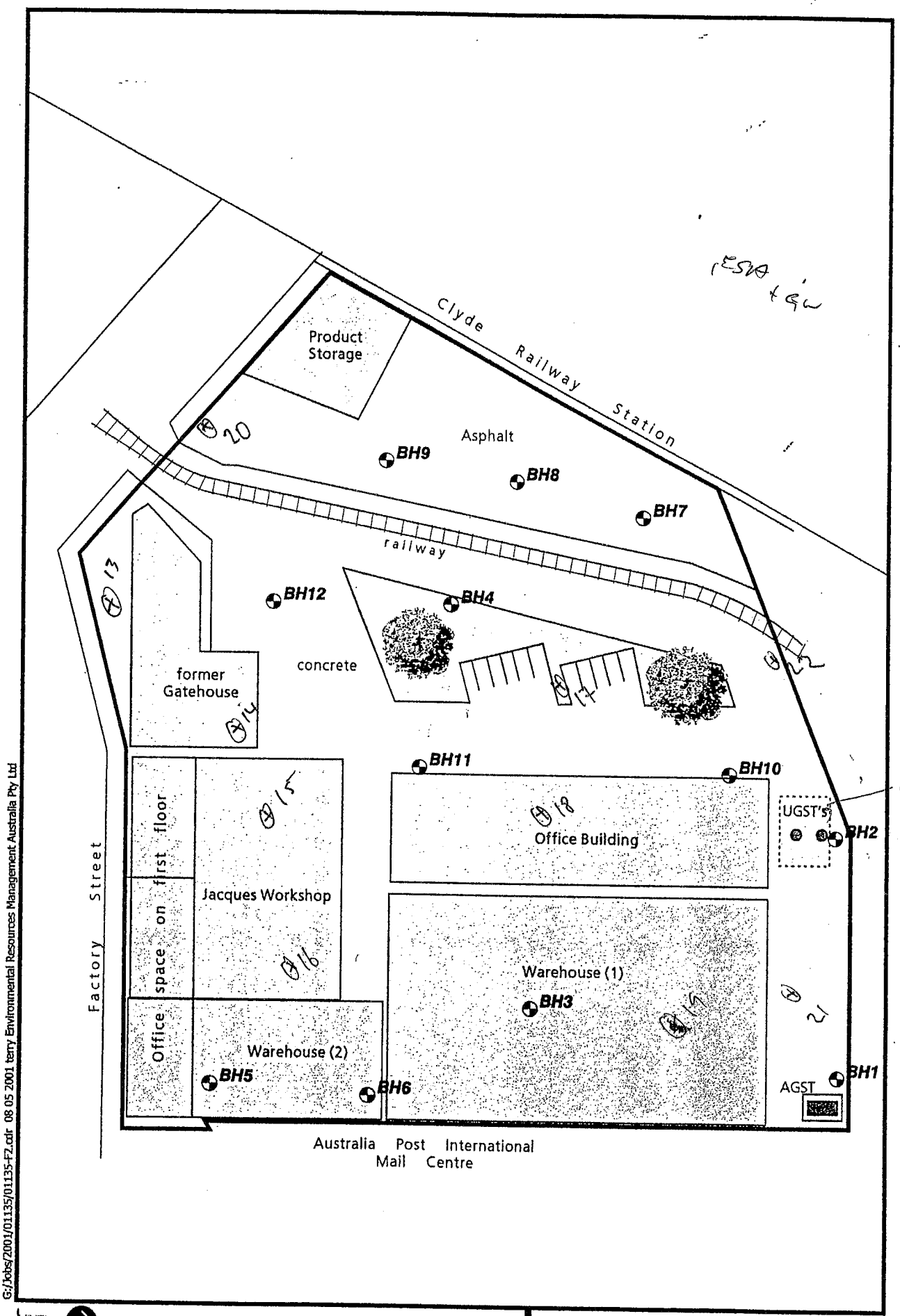


Figure 2 **Site Layout and Borehole Locations**

Preliminary Environmental Site Assessment - Granville

2.3 ENVIRONMENTAL SETTING

2.3.1 *Topography*

Topographic information obtained from the 1:25,000 Parramatta River Topographic Sheet 9130-3-N (1986) indicates that the average natural site level is approximately 5 metres above the Australian Height Datum (1966) and that the site is relatively flat.

2.3.2 *Geology, Soils and Fill*

Geological information obtained from the 1:100,000 Sydney Geological Series Sheet 9130 (1983) indicates the site is situated on "Ashfield Shale" which consists of black to dark grey shale and laminite. The Ashfield Shale group are generally underlain by Hawkesbury Sandstone which consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses throughout.

The 1:100,000 Sydney Soil Landscape Series Sheet 9130 (1983) indicates that the site is situated on the "Disturbed" soils as a result of intense human activity. The area is naturally classed as having soils of the "Birrong" Group. The Birrong consists of deep (>250cm) solodic soils and yellow solonetzic soils. The limitations of this soil group are listed as: high soil erosion hazard; saline subsoils; seasonal waterlogging; and, very low fertility.

Fill was encountered during the drilling of boreholes at the site in the top 0.5 metres. It appeared that the fill had been used to level areas for the construction of buildings and a car park. The fill typically consisted of dark grey clayey ash, blue metal and terracotta pieces.

2.3.3 *Surface Drainage*

All building roofs and the concrete surfaces around the buildings appeared to have storm water drainage in place. A number of stormwater drainage manholes were observed on the site and it appeared as though storm water drainage was directed away from the site in a north easterly direction. The northern half of the site does not have any evident storm water drainage. The asphalt surface appeared to be in poor condition which would allow some infiltration into the subsoils, however it is most likely that stormwater drains via the surface to either Factory Street or to the adjacent main western railway line. It is most likely that the stormwater drained from the site ends up in Duck River and flows in a north easterly direction on into the Parramatta River.

2.3.4 *Hydrogeology*

It is most likely that groundwater beneath the site travels in a west to east direction towards Duck River and ultimately the Parramatta River.

A search conducted by the DLWC indicated that there was one registered groundwater bore within two kilometres of the site. *Table* 2.2 summarises the results of the groundwater bore search.

Table 2.2 SUMMARY OF GROUNDWATER BORE DETAILS

Bore ID	Distance from Site	Direction from Site	Depth to Water	Date Installed	Status	Purpose
GW024667	2,000 m	North	2.4 m	01/10/1966	Supply Obtained	General Use

Borehole GW024667 was drilled to a depth of 4.57 metres below ground level. The drillers log indicates that sand was present throughout the entire borehole. No water quality information was provided. Based on the large distance to this nearest groundwater bore, any impacts present at the site would not be anticipated to impact on this bore.

The work summary and location map of borehole GW024667 is contained in *Appendix A.*

2.3.5 *Sensitive Environments*

No sensitive environments have been identified on the site. The site lies on a relatively flat area in between Duck River and Duck Creek. Duck River is located approximately 90 metres to the east of the eastern site boundary and Duck Creek is located approximately 200 metres to the north west of the western site boundary. The nearest residences are within 20 metres of the site. The nearest school is 650 metres to the west, nearest hospital is 1,500 metres south east, and the nearest recreation area is 500 metres south. Sensitive environments in the areas surrounding the site are summarised in *Table* 2.3.

Table 2.3 SENSITIVE ENVIRONMENTS SURROUNDING THE SITE

Sensitive Environment	Distance From Site	Direction From Site
Residence	20 metres	West
Duck River	90 metres	East
Duck River Reserve	500 metres	South
Granville Boys High School	650 metres	West
St. Josephs Hospital	1,500 metres	South East

Chapter 3

SITE HISTORY

3.1 OWNERSHIP AND TITLE INFORMATION

A search of land title records for the site was undertaken by Advanced Legal Search. The search results indicate that the property was originally purchased by Hudson Brothers Limited, in 1882. The property then had a series of private owners until 1992, when it was purchased by Barinu Pty Ltd. The site has been fully occupied by the Clyde Engineering Company from 1882 to September 2000, and has been partially occupied by the Clyde Engineering Company from September 2000 to the present. *Table 3.1* presents a summary of the history of site ownership and lease details. The complete search results are shown in *Appendix B*.

Table 3.1 SUMMARY OF SITE OWNERSHIP HISTORY

Period	Site Owner	Site Use
1882 - 1895	Hudson Brothers Limited	Steel Machinery Manufacture and Assembly
1895 - 1988	Clyde Industries Limited	Steel Machinery Manufacture and Assembly
(1956 – 1969)	Leased to The Clyde Engineering Company Pty Ltd	Steel Machinery Manufacture and Assembly
1988 – 1992	PC Developments Pty Ltd and Bayrill Corporation Pty Ltd	Steel Machinery Manufacture and Assembly
1992 – 2001	Barinu Pty Ltd	Steel Machinery Manufacture and Assembly
(1994 – 2001)	Leased to Clyde Industries limited	Steel Machinery Manufacture and Assembly

3.2 AERIAL PHOTOGRAPH REVIEW

A search was conducted by the DLWC for aerial photographs featuring the site. Six aerial photographs of the site were found spanning the period from 1951 to 1998. The aerial photographs were viewed by James Morrow of ERM on 20 April, 2001.

The 1951 aerial photograph *'Sydney (Co. Cumberland), Run 11'* shows that the site is mostly covered by buildings. It appears as though a rail line runs through the northern half of the site in a west to east direction. The area surrounding the rail line is vacant and it appears as though there are train carriages lying there. A series of what appear to be sheds or buildings are present between the rail line and Clyde Railway station. The southern side of the site is layed out much the same as it is at present (2001) however the buildings are of different construction. A large rectangular building with gabled roofing occupies the south eastern corner of the site. This building extends well beyond the southern site boundary which is consistent with the information that revealed the site was formerly part of a much larger property which extended nearly the whole length of Factory Street. The south western corner of the site is occupied by another large rectangular building which does not adjoin any structure on the land to the south of the site. An access way exists between the buildings in the south east and south west corners of the site. What appears to be a shed exists on the southern side of the site entrance in the location of the former Gatehouse, which is present on the site today (2001).

The 1961 aerial photograph *'Cumberland, Run 32E, NSW 1048/5715'* shows a number of changes to the site since the 1951 photograph. The buildings along the northern site boundary have been removed and the area remains vacant. The northern half of the building in the south eastern corner of the site has been pulled down and the area which it formerly occupied is vacant. This building still adjoins buildings on the adjacent property to the south of the site. The building in the south west corner of the site remains unchanged since 1951. The Gatehouse, which still exists, has replaced the sheds that were present in the area on the southern side of the site entrance. As in the 1951 photograph, the area surrounding the rail line is vacant and it appears as though there are train carriages lying there. No other changes have occurred since the 1951 aerial photograph.

The 1970 aerial photograph *'Cumberland, Run 16W, 7/7/70, NSW 1909'* shows a number of changes since the 1961 aerial photograph. The northern half of the site forms a car park and access way for the site. A large rectangular building with both flat and gabled roofing has been built in the south west corner of the site. The building in the south east corner of the site remains unchanged since 1961 and still adjoins buildings to the south of the site. A rectangular building has been built immediately north of the building in the south east corner. It appears to be an office building as plant is present on the roof. No other changes have occurred since the 1961 aerial photograph.

The 1978 aerial photograph *'County of Cumberland, Run 15, 6/5/78, NSW 2713 (Misc 1029)'* shows some changes since the 1970 aerial photograph. A new building, which appears to be a large rectangular warehouse, is now present the south east corner of the site. This building no longer adjoins buildings to the south of the site. The car

park area on the northern portion of the site appears has islands of grass and trees bordering car parking spots. The site appears to be layed out the same as it is at present (2001).

The 1986 aerial photograph *'Sydney ISG, Run 21, 3/8/86, NSW 3528 (M1742)'* shows no significant change since the 1978 aerial photograph.

The 1998 aerial photograph *'Sydney, Run 10, 29/9/98, NSW 4452 (M2136)'* shows no significant change since the 1986 aerial photograph.

An oblique aerial photograph is shown in James Murray's 1992 book on the history of Clyde Industries. It is thought that it depicts the site some time in the 1930's or 1940's. The photo clearly shows that the majority of the site is covered by industrial looking buildings. Smoke or steam is evident coming from chimneys on one of the buildings on the site.

3.3 ADJOINING LAND USES

The current surrounding land uses are:

- To the North – Clyde Railway Station
- To the East – Australia Post International Mail Centre
- To the South – Australia Post International Mail Centre
- To the North West – Factory Street beyond which exists the NSW TAB Printing facility
- To the South West – Factory Street beyond which exists residential dwellings

Aerial Photographs show that the land on the to the north of the site has been part of the main western rail line since at least 1951. A book written by James Murray in 1992, detailing the history of Clyde Engineering, states that the railway existed in 1881, when the original owners of the site, the Hudson Brothers, decided to purchase the site.

Aerial photographs and oblique aerial photographs contained in James Murray's 1992 book show that the area on the eastern side of site was occupied by the Clyde Engineering until some time between 1970 and 1978. The 1978 and 1986 aerial photographs show that the land lay vacant over that period. In the 1998 aerial photograph the site is still vacant however it appears that the site is being levelled

for development. The land is currently used by the Australia Post International Mail Centre as a truck parking area.

Aerial photographs and oblique aerial photographs contained in James Murray's 1992 book show that the area to the south of the site was also occupied by Clyde Engineering up until some time between 1970 and 1978. Like the land to the east of the site, it appears to be vacant and unused in both the 1978 and 1986 aerial photographs. In the 1998 aerial photograph the a portion of the land appears to be used for parking trucks while the remainder of the land appears as though the site is being levelled for development. The land immediately south of the site is currently used by the Australia Post International Mail Centre as a truck parking area while the land further to the south contains buildings associated with Australia Post.

Aerial photographs from 1951 through to 1998 show that the land to the north west of the site has been used for industrial or commercial purposes. This land is currently occupied by the NSW TAB printing facility.

Aerial photographs from 1951 through to 1998 show that the land to the south west of the site has been used for residential purposes. This land is currently used for residential purposes.

3.4 OTHER INFORMATION

On 24 April, 2001, James Morrow of ERM undertook a site inspection. During the inspection Ron Dixon of Comres Property Services, and former employee of Clyde Industries Ltd, was present and provided information regarding the use and history of the site. Information obtained during the site inspection includes the following:

- Ron Dixon recalled that Warehouse (1) was only ever used for product storage. At the time of the site inspection the warehouse was empty however the presence of aisles markings on the ground back up this recollection.

- Warehouse (2) was used for manufacturing of steel products. The warehouse contains offices on a mezzanine level along the western side. The northern half of Warehouse (2) is currently being used by Jacques to manufacture heavy duty products that are used in rock crushing equipment, while the southern half is not currently used.

- The office building situated on the northern side of Warehouse (1) was built some time in the 1960's and has only ever been used as office space.

- The building on the southern side of the property entrance was formerly used as a gatehouse to monitor incoming vehicles and rolling stock. The

building consists of two or three offices and considerable storage space. It is currently unused.

- An above ground diesel fuel tank exists in the south eastern corner of the site. The tank is surrounded by a concrete bund and appears as though it has not been used recently. The area inside the bund is badly stained with diesel fuel however the staining does not extend outside the bunding. No other above ground storage tanks (ASTs) were evident on the site.

- Two fill points were observed at the eastern end of the office building. One of the fill points has been filled with concrete and the other appears to have been purposely bent to discontinue its use. It is most likely that these fill points are associated with under ground storage tanks (USTs). There was no evidence to suggest that any other USTs exist on the site.

A book written by James Murray in 1992 details the history of Clyde Engineering, the former owners of the site. The book gives an indication as to activities that may have occurred on the site in the past. Clyde Engineering manufactured metal mechanical products. Examples of the types of goods made include: steam driven vehicles, agricultural equipment, steam driven locomotives and diesel-electric locomotives for the NSW Railways. Clyde Engineering originally occupied the entire eastern side of Factory Street. There are no details given as to what activities took place on different areas of the site so there is no way of knowing what activities have taken place on the subject site.

Ronald Curby, a former train driver and employee of NSW Railways, recalls that diesel electric locomotives were tested out of the Clyde Engineering Factory before they were passed for full time use. This means that it is likely that diesel fuel was stored somewhere on the Clyde Engineering Factory to enable the newly constructed locomotives to be fuelled before their maiden test run.

3.5 EPA SEARCH

An EPA search was conducted by Advanced Legal Search on behalf of ERM and it was found that there are currently no notices issued under the Unhealthy Building Land Act for the site. The results of the search are shown in *Appendix C*.

3.6 COUNCIL DEVELOPMENT APPLICATION RECORDS

A search of Parramatta City Councils (PCCs) property records was undertaken by Dennis O'Sullivan of PCC on behalf of ERM. A development application number

JT/00571/00 dated 30 May 2000 was present in the files. A construction certificate determination number NH/00724/00 and development consent DA 00/571 dated 13 September 2000 for the site were also in the files. No other relevant documentation for the site was present in the files.

3.7 SUMMARY OF SITE HISTORY

The history of the site can be summarised as follows:

The site was purchased in 1882 by the Hudson Brothers Limited, who used it to form part of their mechanical engineering factory. The Hudson Brothers subsequently became Clyde Industries Limited. The site formed part of the Clyde Industries factory which produced all types of metal mechanics including steam driven cars, agricultural equipment, steam locomotives and diesel locomotives. Although the site was owned by a number of different owners, Clyde Industries or Clyde Engineering leased and used the site up until September 2000. The site is currently used for the manufacture of parts for rock crushers by Jacques Engineering.

- Sample identification number
- Sample depth
- Job number
- Date of collection
- Samplers initials

- Samples were placed in a cooler on ice immediately for dispatch to the laboratory; and

- Samples were recorded on a Chain of Custody form and dispatched to a National Association of Testing Authorities (NATA) registered laboratory.

Three samples were taken from each borehole, one at the ground surface, one at one metre below ground level and another at two metres below ground level. The soil profile for each borehole was logged in the field to include the following information where appropriate: soil type, colour, grain size, angularity inclusions, moisture conditions, staining and odour.

The implements used for drilling and collecting samples were inspected for any dirt, oil, grease or accumulated sediment; decontaminated on-site (manually washed with a steam cleaner or non-phosphate detergent solution) and air-dried. This procedure was repeated prior to the beginning of a new sampling location to prevent cross contamination.

4.2.2 Sample Analysis

One sample from each borehole was analysed to achieve adequate analytical coverage of the site. Samples to be analysed by the laboratory were selected based upon their appearance, odour and PID results from the field. All soil samples submitted for analysis were analysed for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphorous pesticides (OPPs), polychlorinated biphenyls (PCBs), metals and cyanides.

All soil samples were sent to LabMark, Asquith for analysis or storage. LabMark performed laboratory analysis for TPH, BTEX, PAHs, OCPs, OPPs and PCBs. Metals and cyanide analysis was subcontracted to Sydney Analytical Laboratories (SAL).

Chapter 5

SOIL INVESTIGATION RESULTS

5.1 ASSESSMENT CRITERIA

Soil analytical results were assessed against the criteria summarised in *Table 5.1*.

Soil results for metals, OCPs, PCBs, PAHs and cyanide were assessed against the Soil Investigation Levels (SIL) – Exposure Setting "F" (commercial/industrial landuse) as outlined in the NSW EPA (1998) *Guidelines for the NSW Site Auditor Scheme*. These guidelines are based on the National Environmental Health Forum's (NEHF) (1996) *"Health-Based Soil Investigation Levels"*. The NEHF criteria provide a tiered set of soil quality criteria based upon the exposure to soils associated with various land uses. These guidelines are considered appropriate for a site that is used for industrial or commercial purposes.

Analytical results for BTEX were assessed against the threshold concentrations for less sensitive land use as published in the NSW EPA (1994) *Guidelines for Assessing Service Station Sites*. For TPH, there are currently no accepted values for TPH for less sensitive land uses; therefore, the value for sensitive land use was used. Currently there are no guidelines in existence in NSW for OPPs.

Table 5.1 SUMMARY OF ASSESSMENT CRITERIA

Analyte	NSW EPA (1994) Sensitive Land Use Criteria	NSW EPA (1998) Soil Investigation Levels
Organics		
TPH C6-C9	65	-
TPH C10-C36	1,000	-
Benzene	1	-
Toluene	130	-
Ethylbenzene	50	-
Xylene	25	-
Priority Heavy Metals		
Arsenic	-	500
Cadmium	-	100

Chromium	-	500
Copper	-	5,000
Lead	Not Applicable	1,500
Nickel	-	3,000
Zinc	-	35,000
Mercury	-	75
Organochlorine Pesticides		
Aldrin & Dieldrin	-	50
Chlordane	-	250
DDT & DDD & DDE	-	1,000
Heptachlor	-	50
Total PAHs	-	100
Total PCBs	-	50
Cyanides (Complex)	-	2,500
Organophosphate Pesticides	-	-

Notes: 1. *All values are given in mg/kg (dry weight).*

5.2 FIELD OBSERVATIONS

The site geology was very consistent across all boreholes. Typically the top 0.3 - 0.5 metres of soil was fill consisting of crushed blue metal, dark grey clayey ash and pieces of terracotta material. This fill layer was underlain by mottled red, orange, light grey and brown clay with some shale content. The clay was moist, stiff and of medium plasticity down to a depths of about 1.2 metres after which it became very dry and powdery. The clay continued down to 2 metres in most boreholes.

Groundwater was not encountered in the drilling of any borehole however a saturated zone exists in BH10 at depths between 1.2 and 1.6 metres. This could represent a perched water unit. Detailed bore logs are contained in *Appendix D*.

A borehole was drilled on the down gradient (eastern) side of two fill points that were found in a concrete slab. There was visual and olfactory evidence of diesel fuel in the soil that indicates it is most likely that the fill points are associated with diesel USTs. A borehole was also placed on the down gradient side of a diesel AST, but there was no obvious evidence of there being diesel fuel in the soil. There was no evidence to suggest that any other ASTs or USTs exist on the site.

5.3 SOIL SAMPLING RESULTS

All laboratory reports and chain of custody forms are included in *Appendix E.*

5.3.1 BTEX and TPH

Table 5.2 shows the results of the analysis of soils for BTEX and TPH.

Table 5.2 BTEX AND TPH SOIL RESULTS

Sample ID	B	T	E	X	Total Petroleum Hydrocarbons			
					$C_6 - C_9$	$C_{10} - C_{14}$	$C_{15} - C_{28}$	$C_{29} - C_{36}$
EQL	0.2	0.5	0.5	1	10	50	100	100
BH1 - 0.5m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	160	<100
BH2 – 0.5m	< 0.2	< 0.5	< 0.5	1	50	1,690	5,630	360
DUP A (BH2)	< 0.2	< 0.5	< 0.5	< 1	20	1,100	3,460	200
BH3 - 0.2m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
BH4 – 0.0m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
BH5 – 0.2m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
BH6 – 0.2m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
BH7 – 0.1m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
BH8 – 0.1m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	270	130
BH9 – 0.1m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
BH10 – 0.2m	< 0.2	< 0.5	< 0.5	< 1	< 10	250	3,640	660
BH11 – 0.1m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	100	< 100
BH12 – 0.2m	< 0.2	< 0.5	< 0.5	< 1	< 10	< 50	< 100	< 100
Assessment Criteria								
NSW EPA (1994)	1.0	130	50	25	65	*	1,000*	*

Notes:
1. *EQL = estimated quantitation limit as specified by the laboratory.*
2. *All results shown in mg/kg unless stated otherwise.*
3. ** = 1,000 mg/kg applies for total TPH ($C_{10} - C_{36}$).*
4. *Shaded values indicate an exceedance of the criteria.*

Table 5.2 shows that soil sampled from BH2 and BH10 have concentrations of TPH ($C_{10} - C_{36}$) which exceed the assessment criteria. All other samples analysed for TPH and BTEX had concentrations either below the laboratory detection limits or below the assessment criteria.

5.3.2 *Metals*

Soil samples were analysed for the eight priority metals, Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), Zinc (Zn), Mercury (Hg) and Cyanides (CN*). *Table 5.3* shows the results of the analysis of soil samples for metals.

Table 5.3 METALS SOIL RESULTS

Sample ID	As	Cd	Cr	Cu	Ni	Pb	Zn	Hg	CN*
EQL	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.005*	*0.1*
BH1 - 0.5m	5.5	< 0.5	19	52	15	22	60	0.025	0.2
BH2 – 0.5m	5.5	< 0.5	7.5	38	18	31	52	0.040	< 0.1
DUP A (BH2)	4.0	< 0.5	11	23	13	31	33	0.025	< 0.1
BH3 - 0.2m	4.5	< 0.5	31	29	27	12	58	0.010	< 0.1
BH4 – 0.0m	3.0	< 0.5	7.5	10	2.5	39	16	0.020	< 0.1
BH5 – 0.2m	6.0	< 0.5	12	54	25	32	160	0.025	< 0.1
BH6 – 0.2m	7.5	< 0.5	7.0	760	29	150	380	0.045	< 0.1
BH7 – 0.1m	5.0	< 0.5	12	51	13	180	105	0.27	< 0.1
BH8 – 0.1m	12	< 0.5	14	45	34	87	190	0.25	< 0.1
BH9 – 0.1m	3.0	< 0.5	18	24	3.5	20	42	0.040	< 0.1
BH10 – 0.2m	26	< 0.5	14	52	50	83	240	0.020	< 0.1
BH11 – 0.1m	300	1.0	22	150	43	440	810	0.170	< 0.1
BH12 – 0.2m	5.0	< 0.5	23	65	10	130	83	0.060	< 0.1
Assessment Criteria									
NSW EPA (1998)	500	100	500	5,000	3,000	1,500	35,000	75	2,500

Notes: 1. *EQL = estimated quantitation limit as specified by the laboratory.*

2. *All results shown in mg/kg unless stated otherwise.*

3. ** - results reported are for total Cyanides.*

As shown, all metals concentrations were below their respective assessment criteria.

Chapter 6

CONCLUSIONS

Based upon a historical information research, a site inspection and soil sampling results ERM concludes the following:

- The site forms part of a much larger property that has been the location of the Clyde Engineering Factory, or the like, since 1882. The factory was used to manufacture metal mechanical products including steam vehicles, diesel locomotives and agricultural equipment;

- The site geology consists of fill from the surface to 0.3 to 0.5 metres depth. The fill consists of crushed blue metal, dark grey clayey ash and pieces of terracotta material. This fill layer is underlain by mottled red, orange, light grey and brown clay with some shale content. The clay was moist, stiff and of medium plasticity down to a depths of about 1.2 metres after which it became very dry and powdery. The clay continued down to 2 metres.

- Groundwater was not encountered in any boreholes advanced at the site; however, a saturated zone that was likely perched water was encountered at one location (BH10) from a depth of 1.2 to 1.6 metres below ground surface.

- Soil from BH2 and BH10 had concentrations of TPH that exceed the NSW EPA (1994) *'Guidelines for Assessing Service Station Sites'*. It is thought that the source of the soil impact in BH2 is two or more diesel USTs that are located underneath a concrete slab immediately west of BH2. The source of the contamination in BH10 is not known. Although BH10 is located in close proximity to BH2 the odours detected in each were markedly different which may suggest that the two impacted areas are not associated. All other soil samples analysed for TPH had concentrations below either the assessment criteria or laboratory detection limits; and

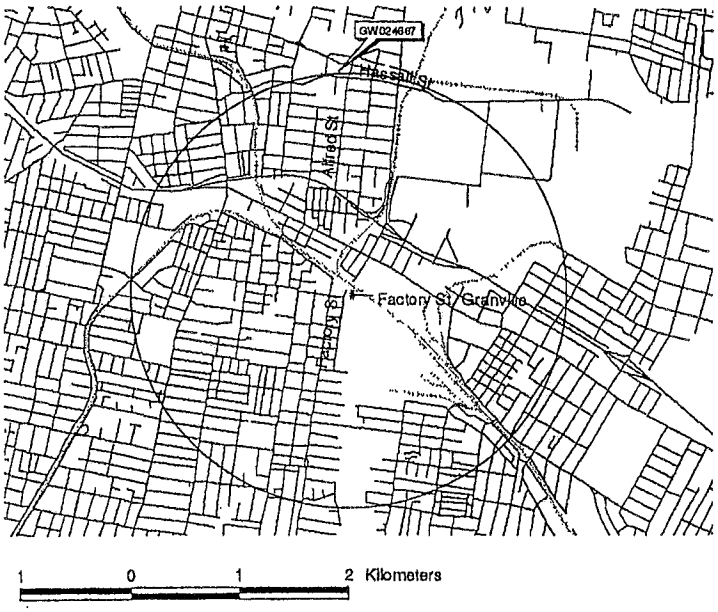
- All soil samples analysed for BTEX, OCPs, OPPs, PCBs, PAH's and metals had concentrations below either the assessment criteria or laboratory detection limits.

APPENDICES

Appendix A

DLWC GROUNDWATER BOREHOLE SEARCH RESULTS

Bores around Factory St, Granville
Nr Clyde Station



1 0 1 2 Kilometers

Groundwater Bores
Roads.shp
Nswrail.shp

N
W E
S

Date/Time :26-Apr-2001 3:37 PM
User :GUEST
Report :RMGW001D.QRP
Executable :S:\G5\PROD32\GROUND.EXE
Exe Date :12-Feb-2001
System :Groundwater
Database :Dlwcp

DEPARTMENT OF LAND & WATER CONSERVATION
Work Summary

GW024667

Converted From HYDSYS

License :

	Authorised Purpose(s)	Intended Purpose(s)
Work Type :Well		GENERAL USE
Work Status :Supply Obtained		
Construct. Method :Hand Dug		
Owner Type :Private		

Commenced Date :
Completion Date :01-Oct-1966
Final Depth : 4.50 m
Drilled Depth : 4.60 m

Contractor Name :
Driller :

Property :
GWMA :
GW Zone :
Standing Water Level :
Salinity : Fresh
Yield :

Site Details

Site Chosen By	County	Parish	Portion/Lot DP
	Form A :CUMBERLAND	ST JOHN	99999
	Licensed :		

Region :10 - SYDNEY SOUTH COAST
River Basin :213 - SYDNEY COAST - GEORGES RIVER
Area / District :

CMA Map :9130-3N PARRAMATTA RIVER
Grid Zone :56/1 Scale :1:25,000

Elevation :
Elevation Source :(Unknown)

Northing :6256031 Latitude (S) :33° 49' 12"
Easting :316267 Longitude (E) :151° 0' 53"

GS Map :0055A4 AMG Zone :56 Coordinate Source :GD.,PR. MAP

Construction

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

H	P	Component	Type	From (m)	To (m)	OD (mm)	ID (mm)	Interval	Details
1	1	Casing	Concrete Cylinder	-0.60	-0.60	914			(Unknown)

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
2.40	2.40	0.00	Unconsolidated	2.40					Fresh

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	4.57	4.57	Sand Water Supply	Sand	

Remarks

SITED 68 HASSALL ST. PARRAMATTA

*** End of GW024667 ***

*** End of Report ***

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

Appendix B

LAND TITLES SEARCH RESULTS

ADVANCE LEGAL SEARCH PTY LIMITED

(ACN 077 067 068)
ABN 49 077 067 068

P. O. Box 149
Yagoona NSW 2199

Telephone: (02) 9754 1590
Mobile: 0412 169 809
Facsimile: (02) 9754 1364
Email:alsearch@kbdnet.net.au

23 April 2001

Environmental Resources Management Australia Pty Ltd
PO Box 943
CROWS NEST NSW 1585
Attention James Morrow

RE: **FACTORY STREET, GRANVILLE**
Lot 22 DP 569501
Ref: 101135

Current Search

Folio Identifier 22/569501 (attached)
Lot 22 DP 569501 (plan attached)
Dated 19 April 2001
Registered Proprietor:
BARINU PTY LIMITED

Subject to Lease No 3641142 to Clyde Industries Ltd.
Expires 30/9/1998.

Title Tree
Lot 22 DP 569501

Folio Identifier 22/569501

Certificate of Title Volume 12553 Folio 138

Certificate of Title Volume 12003 Folio 219

Certificate of Title Volume 6854 Folio 98

Certificate of Title Volume 6303 Folio 228

Certificate of Title Volume 6191 Folio 40

PA 35627

Conveyance Book 629 No 257

Summary of Proprietor(s)
Lot 22 DP 569501

Year	Proprietor
1992-todate	Barinu Pty Limited
(1994-todate)	*(Lease to Clyde Industries Ltd)*
1988-1992	PC Developments Pty Limited
	Bayrill Corporation Pty Limited
1895-1988	Clyde Industries Limited
(1956-1969)	*(Lease to The Clyde Engineering Company Pty Limited)*
1882-1895	Hudson Brothers Limited

******

Land and Property Information

TITLE SEARCH

Computer Folio Certificate issued under Section 96D of the Real Property Act 1900

No. B97

Search certified to:
19/4/2001 11:10AM

COMPUTER FOLIO REFERENCE	
22/569501	
EDITION No. & DATE OF CURRENT CERTIFICATE OF TITLE	
4	4/12/1997

LAND

LOT 22 IN DEPOSITED PLAN 569501
AT CLYDE
LOCAL GOVERNMENT AREA: PARRAMATTA
PARISH OF LIBERTY PLAINS COUNTY OF CUMBERLAND
TITLE DIAGRAM: DP569501

FIRST SCHEDULE

BARINU PTY. LIMITED (T E286693)

SECOND SCHEDULE (7 NOTIFICATIONS)

---

1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2. F784995 RIGHT OF FOOTWAY APPURTENANT TO THE LAND ABOVE DESCRIBED AFFECTING THE 5.75 PERCH PARCEL SHOWN IN DP380918
3. DP569501 RIGHT OF FOOTWAY APPURTENANT TO THE LAND ABOVE DESCRIBED
4. T358113 EASEMENT FOR UNDERGROUND MAINS AFFECTING THE LAND SHOWN SO BURDENED IN DP117574
5. T472771 EASEMENT FOR ELECTRICITY PURPOSES AFFECTING THE LAND SHOWN SO BURDENED IN DP117574
6. E286694 MORTGAGE TO WESTPAC BANKING CORPORATION
7. 3641142 LEASE TO CLYDE INDUSTRIES LTD EXPIRES 30/9/1998 OPTION OF RENEWAL 2 YEARS

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

The Registrar General certifies that at the date and time specified above the person(s) described in the First Schedule was the registered proprietor of an estate in fee simple (or other such estate or interest set out in the Schedule) in the land described, subject to any exceptions, encumbrances, interests and entries which appear in the Second Schedule.

REGISTRAR GENERAL NEW SOUTH WALES

*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE.

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

Box:97 /Req:1870625 /Doc:DP 0569501 P /Rev:10-Sep-1992 /Sts:OK.OK /Prt:19-Apr-2001 11:10 /Pgs:ALL /Seq:1 of 1

PLAN FORM 2

Plan Drawing only to appear in this space

OFFICE USE ONLY

D.P. 569501

Registered: 16-9-1974

C.A. NO. 2895/6986/2/32/2863 OF 20-8-1973

Title System: TORRENS

Purpose: SUBDIVISION

Ref. Map: PARRAMATTA SH. 22

Last Plan: D.P. 558782

PLAN OF SUBDIVISION OF LOT 2 D.P. 558782

Reduction Ratio 1: 2000

Lengths are in metres.

Meridian: PARRAMATTA City

Locality: CLYDE

Parish: LIBERTY PLAINS

County: CUMBERLAND

This is Sheet 1 of my plan in (Delete B if inapplicable).

I, Lindsay John Millard of 265 Elizabeth St., Sydney a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan is accurate and has been made *[I] / [or] under my supervision in accordance with the Survey Practice Regulations, 1933, and was completed on 7 ——— 19-6-73

Signature

Surveyor registered under Surveyors Act, 1929, as amended. Delete Class of Survey A, B or C. *Strike out either (1) or (2). Proper cross at survey.

Parcel 1 is set aside for the easements at intervals to dedicate public roads or to create public rights, sewer, drainage reserves, easements or restrictions as to user.

It is intended to create pursuant to Sec. 88B of the Conveyancing Act (Cos Generation)

a) Right of Footway variable width.

b) Restrictions on the Use.

INSTRUMENT FILED AS P000787

SURVEYOR'S REFERENCE: 7332A

DIAGRAM 1
SCALE 1:800

DIAGRAM 2
SCALE 1:200

FACTORY

STREET

SIXTH AVE.

DUCK RIVER

RAILWAY

SEE DIAGRAM 1

SEE DIAGRAM 2

D.P. 569501

D.P. 558782

22

21
5·803 ha
by dwd

1

22
1·07 ha

(ALGD. 3·658-12·801-3·658)

Council Clerk's Certificate

I hereby certify that—

(a) the requirements of the Local Government Act, 1919, under that Act applicable to the subdivision of land, and

(b) the requirements of section 252 of the Water Board (Corporation) Act, 1924, as amended, Hunter District Water, Sewerage, and Drainage Act, 1938, as amended, and Drainage Act, 1939, as amended

have been complied with by the applicant in relation to the proposed subdivision.

Delete "approved", "conditionally" or "not approved" as applicable.

Subdivision No. 2582/1974/2/32/2863

Date 20/8/74

Signature

Council Clerk

* This part of certificate to be deleted where the application is only for a consolidation but on the opening of a new road or where the land is to be subdivided in whole or part within the area of operations of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board.

* Strike out inapplicable.

MPD.

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

AMENDMENTS OR ADDITIONS MADE ON PLAN IN REGISTRAR GENERAL'S OFFICE.

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 17th day of January, 1977

Registrar General

Land and Property Information

HISTORICAL TITLE SEARCH

Certificate issued under Section 96G
of the Real Property Act 1900

No. B97

Search certified to: 19/4/2001 11:08AM

Computer Folio Reference: 22/569501

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 12553 FOL 138

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
25/11/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
31/8/1989	Y586380	DEPARTMENTAL DEALING	
12/10/1989	Y642992	DISCHARGE OF MORTGAGE	EDITION 1
27/2/1992	E286692	DISCHARGE OF MORTGAGE	
27/2/1992	E286693	TRANSFER	
27/2/1992	E286694	MORTGAGE	EDITION 2
24/1/1995	U964652	LEASE	EDITION 3
4/12/1997	3641142	LEASE	EDITION 4

*** END OF SEARCH ***

doccop4

PRINTED ON 19/4/2001 B97

The Registrar General certifies that at the date and time specified above the information set out in this search constitutes the historical record of all dealings recorded in or action taken in respect of the mentioned title which is required to be kept by the Registrar General under Section 32(7) of the Real Property Act 1900.

Registrar General

[redacted]ICATE OF TITLE

NEW SOUTH WALES [redacted] PROPERTY ACT, 1900

Appln.No.35627

Prior Title Vol.12003 Fol.219

Vol. 12553 Fol. 138

Edition issued 26-9-1974

(Page 1) Vol. 12553 Fol. 138

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

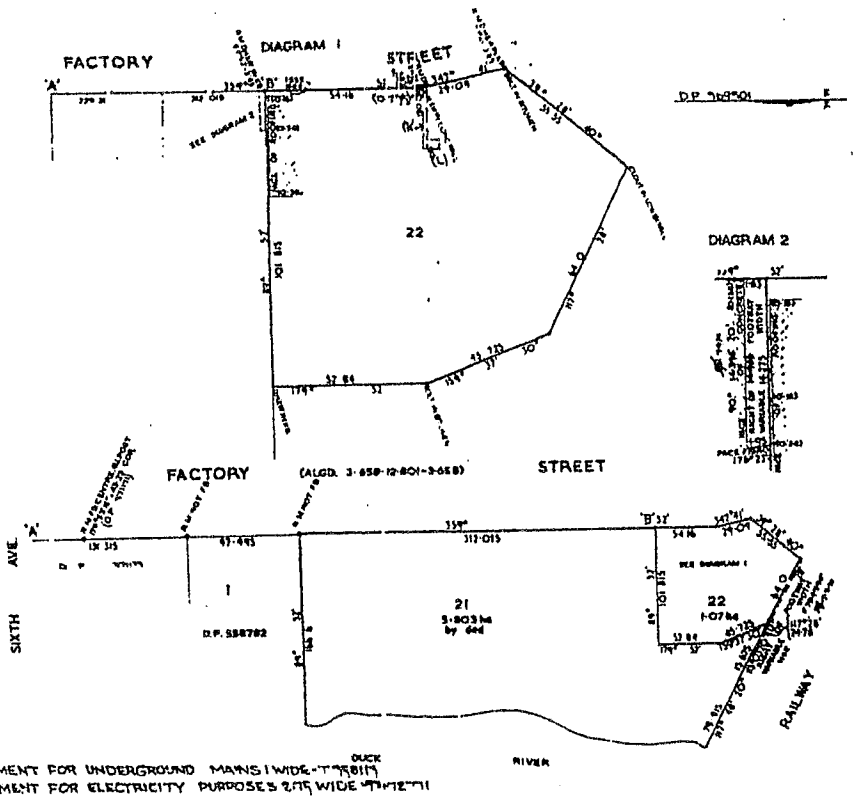
CANCELLED

Registrar General.

SEE AUTO FOLIO

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



(M) EASEMENT FOR UNDERGROUND MAINS 1 WIDE THROUGH

(L) EASEMENT FOR ELECTRICITY PURPOSES 2.05 WIDE THROUGH

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 22 in Deposited Plan 569501 at Clyde in the City of Parramatta Parish of Liberty Plains and County of Cumberland, being part of Portion 2 granted to William Lawson and William Charles Wentworth on 29-1-1840.

FIRST SCHEDULE

~~CLYDE INDUSTRIES LIMITED.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Right of Footway created by Transfer No.F784995 appurtenant to the land above described affecting the 5¾ perch parcel shown in Deposited Plan 380918.
3. ~~Mortgage No.I627063 to State Superannuation Board. Entered 48-11-1969.~~ Discharged R615072
4. Right of Footway appurtenant to the land above described created by the registration of Deposited Plan 569501. See P327.

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

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

Vol. 12553 Fol. 138

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
PC Developments Pty. Limited and Baywill Corporation Pty Limited as tenants in common in equal shares by Transfer X706323. Registered 26-7-1988.					
CANCELLED					
SEE AUTO FOLIO					

CT-20 12.79.
R615-21 m R
T55[illegible] Endt
T472771 IT
X608344 X
X706322 NX
24 T
25 32
26
X836031 L

SECOND SCHEDULE (continued)

	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
EA	T358113	P		Transfer - Easement for underground mains affecting the land shown so burdened in the plan hereon. Registered 25.5.1983.					
ER	T472771	P		Transfer - Easement for Electricity Purposes affecting the land shown so burdened in the plan hereon. Registered 25.5.1983. OP 117574					
	X608344			Caveat by PC Developments Pty Limited and Baywill Corporation Pty. Limited. Registered 23-6-1988. Withdrawn X706322			Withdrawn	X706322	
M	X706324	P		Mortgage to Manufacturers Mutual Insurance Limited. Registered 26-7-1988.					
M	X706325	P		Mortgage to Clyde Industries Limited. Registered 26-7-1988					
L	X836031	P		Lease to Clyde Industries Limited of premises being Lot 22, Factory Street, Granville. Expires 29-6-1994. Option of renewal for 3 years. Registered 15-9-1988					

(Page 2 of 2 pages)

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

NEW SOUTH WALES

CERTIFICATE OF TITLE

PROPERTY ACT, 1900

Vol. 12003 Fol. 219

Appln. No.35627

Prior Title Vol.6854 Fol.98

CANCELLED W

Edition Issued 12-12-1972

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

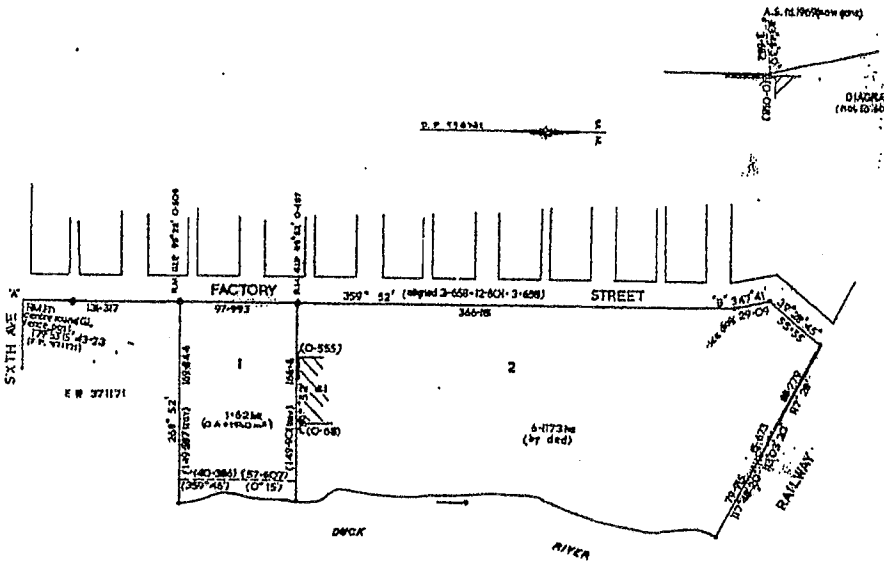
Registrar General.

(Page 1) Vol. 12003 Fol. 219

THE LAND IN THIS CERTIFICATE IS CAUTIONED AGAINST DEALING FOR THE PERIOD AND IN THE MANNER SET FORTH IN THE CAUTION AND SUBJECT TO SECTION 74 OF THE REAL PROPERTY ACT, 1900 AND TO ANY NOTIFICATION HEREON OR SUBSEQUENTLY ENTERED

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 558782 at Clyde in the City of Parramatta Parish of Liberty Plains and County of Cumberland being part of Portion 2 granted to William Lawson and William Charles Wentworth on 29-1-1840.

FIRST SCHEDULE

CLYDE INDUSTRIES LIMITED.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Right of Footway created by Transfer No.F784995 appurtenant to the land above described affecting the 5¾ perch parcel shown in P.P.380918.
3. Mortgage No.L627063 to State Superannuation Board. Entered 18-11-1969.

Registrar General

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

Vol. 12003 Fol. 219

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
Vesting on DP 569501. Vesting of easement reference to SD 22					
This deed is cancelled as to the whole					
New Certificates of ~~Title~~ ~~have~~ ~~issued~~ on 27-9-1974					
for lots in ~~Deposited~~ Plan No. 569501 ~~as follows:~~					
Lots 21 + 22 Vol. 12553 Fol 137 ~~/68~~ respectively.					
REGISTRAR GENERAL					

DP569501 pkg 27.9.74 (whole)

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
	DP 327		nterests created pursuant to Section 88B Conveyancing Act, 1919 by the registration of Deposited Plan 569501	16.9.1974				

(Page 2 of 2 pages)

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

Appendix C

EPA SEARCH RESULTS

ERM

Solicitors Urgent Enquiries Pty Limited
ABN 33 001 915 984
251 Liverpool Road, Ashfield NSW 2131 GPO Box 1615, SYDNEY NSW 2001 DX 516, Sydney
Telephone: (02) 9716.4100 Facsimile: (02) 9716.4155 Web site: www.sue.com.au

CENTRAL REGISTER OF RESTRICTIONS

S.U.E. LTO Division

CERTIFICATE ISSUED AT LAND TITLES OFFICE: **20-04-2001**

CUSTOMER NO.: **1957**
RECEIPT NO.: **G38189**

YOUR REFERENCE: **J34096(2-58268-1)**

Certificate

PARCEL REF: **22/569501**
PARISH: **LIBERTY PLAINS**

LOCAL COUNCIL NAME: **PARRAMATT**
COUNTY: **CUMBERLAND**

THE FOLLOWING AUTHORITIES HAVE NO INTEREST IN THE ABOVE PROPERTY

Environment Protection Authority

THE ENVIRONMENT PROTECTION AUTHORITY CURRENTLY HAS NO STATUTORY NOTICES ISSUED UNDER THE PROVISIONS OF THE UNHEALTHY BUILDING LAND ACT.

STATEMENT

AMOUNT **$10.00** (includes any GST)
NO. OF AUTHORITIES INQUIRED OF: **1**

DIRECTOR OF THE LAND TITLES OFFICE

APPLICANTS SHOULD SATISFY THEMSELVES AS TO THE CORRECTNESS OF THE LAND DESCRIPTION (INCLUDING PARISH/COUNTY) RECORDED HEREON

SOIL BORELOGS

Borehole Log No: BH1

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: —
Final GW: —

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

Description	USCS	Sample	Depth (m)	Sample	Penetration (mm)
Ground Surface			0		
CONCRETE (0.15m)					
GRAVEL FILL					
CONCRETE (0.15m)			0.5	X	35
CLAY Light brown, stiff, moist, medium plasticity.	OH				
CLAY Mottled light grey, red and yellow, high plasticity, stiff, moist with some ironstone.	OH		1	X	27
CLAY Mottled light grey and red, dry, some small gravel.	OH		1.5		
End of Borehole @ 2 metres.			2	X	31
			2.5		
			3		
			3.5		
			4		
			4.5		
			5		
			5.5		
			6		

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH2

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: —
Final GW: —

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

Description	USCS	Graphic	Depth (m)	PID	Recovery (%)	Comments
Ground Surface			0			
CONCRETE (0.15m)						
GRAVEL FILL						
CONCRETE (0.15m)						
CLAY Black stained, moist,oily texture, high plasticity, medium stiffness.	OH		0.5	XX	50.8	Staining, diesel, odour and oily texture.
CLAY Light grey, high plasticity, soft, moist.	OH		1	X	32.9	Diesel odour.
CLAY Light grey, high plasticity, dry.	OH		1.5			Diesel Odour.
End of Borehole @ 2 metres.			2	X	57.0	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH3

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
CONCRETE (0.15m)						
CLAY Light grey, very dry and powdery, with some pieces of shale.	OH		0.5	x	0	
			1	x	0	
			1.5			
CLAY Light brown, very dry and powdery, with some pieces of shale.	OH		2	x	0	
End of Hole @ 2 metres.			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH4

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
FILL Brown, silty, moist, fine grained sand.				X	0	
CLAY Orange, black, brown with pieces of blue metal, moist, hard.	OH		0.5			
CLAY Mottled light brown, light grey, brown, with large pieces of gravel, hard, moist, medium plasticity.	OH		1	X	0	
CLAY Light brown, orangy brown, dry powdery.	OH		1.5			
End of Hole @ 2 metres.			2	X	0	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH5

Project: Factory Sheet
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class.	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
CONCRETE (0.15m)						
FILL Orange, light brown, sandy and clayey, gravel.				X	0	
CLAY Mottled light grey and brown, dry powdery, with some shale pieces.	OH		0.5 1	X	0	
			1.5			
End of Hole @ 2 metres.			2	X	0	
			2.5 3 3.5 4 4.5 5 5.5 6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH6

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 1.8m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
CONCRETE (0.15m)						
FILL Grey, moist, low plasticity, clayey ash.				X	0	
FILL Brown, silty sand, moist, fine grained.			0.5			
CLAY Light brown, very dry and powdery.	OH		1	X	0	
			1.5	X	0	
End of Hole @ 2 metres.			2			
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH7

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
ASPHALT						
FILL Black, moist, fine sand and gravel.	OH			X	0	
CLAY Brown, soft, moist to saturated, medium plasticity.			0.5			
CLAY Browny orange, very hard, dry, low plasticity.	OH		1	X	0	
CLAY Light grey, very dry, powdery.	OH		1.5			
End of Hole @ 2 metres.			2	X	0	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH8

Project: Factory Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USC Class.	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface						
ASPHALT						
FILL Black sandy gravel, dry, small sized.			0	X	0	
CLAY Mottled orange and grey, hard, dry, low plasticity.	OH		0.5			
			1	X	0	
CLAY Light brown, dry, powdery clay.	OH		1.5			
			2	X	0	
End of Hole @ 2 metres.			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH9

Project: Forest Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
ASPHALT						
CLAY Mottled orange and red, dry, hard, low plasticity.	OH		0.5	X	0	
CLAY Light grey/borwn, dry, powdery.	OH		1	X	0	
			1.5			
End of Hole @ 2 metres.			2	X	0	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH10

Project: Forest Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
FILL Dark brown fill, moist, fine grained. Silty Sand.				X	11	Odour - maybe cresote.
FILL Orange, dry, fine grained. Silty Sand.	OH		0.5			
CLAY Light grey/brown, dry, powdery.			1	X	21	
CLAY Light grey/brown, dry.	OH		1.5			
CLAY Light grey/brown, saturated.	OH					
End of Hole @ 2 metres.			2	X	17	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH11

Project: Forest Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morrow
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
FILL Dark brown, moist, Silty Sand.				X	0	
FILL Dark brown, moist with gravel, Silty Sand.			0.5			
CLAY Mottled orange, light grey, red, low plasticity, hard, moist.	OH					
CLAY Mottled orange, light grey, red, low plasticity, hard, dry and powdery.			1	X	0	
	OH		1.5			
End of Hole @ 2 metres.			2	X	0	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

Borehole Log No: BH12

Project: Forest Street
Drilling Co: Barry Ellis
Drill Rig: Bobcat

Project No: 101135
Logged By: J. Morroq
Initial GW: ---
Final GW: ---

Date: 24/04/01
Hole Depth: 2m
Hole Dia: 15cm

ERM

Description	USCS Class	Graphic Log	Depth (m)	Sample	PID (ppm)	Remarks
Ground Surface			0			
CONCRETE (0.15m)						
BLACK GRAVELLY SAND				X	0	
CLAY Orangy red, hard, moist, low plasticity.	OH		0.5			
GRAVELLY CLAY Light brown, soft, moist to saturated.	CL		1	X	0	
CLAY Mottled light grey and red and orange, moist, hard, low plasticity.	OH		1.5			
End of Hole @ 2 metres.			2	X	0	
			2.5			
			3			
			3.5			
			4			
			4.5			
			5			
			5.5			
			6			

ERM Mitchell McCotter
PO Box 943
CROWS NEST NSW 2065

Notes:

LABORATORY SOIL ANALYSIS RESULTS

DQO Certificate

Signature of Quality

Report Number:	010356	Covering Page:	1 of 2
Client Name:	ERM Australia Pty. Limited	Date Received:	26-Apr-01
Contact Name:	J. Morrow	Date Reported:	4-May-01
Client Reference:	101135		
Chain of Custody:	0988-0989		
Sample Matrix:	Soil		

LABORATORY QA/QC SELF ASSESSMENT

1. Sample Integrity & VTSR Holding Times (preservation of certain samples may extend holding time, refer to LabMark preservation chart)

		Method	Description	Ext. Date	LabMark QA/QC Acceptance Criteria
☐	☑	E002/E003	BTEX/ volatile TPH C_{6-9} by P+T	27-Apr-01	soil 14 days, water 7 days, 40 days extraction
☐	☑	E004/E006	TPH C_{10-36} by solvent extraction	27-Apr-01	soil 14 days, water 7 days, 40 days extraction
☐	☑	E007/E008	PAH's/Phenols by GC/MS	27-Apr-01	soil 14 days, water 7 days, 40 days extraction
☐	☑	E013/E014	OC/PCB/OP by ECD/NPD or MS	27-Apr-01	soil 14 days, water 7 days, 40 days extraction
☐	☑	External	Subcontracted laboratory assessment available upon request, if applicable.		

2. Chain of Custody Requirements

☐	☑	Copy of COC attached - signature, date, and time.
☐	☑	Preservation details specified on COC, if applicable.
☐	☑	Sampling date specified on COC.

3. NATA Registered Methods

☐	☑	NATA accreditation held for each method and sample matrix type reported, unless noted below.
☐	☑	NATA accredited in-house laboratory methods are referenced from NEPC, modified USEPA / APHA documents.
☐	☑	Analytical method descriptions including references appear in report body.

4. Quality Assurance Acceptance Criteria

		Data Quality Objective	LabMark QA/QC Acceptance Criteria
☐	☑	QA/QC : Sample Accuracy	Matrix Spike ≥ 1 in 20 (minimum)
☐	☑	QA/QC : Sample Precision	Sample Duplicate ≥ 1in 10 (minimum)
☐	☑	Confirmation of target organic analytes	GC/MS, confirmationary column
☐	☑	Estimated Quantitation Limit (EQL)	typically 2-5 times MDL

5. Quality Control Acceptance Criteria

		Data Quality Objective	LabMark QA/QC Acceptance Criteria
☐	☑	Method Blank	not detected above reported EQL's
☐	☑	Sample Duplicate compliance - discrete extractions.	0% - 50% RPD (>10xEQL)
			0% - 75% RPD (5-10xEQL)
			0% - 100% RPD (<5xEQL)
☐	☑	ms/ surrogate/ lcs compliance	70% - 130% Recovery
☐	☑	- VOC ms and surrogates added to samples during extraction, SVOC added to samples prior to extraction.	

Laboratory QA/QC Self Assessment **Acceptable***

Note* Refer to the laboratory QA/QC outlier data points overleaf, where applicable.

DQO Certificate

Signature of Quality

Sample results follow this page.

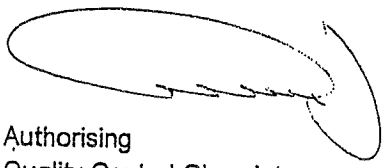
Report Number:	010356
Client Name:	ERM Australia Pty. Limited
Contact Name:	J. Morrow
Client Reference:	101135
Chain of Custody:	0988-0989
Sample Matrix:	Soil

Covering Page:	2 of 2
Date Received:	26-Apr-01
Date Reported:	4-May-01

QUALITY CONTROL RESULTS

1. LabMark laboratory QA/QC data points assessed as satisfactory, unless otherwise stated below.
2. TPH C6-C9; Lab # 4345s matrix spike recovery is 133% (positive background TPH level).
3. OC's; Lab # 4358 surrogate recovery is 56%.
4. OP's; Lab # 4354 surrogate recovery is 65%.

Laboratory QA/QC Self Assessment data shall relate specifically to QA/QC results as performed as part of sample analysis, and may only provide an indication of sample result quality. Acceptance of this Self Assessment certificate does not preclude any requirement for a QA/QC review by a registered contaminated site EPA auditor, when and wherever necessary. Laboratory QA/QC Self Assessment references available upon request. © LabMark 1999.



Authorising
Quality Control Chemist

LabMark

Final Certificate of Analysis

This report supersedes reports issued on: 02-May-01

Report Number: 010356

Covering Page plus: 1 of 15

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

SAMPLE ID & DEPTH (m)	LAB No.	Monocyclic Aromatic Hydrocarbons (MAH's) E 002.2					Total Petroleum Hydrocarbons (TPH's) E 003.2	E 006.2				
		Benzene	Toluene	Ethyl benzene	Total Xylene	Surr. % Rec.	P&T C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_6-C_{36}	
–	EQL	0.2	0.5	0.5	1	%	10	50	100	100	–	
BH1 0.5m	4344	< 0.2	< 0.5	< 0.5	< 1	84	< 10	< 50	160	< 100	160	
BH2 0.5m	4345	< 0.2	< 0.5	< 0.5	1	75	50	1690	5630	360	7730	
BH3 0.2m	4348	< 0.2	< 0.5	< 0.5	< 1	77	< 10	< 50	< 100	< 100	--	
BH4 0.0m	4349	< 0.2	< 0.5	< 0.5	< 1	82	< 10	< 50	< 100	< 100	--	
BH5 0.2m	4350	< 0.2	< 0.5	< 0.5	< 1	80	< 10	< 50	< 100	< 100	--	
BH6 0.2m	4351	< 0.2	< 0.5	< 0.5	< 1	79	< 10	< 50	< 100	< 100	--	
BH7 0.1m	4352	< 0.2	< 0.5	< 0.5	< 1	81	< 10	< 50	< 100	< 100	--	
BH8 0.1m	4353	< 0.2	< 0.5	< 0.5	< 1	72	< 10	< 50	270	130	400	
BH9 0.1m	4354	< 0.2	< 0.5	< 0.5	< 1	71	< 10	< 50	< 100	< 100	--	
BH10 0.2m	4355	< 0.2	< 0.5	< 0.5	< 1	81	< 10	250	3640	660	4550	
BH11 0.1m	4358	< 0.2	< 0.5	< 0.5	< 1	82	< 10	< 50	100	< 100	100	
BH12 0.2m	4359	< 0.2	< 0.5	< 0.5	< 1	81	< 10	< 50	< 100	< 100	--	
DUPA	4359A	< 0.2	< 0.5	< 0.5	< 1	79	20	1100	3460	200	4780	

Comments: Samples analysed as received. Results are uncorrected for s/ lcs and surrogate recovery data.

Results:	mg/kg (ppm) dry weight unless specified.	d/ t:	duplicate/ triplicate analysis result.
EQL:	Estimated Quantitation Limit.	r:	sample duplicate %RPD.
<EQL:	less than reported EQL value.	s:	matrix spike percentage recovery.
–:	not applicable.	lcs/crm:	laboratory control sample/ certified ref. material.
p:	pending.	mb:	method blank.

BTEX Surr: BTEX Surrogate % Recovery [1-chloro-2,4-difluorobenzene, spiking conc. 100ug/L (ppb)].
METH. E002.2: BTEX 5-8g soil ext. in 20ml methanol. Analysis by P&T GC/PID confirm. FID/MS.
METH. E003.2: Volatile TPH 5-8g soil ext. in 20ml methanol. Analysis by P&T GC/FID.
METH. E006.2: TPH 8-12g soil ext. in 20ml dichloromethane/ acetone (8:2). Analysis by GC/FID.

Ivan Povolny B. Sc. M.R.A.C.I.
Authorising Chemist

NATA No. 13542

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Final Certificate of Analysis

This report supersedes reports issued on: 02-May-01

Report Number: 010356

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Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

SAMPLE ID & DEPTH (m)	LAB No.	Monocyclic Aromatic Hydrocarbons (MAH's)					Total Petroleum Hydrocarbons (TPH's)				
		E 002.2					E 003.2	E 006.2			
		Benzene	Toluene	Ethyl benzene	Total Xylene	Surr. % Rec.	P&T C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_6-C_{36}
--	EQL	0.2	0.5	0.5	1	%	10	50	100	100	--
QA/QC Data	4344d	< 0.2	< 0.5	< 0.5	< 1	75	< 10	< 50	300	100	400
	4344r	--	--	--	--	--	--	--	61%	--	--
	4359d	< 0.2	< 0.5	< 0.5	< 1	81	< 10	< 50	160	100	260
	4359r	--	--	--	--	--	--	--	--	--	--
	4345s	87%	86%	88%	94%	77	133%	77%	--	--	--
	lcs	91%	89%	93%	95%	83	94%	81%	--	--	--
	mb	< 0.2	< 0.5	< 0.5	< 1	72	< 10	< 50	< 100	< 100	--

Comments: Samples analysed as received. Results are uncorrected for s/ lcs and surrogate recovery data.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
--: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs/crm: laboratory control sample/ certified ref. material.
mb: method blank.

BTEX Surr: BTEX Surrogate % Recovery [1-chloro-2,4-difluorobenzene, spiking conc. 100ug/L (ppb)].
METH. E002.2: BTEX 5-8g soil ext. in 20ml methanol. Analysis by P&T GC/PID confirm. FID/MS.
METH. E003.2: Volatile TPH 5-8g soil ext. in 20ml methanol. Analysis by P&T GC/FID.
METH. E006.2: TPH 8-12g soil ext. in 20ml dichloromethane/ acetone (8:2). Analysis by GC/FID.

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Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

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Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

Polynuclear Aromatic Hydrocarbons (PAH's)	SAMPLE ID	BH1 0.5	BH2 0.5	BH3 0.2	BH4 0.0	BH5 0.2	BH6 0.2
Method E 007.2	LAB No.	4344	4345	4348	4349	4350	4351
	EQL						
Naphthalene	0.5	0.7	2.2	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	1.2	0.7	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	0.6	2.5	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	5.6	2.9	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	1.6	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	11	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	12	0.6	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	6.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	5.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)&(k)fluoranthene	1	9	< 1	< 1	< 1	< 1	< 1
Benzo(a) pyrene	0.5	6.0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	2.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	3.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total reported PAH's	–	**67**	**9.9**	–	–	–	–
Surrogate 1 % Recovery	–	107	98	106	105	106	101
Surrogate 2 % Recovery	–	107	105	106	107	107	106

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

PAH Surrogate : Surrogate 1: 2-fluorobiphenyl, spiking conc. 5mg/kg (ppm).
Surrogate 2: p-terphenyl-d14, spiking conc. 5mg/kg (ppm).

METH. E007.2: PAH's 8-12g soil ext. in dichloromethane/ acetone (8:2). Analysis by GC/MS.

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Final Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

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Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

Polynuclear Aromatic Hydrocarbons (PAH's)	SAMPLE ID	BH7 0.1	BH8 0.1	BH9 0.1	BH10 0.2	BH11 0.1	BH12 0.2
Method E 007.2	LAB No.	4352	4353	4354	4355	4358	4359
	EQL						
Naphthalene	0.5	< 0.5	0.5	< 0.5	< 0.5	0.6	< 0.5
Acenaphthylene	0.5	< 0.5	1.5	< 0.5	0.8	1.1	< 0.5
Acenaphthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	< 0.5	4.1	< 0.5	0.8	0.8	< 0.5
Anthracene	0.5	< 0.5	1.4	< 0.5	0.5	< 0.5	< 0.5
Fluoranthene	0.5	0.5	8.6	0.5	1.0	1.5	< 0.5
Pyrene	0.5	0.5	8.7	0.5	3.5	1.7	< 0.5
Benz(a)anthracene	0.5	< 0.5	5.0	< 0.5	0.5	1	< 0.5
Chrysene	0.5	< 0.5	4.5	< 0.5	0.7	1.1	< 0.5
Benzo(b)&(k)fluoranthene	1	< 1	8	< 1	2	2	< 1
Benzo(a) pyrene	0.5	< 0.5	5.2	< 0.5	1.1	1.3	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5	3.0	< 0.5	0.8	0.9	< 0.5
Dibenz(a,h)anthracene	0.5	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	< 0.5	4.0	< 0.5	1.2	1.3	< 0.5
Total reported PAH's	–	1	55.7	1	12.9	13.3	–
Surrogate 1 % Recovery	–	95	109	97	102	94	88
Surrogate 2 % Recovery	–	99	108	97	103	99	86

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

PAH Surrogate : Surrogate 1: 2-fluorobiphenyl, spiking conc. 5mg/kg (ppm).
Surrogate 2: p-terphenyl-d14, spiking conc. 5mg/kg (ppm).

METH. E007.2: PAH's 8-12g soil ext. in dichloromethane/ acetone (8:2). Analysis by GC/MS.

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Certificate of Analysis

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Report Number: 010356

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

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Date Received: 26-Apr-01
Date Reported: 04-May-01

Polynuclear Aromatic Hydrocarbons (PAH's)	SAMPLE ID	DUP10
Method E 007.2	LAB No.	4359A
	EQL	
Naphthalene	0.5	1.4
Acenaphthylene	0.5	< 0.5
Acenaphthene	0.5	2.7
Fluorene	0.5	2.5
Phenanthrene	0.5	2.8
Anthracene	0.5	0.8
Fluoranthene	0.5	0.5
Pyrene	0.5	0.5
Benz(a)anthracene	0.5	< 0.5
Chrysene	0.5	< 0.5
Benzo(b)&(k)fluoranthene	1	< 1
Benzo(a) pyrene	0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5
Dibenz(a,h)anthracene	0.5	< 0.5
Benzo(g,h,i)perylene	0.5	< 0.5
Total reported PAH's	–	11.2
Surrogate 1 % Recovery	–	123
Surrogate 2 % Recovery	–	102

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.

Results:	mg/kg (ppm) dry weight unless specified.	d/ t:	duplicate/ triplicate analysis result.
EQL:	Estimated Quantitation Limit.	r:	sample duplicate %RPD.
<EQL:	less than reported EQL value.	s:	matrix spike percentage recovery.
–:	not applicable.	lcs:	laboratory control sample.
p:	pending.	mb:	method blank.

PAH Surrogate : Surrogate 1: 2-fluorobiphenyl, spiking conc. 5mg/kg (ppm).
Surrogate 2: p-terphenyl-d14, spiking conc. 5mg/kg (ppm).

METH. E007.2: PAH's 8-12g soil ext. in dichloromethane/ acetone (8:2). Analysis by GC/MS.

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LabMark Pty. LimitedACN 079 798 397 * Unit 12/18 Leighton Place Asquith NSW 2077 * PO Box 641 HORNSBY NSW 1630
Telephone (02) 94766533 * Fax (02) 94768219 * e-mail: labmark@ozemail.com.au

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Final Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Covering Page plus: 6 of 15
Date Received: 26-Apr-01
Date Reported: 04-May-01

Polynuclear Aromatic Hydrocarbons (PAH's)	SAMPLE ID	QA/QC Data					
Method E 007.2	LAB No.	4344d	4344r	4359d	4359r	4345s	mb
	EQL						
Naphthalene	0.5	1.0	35%	< 0.5	--	*	< 0.5
Acenaphthylene	0.5	1.6	29%	0.5	--	*	< 0.5
Acenaphthene	0.5	< 0.5	--	< 0.5	--	*	< 0.5
Fluorene	0.5	0.8	29%	< 0.5	--	*	< 0.5
Phenanthrene	0.5	8.5	41%	< 0.5	--	*	< 0.5
Anthracene	0.5	2.5	44%	< 0.5	--	*	< 0.5
Fluoranthene	0.5	16	37%	0.6	--	94%	< 0.5
Pyrene	0.5	17	34%	0.9	--	110%	< 0.5
Benz(a)anthracene	0.5	8.9	31%	0.5	--	85%	< 0.5
Chrysene	0.5	7.5	34%	0.5	--	83%	< 0.5
Benzo(b)&(k)fluoranthene	1	12	29%	< 0.5	--	76%	< 1
Benzo(a) pyrene	0.5	8.2	31%	0.5	--	73%	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	3.7	24%	< 0.5	--	74%	< 0.5
Dibenz(a,h)anthracene	0.5	1	22%	< 0.5	--	76%	< 0.5
Benzo(g,h,i)perylene	0.5	4.8	23%	0.5	--	77%	< 0.5
Total reported PAH's	--	**93.5**	--	**4**	--	--	--
Surrogate 1 % Recovery	--	95	--	101	--	98	102
Surrogate 2 % Recovery	--	100	--	104	--	106	90

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.
*NB: Matrix spike reocvery results not available due to a positive sample result.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
--: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

PAH Surrogate : Surrogate 1: 2-fluorobiphenyl, spiking conc. 5mg/kg (ppm).
Surrogate 2: p-terphenyl-d14, spiking conc. 5mg/kg (ppm).

METH. E007.2: PAH's 8-12g soil ext. in dichloromethane/ acetone (8:2). Analysis by GC/MS.

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Final

Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

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Date Received: 26-Apr-01
Date Reported: 04-May-01

Organochlorine Pesticides (OCP's) & PCB's	SAMPLE ID	BH1 0.5	BH2 0.5	BH3 0.2	BH4 0.0	BH5 0.2	BH6 0.2
Method E013.2	LAB No.	4344	4345	4348	4349	4350	4351
	EQL						
α-BHC	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
HCB	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
β-BHC	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
γ-BHC (Lindane)	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
δ-BHC	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor Epoxide	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
trans-Chlordane	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan-1	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-Chlordane	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
DDE	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan-2	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
DDD	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin Aldehyde	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan Sulfate	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
DDT	0.2	< 2*	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Endrin Ketone	0.05	< 0.5*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	< 2*	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Total PCB's	0.5	< 5*	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Surrogate %Recovery	–	–	74	88	107	120	88

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.
*NB: Sample dilution required prior to analysis, EQL values adjusted accordingly.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

Surrogates : OC/PCB Surrogate: dibutylchlorendate, spiking conc. 0.2mg/kg (ppm).
METH_E013.2: 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/ECD.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

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No. 13542

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Telephone (02) 94766533 *Fax (02) 94768219 * e-mail: labmark@ozemail.com.au

Final

Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Covering Page plus: 8 of 15
Date Received: 26-Apr-01
Date Reported: 04-May-01

Organochlorine Pesticides (OCP's) & PCB's	SAMPLE ID	BH7 0.1	BH8 0.1	BH9 0.1	BH10 0.2	BH11 0.1	BH12 0.2
Method E013.2	LAB No.	4352	4353	4354	4355	4358	4359
	EQL						
α-BHC	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
HCB	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
β-BHC	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
γ-BHC (Lindane)	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
δ-BHC	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Heptachlor	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Aldrin	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Heptachlor Epoxide	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
trans-Chlordane	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Endosulfan-1	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
cis-Chlordane	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Dieldrin	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
DDE	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Endrin	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Endosulfan-2	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
DDD	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Endrin Aldehyde	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Endosulfan Sulfate	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
DDT	0.2	< 0.2	< 2*	< 0.2	< 2*	< 0.2	< 0.2
Endrin Ketone	0.05	< 0.05	< 0.5*	< 0.05	< 0.5*	< 0.05	< 0.05
Methoxychlor	0.2	< 0.2	< 2*	< 0.2	< 2*	< 0.2	< 0.2
Total PCB's	0.5	< 0.5	< 5*	< 0.5	< 5*	< 0.5	< 0.5
Surrogate %Recovery	–	115	–	103	–	56	76

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.
*NB: Sample dilution required prior to analysis, EQL values adjusted accordingly.

Results:	mg/kg (ppm) dry weight unless specified.	d/ t:	duplicate/ triplicate analysis result.
EQL:	Estimated Quantitation Limit.	r:	sample duplicate %RPD.
<EQL:	less than reported EQL value.	s:	matrix spike percentage recovery.
–:	not applicable.	lcs:	laboratory control sample.
p:	pending.	mb:	method blank.

Surrogates : OC/PCB Surrogate: dibutylchlorendate, spiking conc. 0.2mg/kg (ppm).
METH. E013.2: 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/ECD.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

No. 13542

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Final

Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356
Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Covering Page plus: 9 of 15
Date Received: 26-Apr-01
Date Reported: 04-May-01

Organochlorine Pesticides (OCP's) & PCB's	SAMPLE ID	DUP10					
Method E013.2	LAB No.	4359A					
	EQL						
α-BHC	0.05	< 0.05					
HCB	0.05	< 0.05					
β-BHC	0.05	< 0.05					
γ-BHC (Lindane)	0.05	< 0.05					
δ-BHC	0.05	< 0.05					
Heptachlor	0.05	< 0.05					
Aldrin	0.05	< 0.05					
Heptachlor Epoxide	0.05	< 0.05					
trans-Chlordane	0.05	< 0.05					
Endosulfan-1	0.05	< 0.05					
cis-Chlordane	0.05	< 0.05					
Dieldrin	0.05	< 0.05					
DDE	0.05	< 0.05					
Endrin	0.05	< 0.05					
Endosulfan-2	0.05	< 0.05					
DDD	0.05	< 0.05					
Endrin Aldehyde	0.05	< 0.05					
Endosulfan Sulfate	0.05	< 0.05					
DDT	0.2	< 0.2					
Endrin Ketone	0.05	< 0.05					
Methoxychlor	0.2	< 0.2					
Total PCB's	0.5	< 0.5					
Surrogate %Recovery	--	91					

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.

Results:	mg/kg (ppm) dry weight unless specified.	d/ t:	duplicate/ triplicate analysis result.
EQL:	Estimated Quantitation Limit.	r:	sample duplicate %RPD.
<EQL:	less than reported EQL value.	s:	matrix spike percentage recovery.
--:	not applicable.	lcs:	laboratory control sample.
p:	pending.	mb:	method blank.

Surrogates : OC/PCB Surrogate: dibutylchlorendate, spiking conc. 0.2mg/kg (ppm).
METH. E013.2: 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/ECD.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

No. 18542

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LabMark

Final Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Covering Page plus: 10 of 15
Date Received: 26-Apr-01
Date Reported: 04-May-01

Organochlorine Pesticides (OCP's) & PCB's	SAMPLE ID	QA/QC Data					
Method E013.2	LAB No.	4344d	4344r	4359d	4359r	4345s	mb
	EQL						
α-BHC	0.05	< 0.5*	–	< 0.05	–	91%	< 0.05
HCB	0.05	< 0.5*	–	< 0.05	–	81%	< 0.05
β-BHC	0.05	< 0.5*	–	< 0.05	–	116%	< 0.05
γ-BHC (Lindane)	0.05	< 0.5*	–	< 0.05	–	105%	< 0.05
δ-BHC	0.05	< 0.5*	–	< 0.05	–	–	< 0.05
Heptachlor	0.05	< 0.5*	–	< 0.05	–	101%	< 0.05
Aldrin	0.05	< 0.5*	–	< 0.05	–	104%	< 0.05
Heptachlor Epoxide	0.05	< 0.5*	–	< 0.05	–	87%	< 0.05
trans-Chlordane	0.05	< 0.5*	–	< 0.05	–	84%	< 0.05
Endosulfan-1	0.05	< 0.5*	–	< 0.05	–	85%	< 0.05
cis-Chlordane	0.05	< 0.5*	–	< 0.05	–	82%	< 0.05
Dieldrin	0.05	< 0.5*	–	< 0.05	–	85%	< 0.05
DDE	0.05	< 0.5*	–	< 0.05	–	85%	< 0.05
Endrin	0.05	< 0.5*	–	< 0.05	–	88%	< 0.05
Endosulfan-2	0.05	< 0.5*	–	< 0.05	–	89%	< 0.05
DDD	0.05	< 0.5*	–	< 0.05	–	94%	< 0.05
Endrin Aldehyde	0.05	< 0.5*	–	< 0.05	–	94%	< 0.05
Endosulfan Sulfate	0.05	< 0.5*	–	< 0.05	–	119%	< 0.05
DDT	0.2	< 2*	–	< 0.2	–	88%	< 0.2
Endrin Ketone	0.05	< 0.5*	–	< 0.05	–	120%	< 0.05
Methoxychlor	0.2	< 2*	–	< 0.2	–	125%	< 0.2
Total PCB's	0.5	< 5*	–	< 0.5	–	–	< 0.5
Surrogate %Recovery	–	–	–	80	–	–	114

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

Surrogates : OC/PCB Surrogate: dibutylchlorendate, spiking conc. 0.2mg/kg (ppm).
METH. E013.2: 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/ECD.

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Final

Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Covering Page plus: 11 of 15

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

Organophosphorus Pesticides (OPP's)	SAMPLE ID	BH1 0.5	BH2 0.5	BH3 0.2	BH4 0.0	BH5 0.2	BH6 0.2
Method E014.2	LAB No.	4344	4345	4348	4349	4350	4351
	EQL						
Dichlorvos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Mervinphos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethoprop	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Demeton (-O and -S)	1	< 1	< 1	< 1	< 1	< 1	< 1
Monocroptophos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Diazinon	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Parathion methyl	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorpyrifos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloronate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Stirophos	0.5	< 5 *	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Prothiofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Profenofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fensulfothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bolstar	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Azinophos methyl	0.5	< 5 *	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Coumafos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
OPP Surrogate %Recovery	–	95	88	80	72	70	80

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.
*NB: EQL values increased due to chromatographic interference.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

Surrogate : OPP Surrogate: TPP, spiking conc. 0.5mg/kg (ppm).
METH. E014.2: OPP 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/NPD/MS.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

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Final

Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Covering Page plus: 12 of 15

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

Organophosphorus Pesticides (OPP's)	SAMPLE ID	BH7 0.1	BH8 0.1	BH9 0.1	BH10 0.2	BH11 0.1	BH12 0.2
Method E014.2	LAB No.	4352	4353	4354	4355	4358	4359
	EQL						
Dichlorvos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Mervinphos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethoprop	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Demeton (-O and -S)	1	< 1	< 1	< 1	< 1	< 1	< 1
Monocroptophos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Diazinon	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Parathion methyl	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorpyrifos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloronate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Stirophos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Prothiofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Profenofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fensulfothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bolstar	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Azinophos methyl	0.5	< 0.5	< 2 *	< 0.5	< 0.5	< 0.5	< 0.5
Coumafos	0.5	< 0.5	< 0.5	< 1 *	< 0.5	< 0.5	< 0.5
OPP Surrogate %Recovery	--	70	86	65	90	83	86

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.
*NB: EQL values increased due to chromatographic interference.

Results:	mg/kg (ppm) dry weight unless specified.	d/ t:	duplicate/ triplicate analysis result.
EQL:	Estimated Quantitation Limit.	r:	sample duplicate %RPD.
<EQL:	less than reported EQL value.	s:	matrix spike percentage recovery.
-:	not applicable.	lcs:	laboratory control sample.
p:	pending.	mb:	method blank.

Surrogate : OPP Surrogate: TPP, spiking conc. 0.5mg/kg (ppm).
METH. E014.2: OPP 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/NPD/MS.

Ivan Povolny B.Sc. M.R.A.C.I.
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Final

Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Covering Page plus: 13 of 15

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

Organophosphorus Pesticides (OPP's)	SAMPLE ID	DUP10					
Method E014.2	LAB No.	4359A					
	EQL						
Dichlorvos	0.5	< 0.5					
Mervinphos	0.5	< 0.5					
Ethoprop	0.5	< 0.5					
Demeton (-O and -S)	1	< 1					
Monocroptophos	0.5	< 0.5					
Phorate	0.5	< 0.5					
Dimethoate	0.5	< 0.5					
Diazinon	0.5	< 0.5					
Disulfoton	0.5	< 0.5					
Parathion methyl	0.5	< 0.5					
Ronnel	0.5	< 0.5					
Fenitrothion	0.5	< 0.5					
Malathion	0.5	< 0.5					
Fenthion	0.5	< 0.5					
Chlorpyrifos	0.5	< 0.5					
Parathion	0.5	< 0.5					
Trichloronate	0.5	< 0.5					
Stirophos	0.5	< 0.5					
Prothiofos	0.5	< 0.5					
Profenofos	0.5	< 0.5					
Fensulfothion	0.5	< 0.5					
Bolstar	0.5	< 0.5					
Azinophos methyl	0.5	< 0.5					
Coumafos	0.5	< 0.5					
OPP Surrogate %Recovery	–	88					

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

Surrogate : OPP Surrogate: TPP, spiking conc. 0.5mg/kg (ppm).
METH. E014.2: OPP 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/NPD/MS.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

NATA No. 13542

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LabMark

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Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Covering Page plus: 14 of 15
Date Received: 26-Apr-01
Date Reported: 04-May-01

Organophosphorus Pesticides (OPP's)	SAMPLE ID	QA/QC Data					
Method E014.2	LAB No.	4344d	4344r	4359d	4359r	4345s	mb
	EQL						
Dichlorvos	0.5	< 0.5	–	< 0.5	–	91%	< 0.5
Mervinphos	0.5	< 0.5	–	< 0.5	–	93%	< 0.5
Ethoprop	0.5	< 0.5	–	< 0.5	–	80%	< 0.5
Demeton (-O and -S)	1	< 1	–	< 1	–	--	< 1
Monocroptophos	0.5	< 0.5	–	< 0.5	–	–	< 0.5
Phorate	0.5	< 0.5	–	< 0.5	–	89%	< 0.5
Dimethoate	0.5	< 0.5	–	< 0.5	–	99%	< 0.5
Diazinon	0.5	< 0.5	–	< 0.5	–	79%	< 0.5
Disulfoton	0.5	< 0.5	–	< 0.5	–	86%	< 0.5
Parathion methyl	0.5	< 0.5	–	< 0.5	–	74%	< 0.5
Ronnel	0.5	< 0.5	–	< 0.5	–	78%	< 0.5
Fenitrothion	0.5	< 0.5	–	< 0.5	–	–	< 0.5
Malathion	0.5	< 0.5	–	< 0.5	–	–	< 0.5
Fenthion	0.5	< 0.5	–	< 0.5	–	80%	< 0.5
Chlorpyrifos	0.5	< 0.5	–	< 0.5	–	94%	< 0.5
Parathion	0.5	< 0.5	–	< 0.5	–	–	< 0.5
Trichloronate	0.5	< 0.5	–	< 0.5	–	75%	< 0.5
Stirophos	0.5	< 5*	–	< 0.5	–	–	< 5*
Prothiofos	0.5	< 0.5	–	< 0.5	–	88%	< 0.5
Profenofos	0.5	< 0.5	–	< 0.5	–	–	< 0.5
Fensulfothion	0.5	< 0.5	–	< 0.5	–	103%	< 0.5
Bolstar	0.5	< 0.5	–	< 0.5	–	79%	< 0.5
Azinophos methyl	0.5	< 5*	–	< 0.5	–	106%	< 5*
Coumafos	0.5	< 0.5	–	< 0.5	–	105%	< 0.5
OPP Surrogate %Recovery	–	80	–	86	–	86	82

Comments: Samples analysed as received. Results uncorrected for s/ lcs and surrogate recovery data.
*NB: EQL values increased due to chromatographic interference.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.

d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
mb: method blank.

Surrogate : OPP Surrogate: TPP, spiking conc. 0.5mg/kg (ppm).
METH. E014.2: OPP 10g soil ext. in Hexane/ Acetone (1:1). Analysis by GC/NPD/MS.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

NATA No. 18648

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LabMark Pty. Limited * Unit 12/18 Leighton Place ASQUITH NSW 2077 * PO Box 641 HORNSBY NSW 1630
Telephone (02) 94766533 *Fax (02) 94768219 * e-mail: labmark@ozemail.com.au

LabMark

Final Certificate of Analysis

This report supercedes reports issued on: 02-May-01

Report Number: 010356

Covering Page plus: 15 of 15

Client Name: ERM Australia Pty. Limited
Contact Name: J. Morrow
Client Reference: 101135
Chain of Custody: 0988-0989
Sample Matrix: Soil

Date Received: 26-Apr-01
Date Reported: 04-May-01

SAMPLE ID & DEPTH (m)	LAB No.	Acid Extractable Metals								
		M7/P3	M1/P3						M3/P3	WA11
		As	Cd	Cr	Cu	Ni	Pb	Zn	Hg	Total CN
–	EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.005	0.1
BH1 0.5m	4344	5.5	< 0.5	19	52	15	22	60	0.025	0.2
BH2 0.5m	4345	5.5	< 0.5	7.5	38	18	31	52	0.040	< 0.1
BH3 0.2m	4348	4.5	< 0.5	31	29	27	12	58	0.010	< 0.1
BH4 0.0m	4349	3.0	< 0.5	7.5	10	2.5	39	16	0.020	< 0.1
BH5 0.2m	4350	6.0	< 0.5	12	54	25	32	160	0.025	< 0.1
BH6 0.2m	4351	7.5	< 0.5	7.0	760	29	150	380	0.045	< 0.1
BH7 0.1m	4352	5.0	< 0.5	12	51	13	180	105	0.27	< 0.1
BH8 0.1m	4353	12	< 0.5	14	45	34	87	190	0.25	< 0.1
BH9 0.1m	4354	3.0	< 0.5	18	24	3.5	20	42	0.040	< 0.1
BH10 0.2m	4355	26	< 0.5	14	52	50	83	240	0.020	< 0.1
BH11 0.1m	4358	300	1.0	22	150	43	440	810	0.170	< 0.1
BH12 0.2m	4359	5.0	< 0.5	23	65	10	130	83	0.060	< 0.1
DUPA	4359A	4.0	< 0.5	11	23	13	31	33	0.025	< 0.1
QA/QC Data	4355d	29	< 0.5	17	55	46	90	230	0.025	< 0.1
	4355r	11%	–	19%	6%	8%	8%	2%	22%	–
	crm	108%	–	71%	108%	105%	106%	101%	85%	–
	mb	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.005	< 0.1

Comments: Samples analysed as received. Results are uncorrected for s/ and lcs recovery data.
Metals performed by SAL NATA registration no. 1884 batch SAL10046 issued on 3/5/01.

Results: mg/kg (ppm) dry weight unless specified.
EQL: Estimated Quantitation Limit.
<EQL: less than reported EQL value.
–: not applicable.
p: pending.
mb: method blank.
d/ t: duplicate/ triplicate analysis result.
r: sample duplicate %RPD.
s: matrix spike percentage recovery.
lcs: laboratory control sample.
crm: certified reference material.

METH. P3: Sample dried, jaw crushed and sieved at 2mm.
METH. M1: Base metal - digestion HNO_3/ H_2O_2. Element determined by flame, APHA 3111B, 3050.
METH. M7: Digestion HNO_3/ H_2SO4. Element determined by hydride, APHA 3111B, 7061.
METH. M3: Digestion HNO_3/ HCl. Element determined by cold vapour, APHA 3111B, 7471.
METH. WA11: Total Cyanide - Harwell UKEA Nov 1981 (NaOH extract) Determined by APHA 4500CE.

Ivan Povolny B.Sc. M.R.A.C.I.
Authorising Chemist

No. 19642

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Telephone (02) 94766533 * Fax (02) 94768219 * e-mail: labmark@ozemail.com.au

CHAIN OF CUSTODY

Form QS0073, Rev.4 : Date Issued 12/9/2000.

LABMARK Quality, Service & Support NATA 13542, ADIS 749

Dispatch samples to:
Geoff Weir
Unit12/18 Leighton Place
Asquith NSW 2077

Telephone: 0011-61-2-9476 6533
Facsimile: 0011-61-2-9476 9219
After hours (DB): 0409 449584
After hours (IP): 0419 689300
E-mail: labmark@ozemail.com.au
Web page : www.labmark.com.au

Client Details

Client Name: ERM Tel: 8425-1647
Client Address: Lvl 1 24 Falcon St, Crows Nest Fax: 9906 5375
Contact Name: James Morrow Date Required: 2/5/01
Project Ref: 101135 Lab. Quote No:

Global Specifications I require:

	YES (tick)
1. Urgent TAT required? (please circle: 1 day 2 days 3 days ..... days)	
2. Fast TAT Guarantee required? (surcharge may apply)	
3. Do you wish any sediment layer present in waters to be excluded from extractions?	
4. Additional QA/QC reported where sample batches submitted are < 10 samples?	
5. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
6. "EasyQ" QA/QC assessment report?	
7. "RemLab" Remediation bench scale project, please contact me for further details?	

Note1: Additional water sample must be submitted for lab. duplicate & spike analysis.
Note2: Contact lab if consolidating multiple analyses into a single sample container.

Analysis Request

Volatile sample required: 125g — 2x44 ml; 2x44ml; 2x44ml
Semi- & Non-Volatile sample required: 125g (max. 4 tests) — 500 ml; 500 ml; 1L; 1L; 1L; 1L; 500 ml; 250ml
Leachate: 250g
Other

Lab. Number	Sample ID	Sample Depth	Sampling Date	Matrix: soil	water	other	Preservation: ice	Container (No. & type)	BTEX+vTPH (Cs-9) E002d PT	VHC E010 PT GC/MS	THM E010 PT GC/MS	MTBE E011 PT GC/MS	VAC E009 PT GC/MS	VOC E016 PT GC/MS	TPH (C10-36) E004/B	Speciated TPH E012 GC/FID	PAH's E007 GC/MS	Phenols E008 GC/MS	OCP E013 GC/ECD	PCB E013 GC/ECD	OPP E014 GC/MS	SVOC E017 GC/MS	GC/MS Scan Non-NATA	Lead (circle: dissolved / total)	Metals* (circle: dissolved / total)	TCLP extraction	ZHE TCLP extraction	Cyanides	Other
4344	BH1	0.5	24/4/01	✓			✓	1 Glass	✓						✓		✓		✓	✓	✓				✓			✓	
4345	BH2	0.5		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4346	BH2	1.0		✓			✓		Hold																			Please	Hold
4347	BH2	2.0		✓			✓																					Please	Hold
4348	BH3	0.2		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4349	BH4	0.0		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4350	BH5	0.2		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4351	BH6	0.2		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4352	BH7	0.1		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4353	BH8	0.1		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4354	BH9	0.1		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	
4355	BH10	0.2		✓			✓		✓						✓		✓		✓	✓	✓				✓			✓	

* Metals to analyse (please circle): As Cd Cr Cu Ni Pb Zn Hg Other

Comments (Highly contaminated samples, e-mail required):

Relinquished by (print): James Morrow Signed: Date: 26/4/01 Received By:

Lab. Report No. 010356 Esky ID.

Date/Time

Received: 12/ 7/01 12:00PM; 12. JUL. 2001 11:55 URS SYDNEY 612 89255555 61 2 99226977 -> BELMADAR CONSTRUCTIONS PTY LTD; Page 4
NO. 352 P. 49/52

LABMARK Quality, Service & Support — 542 AQIS749

Date Issued 12/8/2000.

Dispatch samples to:
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Asquith NSW 2077

Telephone: 0011-61-2-9476 6533
Facsimile: 0011-61-2-9476 8219
After hours (DB): 0409 449684
After hours (IP): 0419 689300
E-mail: labmark@ozemail.com.au
Web page: www.labmark.com.au

Client Details

Client Name: ERM
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Tel: 8425 1647
Fx: 9906 5375
Date Required: 2/5/01
Lab. Quote No:

Global Specifications I require:

	YES (tick)
1. Urgent TAT required? (please circle: 1 day 2 days 3 days ..... days)	
2. Fast TAT Guarantee required? (surcharge may apply)	
3. Do you wish any sediment layer present in waters to be excluded from extractions?	
4. Additional QA/QC reported where sample batches submitted are < 10 samples?	
5. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
6. "EasyQ" QA/QC assessment report?	
7. "RemLab" Remediation bench scale project, please contact me for further details?	

Note1: Additional water sample must be submitted for lab. duplicate & spike analysis.
Note2: Contact lab if consolidating multiple analyses into a single sample container.

Analysis Request

Lab. Number	Sample ID	Sample Depth	Sampling Date	Matrix: soil	Matrix: water	Matrix: other	Preservation: filtered	Preservation: acid	Preservation: ice	Preservation: other	Container (No. & type)
4356	BH 10	1.0	24/4/01	✓					✓		1 Gloss
4357	BH 10	2.0		✓					✓		
4358	BH 11	0.1		✓					✓		
4359	BH 12	0.2		✓					✓		
4359A	DUP A	1		✓					✓		

Volatile sample required — 125g: 2x40 ml; 2x40ml; 2x40ml
Semi- & Non-Volatile sample required — 125g (max. 4 tests): 500 ml; 500 ml; 1L; 1L; 1L; 1L; 500 ml; 250ml
Leachate: 250g
Other

Lab. Number	BTEX+VTPH (C5-9) E602/3 PT	VHC E010 PT GC/MS	THM E010 PT GC/MS	MTBE E011 PT GC/MS	VAC E009 PT GC/MS	VOC E016 PT GC/MS	TPH (C10-36) E004/6	Speciated TPH E012 GC/FID	PAH's E007 GC/MS	Phenols E008 GC/MS	OCP E013 GC/ECD	PCB E013 GC/ECD	OPP E014 GC/MS	SVOC E017 GC/MS	GC/MS Scan Non-NATA	Lead (circle: dissolved / total)	Metals* (circle: dissolved / total)	TCLP extraction	ZHE TCLP extraction	Cyanides	Other
4356																				Please Hold	
4357																				Please Hold	
4358	✓						✓	✓			✓	✓	✓				✓		✓		
4359	✓						✓	✓			✓	✓	✓				✓		✓		
4359A	✓						✓	✓			✓	✓	✓				✓		✓		

FAXED

* Metals to analyse (please circle): As Cd Cr Cu Ni Pb Zn Hg Other

Comments (Highly contaminated samples, e-mail required):

Relinquished by (print): James Morrow Signed: Date: 26/4/01 Received By:

Relinquished by (print): Signed: Date: Date: 26/4/01 5pm

Lab. Report No. 010356

Esky ID.

Received: 12/ 7/01 12:00PM; 12.JUL.2001 11:55 URS SYDNEY 612 89255555 61 2 99226977 -> BELMADAR CONSTRUCTIONS PTY LTD; Page 50 NO.352 P. 50/50