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# STAGE 1 ENVIRONMENTAL SITE ASSESSMENT COMMERCIAL/RETAIL DEVELOPMENT CNR KEATING STREET AND MOGGILL ROAD INDOOROOPILLY

**Prepared for**
Property Solutions (Australia) Pty Ltd

Project No. 06253A
March 2007

Published on DES Disclosure Log
RTI Act 2009

CONTAMINATED LAND SECTION
17 OCT 2007

RECEIVED
15 OCT 2007
EPA SOUTHERN REGION

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# SECTION 1 - INTRODUCTION

## 1.1 Project

It is understood that the proposed development design allows for a mix of one and two level retail and commercial uses, over a two level basement. The site is currently used as a car yard. However, part of the site has formerly been used as a Service Station for which it is listed on the Queensland Environmental Protection Agency's (EPA's) Environmental Management Register (EMR).

## 1.2 Proposed Scope of Work

Based on the result of investigations for nearby sites, it is considered that the following ground conditions may underlie the site:

- Surface Fill to depths between 0.5m and 1m.
- Residual Clay – generally stiff, residual clays to 0.5m to 1m depth.
- Phyllite (rock) – initially low strength, but grading with depth to high strength.

Based on our understanding of site conditions and the likely requirements of the EPA for a Stage 1 Environmental Site Assessment (ESA), the following scope of work is proposed:

- review of the history of the site utilising aerial photographs, historical titles and discussions with personnel familiar with the history of the site;
- identification of likely locations of Underground Fuel Storage Tanks (UFSTs);
- drilling 19 holes across the site and in the vicinity of any UFSTs;
- collection of environmental samples for analytical testing;
- laboratory analysis of samples for a range of potential contaminants including:
  - heavy metals;
  - monocyclic aromatic hydrocarbons as benzene, toluene, ethyl benzene and xylenes (BTEX);
  - total petroleum hydrocarbons (TPH); and
  - pesticides.
- preparation of a report detailing the investigation undertaken, the results and any further investigation and remedial action that may be required.

## 1.3 Commission

Based on the proposed nature of the development, the anticipated subsurface conditions and the scope of work, a fee to undertake the investigation was presented in a proposal of 21 September 2006. Butler Partners Pty Ltd were subsequently commissioned by Property Solutions (Australia) Pty Ltd to conduct the environmental investigation as proposed.

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## 1.4 Technical Framework

In general, this Stage 1 ESA has been carried out in accordance with:

- *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland,* May 1998;
- *Draft Investigation Thresholds for Underground Storage Tanks,* January 1999;
- Australian Oil Industry Environmental Guidelines Working Group document *'Guidelines for the Management of Petroleum Hydrocarbon Impacted Land',* April 1999;
- The Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council *Guidelines for the Assessment and Management of Contaminated Sites (the ANZECC/NHMRC Guidelines)* January 1992;
- Australian Standard AS 4482.2-2005 *Guide to the Sampling and Investigation of Potentially Contaminated Soil – Part 1: Non-volatile and Semi-volatile compounds; and*
- *National Environmental Protection (Assessment of Site Contamination) Measure* 1999 (National Environment Protection Council).

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# SECTION 2 - THE SITE

## 2.1 Site Identification

Details of the site are given in Table 1. Copies of the Current Land Title and Registered Plan information are presented in Appendix A.

**Table 1: Summary of Registered Plan and Current Title Search Information**

| | |
|---|---|
| **Real Property Description** | Parish of Indooroopilly, County of Stanley |
| | Lot 1 on RP154325 |
| **Registered Owner** | Denmac Nominees Pty Ltd |
| **Current Land Use (At the time of investigation)** | Leased by Brisbane RJV Pty Ltd |
| **Local Government** | Brisbane City |
| **Under Caveat** | Dupont Properties (Qld) Pty Ltd (2003) No. 706419579 |

## 2.2 Site Description

The site is located on the large roundabout at the intersection of Moggill Road, Coonan Street, and Keating Street. At the time of the investigation, the site was occupied by a car dealership. Single storey buildings were located on the south-eastern half of the site, and a small single storey building existed at the northern end of the site. Concrete paved areas existed throughout the central area of the site, surrounded by grassed areas, which bordered on to the surrounding roads. Ground surface levels on the western half of the site generally sloped downwards towards the south-west, and on the eastern half of the site ground surface levels sloped towards the south and south-east. A steep rock face fronts the south-eastern corner of the site where site surface levels are approximately 4.5m above Coonan and Keating Streets.

At the time of the investigation, the site was leased for a vehicle viewing and sales yard with associated office space (refer to Photographs 1 and 2).




Photograph 1: View from the south-western corner of the site looking east

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Photograph 2: View from the northern corner of the site looking south

## 2.3 Government Records

A search of the EPA's EMR and Contaminated Land Register (CLR) indicates that Lot 1 on RP154325 is listed on the EMR but is NOT listed on the CLR.

## 2.4 Published Information

### 2.4.1 Fire Ants

Review of the Department of Primary Industries *Fire Ant Eradication and Surveillance Zone Plan* updated March 2005, indicates the site is not located in a Fire Ant infested area.

### 2.4.2 Geology

Reference to the Geological Survey of Queensland's 1:31,680 Series City of Brisbane Sheet, indicates that the site is located in an area mapped as underlain by Bunya Phyllite, which comprises phyllite with minor phyllonite.

## 2.5 Hydrogeology/Hydrology

A search conducted by NRM found that one bore was drilled approximately 800m to the north-east of the site at 20 Harrys Road, Taringa. There was no water reported to a maximum depth of 42m, with yellow clay reported to three metres, then broken and hard shale. The bore was reportedly backfilled with cuttings and grout.

A study of the hydrogeology of the site was not conducted as part of this investigation. Groundwater flow beneath the site is anticipated to be to the south, toward the Brisbane River located approximately 800m away.

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## 2.6 Additional Information

Mr Bruce Kelly from Denmac Nominees, the current owner of the site, oversaw the construction of the current facilities, in particular he was able to provide information on the following:

- any fill material utilised in the construction of the current facility was sourced from onsite;
- there is very little fill on the site except where it has been locally used to level the building pad on which the showroom and offices have been constructed;
- the former service station was located in the northern corner of the site with the bowsers and canopy facing the Moggill Road and Coonan Street intersection;
- the UFSTs were located to the south of the service station buildings and forecourt; and
- the UFSTs, fuel bowsers and associated pipework have been removed.

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# SECTION 3 - SITE HISTORY

## 3.1 Aerial Photograph Review

1946 The site is approximately triangular in shape and bound by Moggill Road, Coonan Street and Keating Street. A single structure is located in the south-west corner of the site while a cluster of larger structures is visible in approximately the centre of the site. The remainder of the site appears vacant with a few isolated trees. The surrounding area is occupied by residential properties.



Photograph 3: Extract from 1946 Aerial Photograph

1964 The isolated structure located in the south-west corner is the only structure remaining from the photograph taken in 1946, with the buildings in the centre having been demolished. A cluster of three small buildings now occupies the northern portion of the site with the remainder of the site appearing vacant.



Photograph 4: Extract from 1964 Aerial Photograph

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1974 The site is similar to that seen in the photograph taken in 1964 except the isolated building located in the south-west corner has been demolished. A number of cars are using the site for informal parking.



Photograph 5: Extract from 1974 Aerial Photograph

1981 A large split level building (show room observed today) occupies the southwest corner of the site with frontage on Coonan Street and Keating Street. The south-west and northern portions of the site are paved and used for the storage and display of additional motor vehicles. One of the three buildings that occupied the northern portion of the site in 1974 remains in the centre of the northern display yard. A retractable shade structure appears to be present over much of the south-west display yard.



Photograph 6: Extract from 1981 Aerial Photograph

2002 The site appears similar to that seen in the photograph taken in 2002



Photograph 7: Extract from 2002 Aerial Photograph

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### 3.2 Historical Title Search

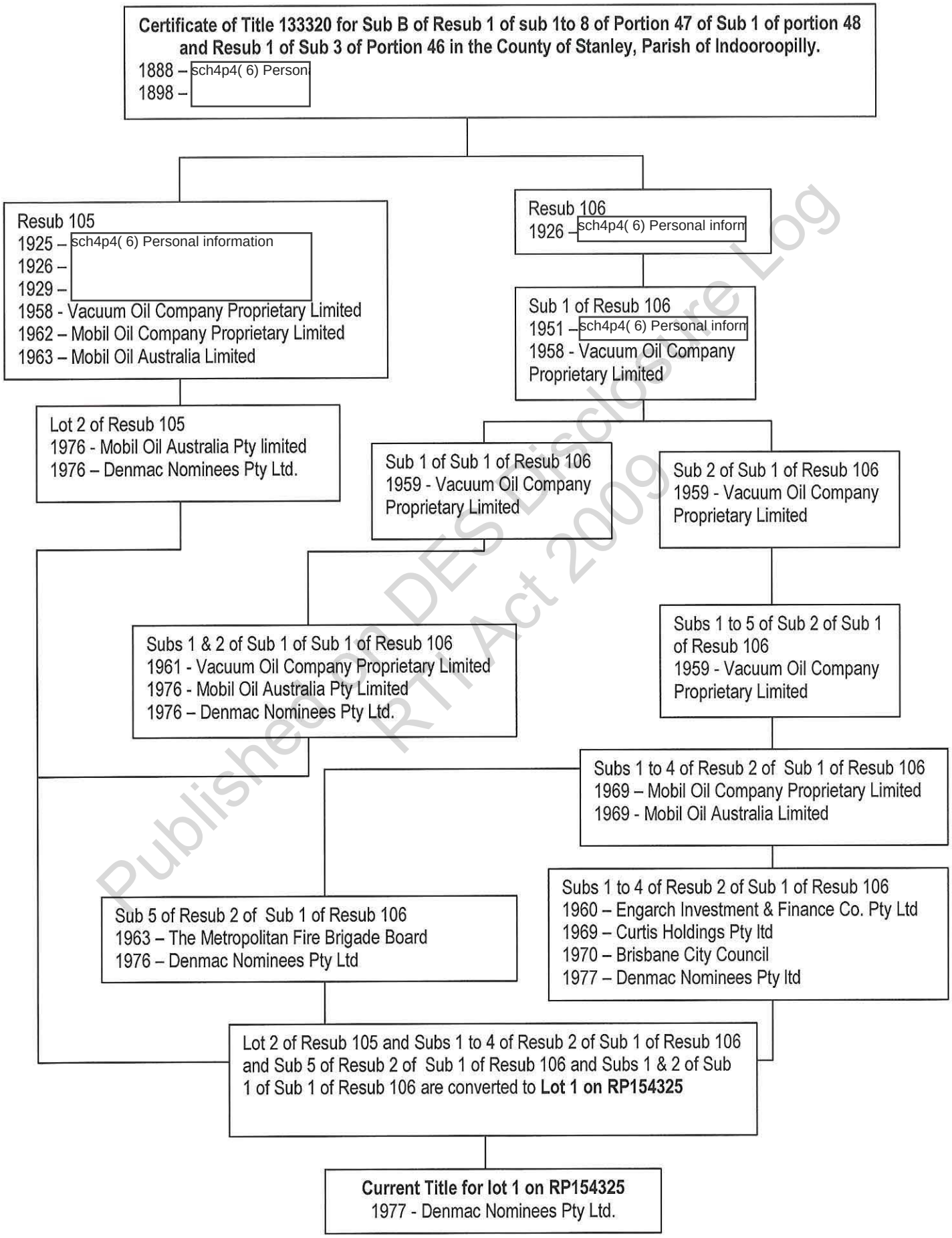
The Department of Natural Resources (DNR) carried out a historical title search for Lot 1 RP154325. Historical titles were traced for the allotments back to the year 1888.

Review of the historical Certificates of Title indicate that Lot 1 RP154325 was owned by individuals until it was purchased by The Vacuum Oil Company Proprietary Limited in 1958. Mobil Oil gradually resumed subdivision portions in 1962, 1969 and 1976. Denmac Nominees purchased the Subdivision 5 in 1976 from the Metropolitan Fire Brigade Board and Subdivisions 1 to 4 from the Brisbane City Council.

Demac Nominees Pty Ltd was the owner of the lot at the time of the current title searches 13 November 2006. A copy of the titles are provided in Appendix A, with a summary of the historical Certificates of Title reviewed provided in Figure 1.

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**Figure 1: Site Occupancy Flow Chart**




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# SECTION 4 - FIELDWORK

## 4.1 Drilling and Sampling Methods

Fieldwork was undertaken on 6 December 2006 and 8 December 2006 and comprised the drilling and sampling of nineteen (19) bores using a truck-mounted Mobile B40L drilling rig, using a combination of solid flight augering and NMLC core drilling (in rock).

Strata identification was from inspection of material returned to the surface on the augers and in the circulation fluid during wash bore drilling samples taken at selected depth intervals, as well as the inspection and logging of rock core samples.

To minimise the potential for cross contamination of samples, each environmental sample was collected using disposable gloves, which were replaced between each sample.

Samples were placed immediately into laboratory prepared jars that were sealed, labelled with a unique identifier and placed into a chilled ice chest. Each sample was immediately recorded on a chain of custody register, which was used to track the movement of the samples. The samples remained in the chilled ice chest and were transported to the analytical laboratory for analysis.

## 4.2 Test Locations and Supervision

Bore and test pit locations were determined on site by direct measurement from existing site features and are shown approximately on Drawing No. 1, attached. Ground surface levels were determined by interpolation between contours given on PMM Brisbane Pty Ltd Detail Survey, Drawing Reference 21454.

An experienced geotechnical engineer set out the test locations, logged the stratigraphy encountered in the bores and directed the in-situ sampling and testing program

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# SECTION 5 - INVESTIGATION RESULTS

## 5.1 Results

The subsurface conditions encountered at the bore locations are given in detail on Bore Reports presented in Appendix C, using classification and descriptive terms defined in attached notes.

## 5.2 Groundwater

'Free' groundwater was not encountered during auger drilling in any bore, and could not be observed once NMLC core drilling was commenced. The depth to free water in a standpipe installed in Bore 5 at the completion of drilling was approximately 5.1m (i.e. RL 21.1m), measured 5 days and 8 days after standpipe installation.

It is considered that groundwater levels could vary considerably across the site, and would be dependent upon seasonal affects and the prevailing weather. It is also considered highly likely that 'perched' groundwater conditions could also occur in areas of fill across the site, particularly after prolonged periods of rain.

It should be noted that the groundwater level would be expected to vary both seasonally and with the prevailing weather conditions. It is recommended that groundwater presence/levels be confirmed if construction is undertaken during/following wet weather or if a significant period of time elapses between the investigation and construction.

## 5.3 Laboratory Testing

In general, soil samples from each 0.5m depth interval and/or from each strata unit down the soil profile until natural soils were encountered, were submitted to National Measurement Institute, a laboratory registered by NATA for the analyses required. Based on site history and fieldwork observations soil samples were submitted for a combination of the following analyses:

- heavy metals;
- monocyclic aromatic hydrocarbons as benzene, toluene, ethyl benzene and xylenes (BTEX);
- total petroleum hydrocarbons (TPH); and
- organochlorine pesticides.

A summary of the laboratory results for this Stage 1 ESA is given in Table 2 and the laboratory reports are provided in Appendix C.

## 5.4 Subsurface Conditions

The general stratigraphy encountered across the site consisted of subsurface conditions comprising 0.4m to 4.1m depth of fill, overlain by a concrete slab at some bore locations. The fill was underlain by phyllite (rock). The bores were terminated in the phyllite between 7.35m and 9.98m depth.



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## 5.5 Quality Assurance/Quality Control (QA/QC) Methods

The samples were dispatched under Chain of Custody documentation provided in Appendix C in order to identify sample movements. The laboratory's internal QA/QC measures included spike analyses, method blanks and duplicates. The laboratory's internal QA/QC results for each batch are included in the laboratory reports.

To ensure the integrity of data transfer the electronic data supplied by the laboratory has been used to develop the results summary tables.

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# SECTION 6 - ENVIRONMENTAL DISCUSSION

## 6.1 Contaminated Land

### 6.1.1 Potential Contamination Sources

Potentially contaminating activities identified in the site history review and observations made on site include:

- use of the site as a former service station; and
- former storage of fuel in UFSTs.

Potential contaminants of concern associated with the identified potentially contaminating activities listed above comprise:

- heavy metals;
- monocyclic aromatic hydrocarbons as benzene, toluene, ethyl benzene and xylenes (BTEX);
- total petroleum hydrocarbons (TPH); and
- pesticides.

### 6.1.2 Results and Assessment Criteria

To assess the suitability of the site for its proposed use, assessment criteria is required for heavy metals, TPH, BTEX and OCPs.

**Heavy Metals, and OCPs**

Assessment of heavy metal and OCP soil contamination is based on the Queensland EPA's *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, May 1998 (*'the Guidelines'*).

Investigation levels for contaminants are presented in the Guidelines for a range of categories:

- *Background levels* provide levels of contaminants which would be expected to occur naturally in soils in Queensland;
- *Environmental Investigation Levels (EILs)* are levels below which contaminants in soils are not considered to adversely impact the environment;
- *Phytotoxicity Investigation Levels (PILs)* are levels below which contaminants in soil are not considered toxic to plant life; and
- *Health-based Investigation Levels (HILs)* are levels below which contaminants in soils are not considered to adversely impact human health. HILs are divided into six exposure settings depending upon proposed land-use type. Exposure settings range from standard residential settings with garden accessible soil, to commercial/industrial type exposure that includes offices/shops, factories and industrial sites.

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In order to assess the results obtained in terms of the site's status on the EMR, EILs are utilised for OCPs and heavy metals except Cu and Zn for which PILs are adopted.

**TPH and BTEX**

Assessment of TPH and BTEX soil contamination is based on Queensland EPA's *Draft Investigation Threshold for Underground Storage Tanks* – January 1999.

The threshold concentrations for both TPH and BTEX are based on suitable levels for sensitive land use.

### 6.1.3 Comparison of Results to Assessment Criteria

The results of the laboratory analyses have been compared with the assessment criteria and the results are summarised below.

#### *6.1.3.1 Metals*

- results for all fifty (50) samples analysed for metal returned concentrations of Cd, Cr, Cu, Hg, Ni and Zn below the EPA EIL/PIL criteria;
- results for two (2) of the 50 samples analysed returned arsenic concentrations above the EPA RIL criterion of 20 mg/kg; and
- results for two (2) of the 50 samples analysed returned lead concentrations above the EPA EIL/HIL-A criterion of 300 mg/kg.

#### *6.1.3.2 Total Petroleum Hydrocarbons (TPH)*

All ten (10) samples submitted for TPH analysis were below the laboratory limit of reporting.

#### *6.1.3.3 Benzene, Toluene, Ethyl benzene and Xylene (BTEX)*

All ten (10) samples submitted for BTEX analysis were below the laboratory limit of reporting.

#### *6.1.3.4 Organochlorine Pesticides (OCP)*

All fourteen (14) samples submitted for OCP analysis were below the laboratory limit of reporting.

## 6.2 Quality Assurance/Quality Control (QA/QC) Methods

The samples were dispatched under Chain of Custody documentation provided in Appendix C in order to identify sample movements. To ensure the integrity of data transfer the electronic data supplied by the laboratory has been used to develop the results summary tables.

Data quality is assessed with respect to completeness, accuracy, precision, sensitivity, laboratory blanks, holding times, field duplicates and representativeness. The QA parameters are discussed in what follows as indicators of data quality.

### 6.2.1 Completeness

The following information is required to check for completeness of data sets:



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- chain-of-custody forms (signed by Butler Partners and the laboratory);
- sample receipt forms;
- all sample results reported;
- all blank data reported;
- all lab duplicates reported and relative percent differences (RPDs) calculated;
- all surrogate spike data reported;
- all matrix spike and matrix spike duplicate (MS/MSD) data reported and RPDs calculated; and
- NATA stamp on reports.

The results of this check indicated that required documentation and data has been reported on NATA approved reports.

6.2.2 Accuracy

Accuracy is a measure of the agreement between an experimental determination and the true value of the parameter being measured. The determination of accuracy can be achieved through the analysis of known reference materials or assessed by the analysis of matrix spikes. Spiking of reference materials into an actual sample matrix is the preferred technique because it provides a measure of the matrix effects on the analytical accuracy. Accuracy is measured in terms of percentage recovery as defined by the following equation:

$$\%R = \frac{SSR - SR}{SA} X\ 100$$

where: %R = percentage recovery of the spike
SSR = spiked sample result
SR = sample result (native)
SA = spike added

Laboratory personnel calculate percentage recoveries of spiked compounds, which are evaluated against control or acceptance limits taken from the appropriate NATA approved method. If the spike recovery for a sample does not fall within the prescribed control limits, laboratory based corrective action is taken, although the sample is not necessarily reanalysed.

Surrogate spikes consist of spiking non-target compounds into the sample prior to analysis. The spiked compounds are expected to behave during analysis in the same way as the target compounds. Every sample is spiked prior to extraction or analysis with surrogate compounds that are representative of the analysis. If surrogate spike recovery does not meet the prescribed control limits, samples are generally reanalysed.

Matrix spikes and matrix spike/matrix spike duplicates (MS/MSDs) are analysed at a frequency of one in 10 samples or one per analytical batch, whichever is more frequent. Matrix spike/matrix spike duplicates are analysed by splitting a field sample. Each portion is spiked with known quantities of the target compound in order to ascertain the effects of the specific sample matrix on the recovery of analytes.

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The sample batch may contain samples from other sources. Therefore, MS/MSDs may be analysed on other samples from the batch or on a 'clean' matrix (eg distilled water). However, the laboratory's QA/QC procedures require all batch MS/MSDs to conform to the prescribed criteria. The laboratory may report this analysis as laboratory control samples, which may be used to assess the laboratory's methods and procedures.

According to guidelines, sample results are qualified when a matrix spike recovery is below or above the QA acceptance criteria. Typically, results are qualified when percentage recovery is below QA acceptance criteria, indicating that sample results may be biased low. However, results are also qualified when percentage recovery is above QA acceptance criteria, indicating that sample results may be biased high.

The laboratory reports indicated that analyses met acceptance criteria.

### 6.2.3 Precision

Precision is a measure of the ability to reproduce results, and is assessed on the basis of agreement between a set of replicate results obtained from duplicate analyses. The precision of a duplicate determination can be measured as relative percentage difference (RPD), and is calculated from the following equation:

$$RPD = \left[ \frac{X1 - X2}{\left( \frac{X1 + X2}{2} \right)} \right] \times 100$$

where: X1 is the first duplicate value
X2 is the second duplicate value

Laboratory personnel calculate the RPDs of laboratory duplicates and matrix spike/matrix spike duplicates. Control or acceptance limits are taken from the appropriate method. If the RPD for a sample does not fall within the control limits, laboratory based corrective action is taken; however, the sample is not necessarily reanalysed. All laboratory duplicates and matrix spike/matrix spike duplicate RPDs were reported within prescribed limits.

As previously noted, a laboratory batch may contain samples from other sources. Therefore, laboratory duplicates and MS/MSDs may be analysed on other samples from the batch. However, the laboratory's QA/QC procedures require all batch laboratory duplicates and MS/MSDs to conform to prescribed criteria. This was achieved for this batch of samples.

### 6.2.4 Sensitivity

Sensitivity criteria are used to monitor achievement of quantification using method detection limits. Method detection limits depend on the method of analysis, the instrument's ability to measure analytes and the sample matrix; in particular, background interferences.

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When interferences are present in the sample, a loss of sensitivity can occur resulting in an increase in the method detection limit. In some instances (e.g. where one or more compounds have particularly high concentrations) the sample must be diluted for analysis. This increases the method detection limit by the dilution factor.

Method detection limits for soil/sediments are based on 'wet weight'. Actual detection limits are calculated on a 'dry weight' basis and are higher. The detection limits achieved by the laboratory were below the site criteria for all analytes.

### 6.2.5 Laboratory blanks

Laboratory blanks monitor externally introduced contaminants that potentially derive from glassware, cleaning reagents and digestion reagents during the analysis process. The blank consists of water and digestion reagents prepared in the laboratory. The laboratory blank is treated as a sample in the laboratory, going through the same sample preparation and analysis procedures as corresponding samples.

To meet the QC acceptance criteria the laboratory blanks should have no detectable concentrations of the target compounds. The laboratory blank results are presented in the laboratory analytical reports. All laboratory blank results were reported within prescribed acceptance criteria.

### 6.2.6 Holding times

Holding times from field sampling to laboratory analysis must be minimised to ensure the representativeness of the result obtained. Delays between sampling and analysis can lead to analytes changing due to processes such as volatilisation, mineralisation, and biological modification.

Where standard holding times are exceeded, professional judgement as to the integrity of the data will be required, taking into account such factors as field storage, laboratory storage and even sample bottle characteristics. The laboratory reported that all samples were received and analysed within prescribed holding times.

### 6.2.7 Field Duplicates

Blind duplicates were collected and the pair of samples (i.e. duplicate and primary) were submitted for analyses for the contaminants of concern. The duplicate analytical results are compared to the primary results using relative percentage difference (RPD). The RPD is the absolute difference between two results divided by their mean values and expressed as a percentage. Where either primary or duplicate results have concentrations below the laboratory level of reporting, the RPD is not calculated. A value of 50% is considered an acceptable data quality objective (DQO).

Results exceeding the RPD DQO (shown in Table 3) for Nickel (Ni) analysed in sample B16-2 and DUP02 (primary and duplicate sample respectively) was 63%, which exceeds the acceptable 50% RPD.

Results exceeding the RPD for Chromium (total Cr) analysed in sample B7-4 and DUP05 (primary and duplicate sample respectively) was 62%, which exceeds the acceptable 50% RPD.



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The calculated RPD for Arsenic, Lead, Nickel for sample B19-3 and duplicate DUP03 was 61%, 57% and 67%, respectively, also exceeding the acceptable RPD of 50%.

The variability in results maybe due to matrix heterogeneity and as such, the RPD's reported in this investigation are therefore considered to be acceptable.

Refer to Table 3 for summary of RPD calculations.

6.2.8 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition.

Representativeness is primarily dependent on the design and implementation of the sampling program and is partially ensured by the avoidance of contamination, adherence to sample handling and analysis protocols, and use of proper chain-of-custody and documentation procedures. Blanks, holding times and field duplicates are all QA parameters that can assist in the analysis of representativeness.

The QA/QC evaluation presented in this report generally confirms the representativeness of the samples analysed. Therefore, the analytical data reported is considered suitable for the assessment of the site.

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Client: Property Solutions (Australia) Pty Ltd
Project: Commercial Development
Location: Cnr Keating Street and Moggill Road, Indooroopilly

Project Number: 06253A
Date: March, 2007

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## Table 3 - Soil RPDs

| Test Duplicate | Sample Number | Sample Depth (m) | Material Type | Organics (mg/kg) | | | | | | | | | | | | Inorganics (mg/kg) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TPH | | | | BTEX | | | | Pesticides | | | | Metals | | | | | | | |
| | | | | C6-C9 | C10-C14 | C15-C28 | C29-C36 | Benzene | Toluene | Ethyl-benzene | Xylene | Aldrin & Dieldrin | Chlordane | DDT | Heptachlor | As | Cd | Total Cr | Cu | Pb | Hg | Ni | Zn |
| Laboratory Level of Reporting (mg/kg) | | | | 25 | 50 | 100 | 100 | 0.5 | 0.5 | 0.5 | 1.0 | 0.2 | 0.2 | 0.2 | 0.2 | 1.0 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| - | B15-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | 2.2 | <0.5 | 7.2 | 5.5 | 3.8 | <0.2 | 8.7 | 23 |
| Blind | B15-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | 2.5 | <0.5 | 12 | 4.8 | 4.2 | <0.2 | 11 | 25 |
| RPD Blind | | | | NA | NA | NA | NA | NA | NA | NA | NA | - | - | - | - | 13 | NA | 50 | 14 | 10 | NA | 23 | 8 |
| - | B16-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | 15 | <0.5 | 5.6 | 24 | 22 | <0.2 | 7.3 | 41 |
| Blind | B16-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | 16 | <0.5 | 4.6 | 35 | 33 | <0.2 | 14 | 50 |
| RPD Blind | | | | - | - | - | - | - | - | - | - | - | - | - | - | 6 | NA | 20 | 37 | 40 | NA | 63 | 20 |
| - | B19-3 | 1.0-1.3 | Fill | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <0.01 | 8.5 | <0.5 | 6.3 | 25 | 54 | <0.2 | 13 | 71 |
| Blind | B19-3 | 1.0-1.3 | Fill | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <0.01 | 16 | <0.5 | 4 | 35 | 30 | <0.2 | 26 | 87 |
| RPD Blind | | | | - | - | - | - | - | - | - | - | NA | NA | NA | NA | 61 | NA | 45 | 33 | 57 | NA | 67 | 20 |
| - | B2-3 | 0.8-1.0 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | 13 | <0.5 | 19 | 41 | 30 | <0.2 | 31 | 79 |
| Blind | B2-3 | 0.8-1.0 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | 15 | <0.5 | 21 | 41 | 40 | <0.2 | 32 | 82 |
| RPD Blind | | | | - | - | - | - | - | - | - | - | - | - | - | - | 14 | NA | 10 | 0 | 29 | NA | 3 | 4 |
| - | B7-4 | 1.5-2.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | <LOR | <LOR | <LOR | <0.01 | 8.6 | 1.6 | 11 | 23 | 520 | <0.2 | 6.2 | 140 |
| Blind | B7-4 | 1.5-2.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | 8.7 | 1.4 | 5.8 | 21 | 410 | <0.2 | 6.7 | 130 |
| RPD Blind | | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 | 13 | 62 | 9 | 24 | NA | 8 | 7 |

NOTES:
72 RPD value exceeds 50%
NA Not Applicable
- Not Analysed

Published on DES Disclosure Log
RTI Act 2009

### 6.3 Discussion

Two separate bore locations, B13-5 (depth 2.1m to 2.3m) and B18-5 (depth 2.0m to 2.3m) reported arsenic exceeding the EIL criterion of 20 mg/kg, however these values were within the background level of 30 mg/kg listed by the EPA and are not considered to be significant.

Two samples at location B7 (B7-2 and B7-4) reported lead exceeding the EIL and HIL 'A' criterion of 300 mg/kg at a depth of 0.9m to 2.0m. However, the lead was not present at the next sample analysed in this bore at a depth of 2.5m. Lateral delineation of the lead impact has not been undertaken.

### 6.4 Conclusions

Based on the results of the Stage 1 ESA undertaken by Butler Partners, the following conclusions are made:

- Lot 1 on RP154234 is listed on the EPA's EMR;
- the site has been filled with sands and gravely clays and covered with concrete hardstand;
- potentially contaminating activities identified on site include operation of a service station with associated underground fuel storage;
- laboratory testing of the soil samples taken by Butler Partners indicate the presence of concentrations of arsenic in samples B13-5 and B18-5 at depths between 2m to 3m above the EIL but within background concentrations;
- laboratory testing of the soil samples taken by Butler Partners indicate the presence of elevated levels of Lead in samples B7-2 and B7-4 between 0.9m and 2.0m depth exceeding the EIL/HIL-A criterion;
- the extent of identified contamination has been limited vertically at 2.5m depth; and
- all other soil samples analysed from across the site for TPH, BTEX and OCPs returned concentrations below the EIL criteria.

### 6.5 Recommendations

In order to assess if the lead impact at bore B7 is significant it is recommended that sampling of shallow soils be undertaken close to the location to assess whether the impact is extensive.

If the impact is of limited extent it may not be significant and therefore, not require further contaminated land management. Based on the findings where there is no significant impact, an application may then be made to the EPA for approval to remove the site from the EMR.

Alternately, if the impact extends to a point where more than $10m^3$ to $20m^3$ of impacted soil is calculated to be present, a remediation plan to remove the impacted material and validate remaining material will be required.

**BUTLER PARTNERS PTY LTD**

sch4p4( 6) Personal information

Senior Environmental Scientist

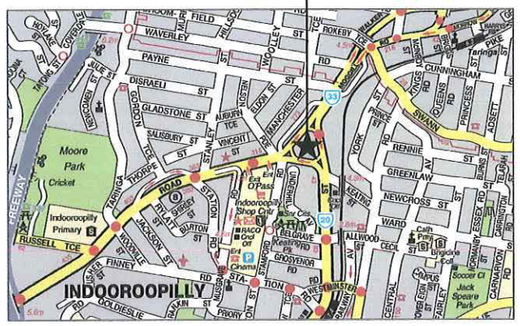
sch4p4( 6) Personal informatic

SUZANNE WALKER
Principal



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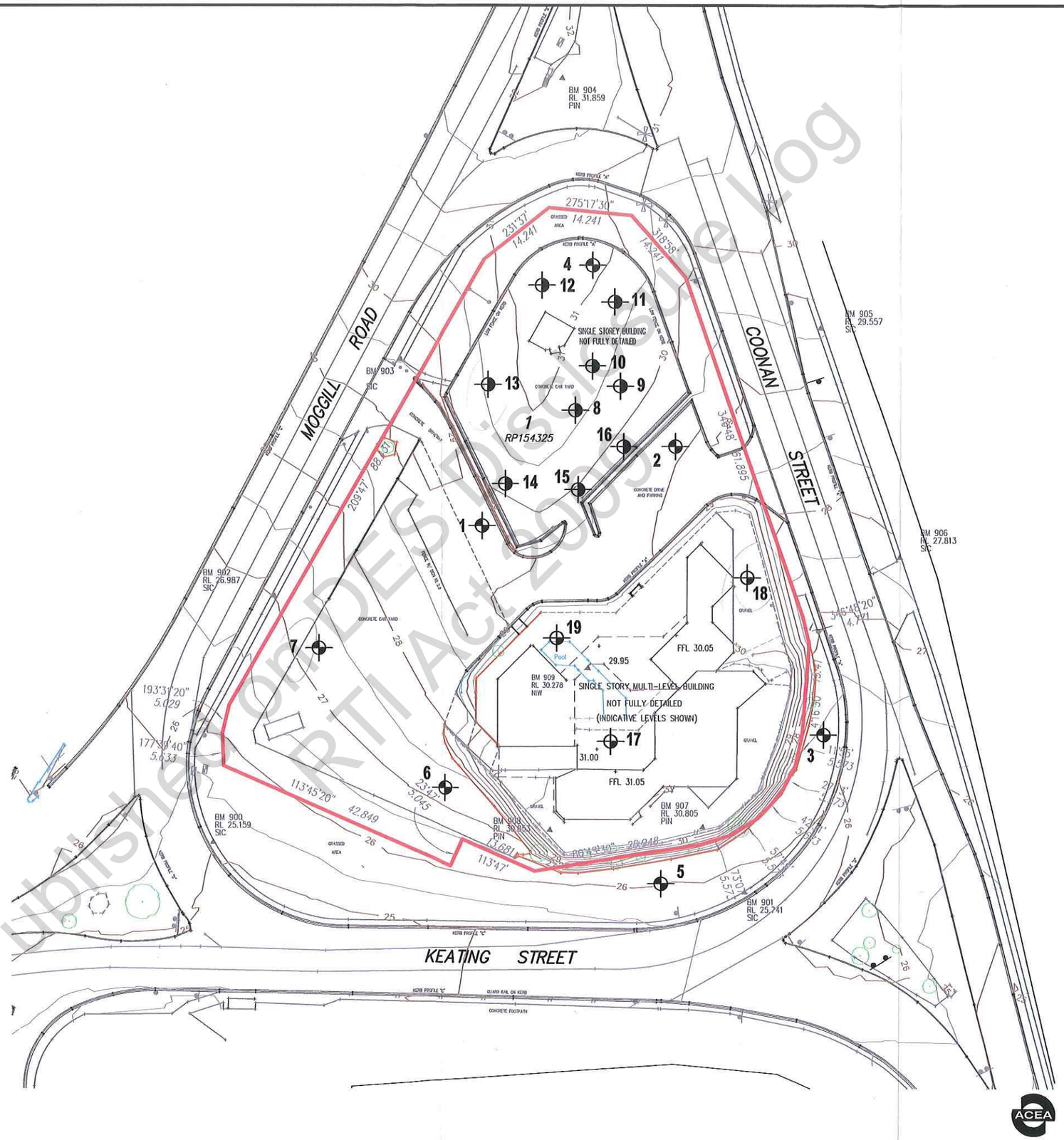
SITE




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UBD Reference: Map 178 Ref K3 (50th Edition) N.T.S.

LEGEND

- 1 Bore
- 8 Environmental Bore
- 17 Environmental Bore (Small Rig)
- Site Boundary




Reference: PMM Pty Ltd's 'Detail Survey', Drawing No.21454det.dwg, dated 28.11.06

Published on DES Disclosure Log
RTI Act 2009

CLIENT:
PROPERTY SOLUTIONS (AUSTRALIA) PTY LTD

BUTLER PARTNERS
79 Doggett Street, Newstead
Queensland 4006 Australia
Telephone 61 7 3852 3800
Facsimilie 61 7 3852 3808

# COMMERCIAL AND RETAIL DEVELOPMENT

CORNER KEATING STREET AND MOGGILL ROAD, INDOOROOPILLY

## LOCALITY PLAN AND TEST LOCATIONS

NORTH

0 10 20 30m

SCALE: 1:750 (A3)

DATE: JANUARY 2007

DRAWN BY: FD

APPROVED: sch4p4( 6) F

PROJECT No: 06253A

DRAWING No: 1 REV: A

Published on DES Disclosure Log
RTI Act 2009

# APPENDIX A

## CURRENT AND HISTORICAL TITLES AND EPA REGISTERS SEARCH RESPONSE

# CURRENT TITLE SEARCH

# NATURAL RESOURCES AND WATER, QUEENSLAND

Request No: 118593796
Search Date: 28/03/2007 09:25

Title Reference: 15667040
Date Created: 20/07/1977

Previous Title: 13686001
14318079
14318080
14348220
15601206

REGISTERED OWNER

DENMAC NOMINEES PTY LTD

ESTATE AND LAND

Estate in Fee Simple

LOT 1 REGISTERED PLAN 154325
County of STANLEY Parish of INDOOROOPILLY
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10004121 (POR 47)

2. MORTGAGE No 702554477 11/03/1998 at 15:00
NATIONAL AUSTRALIA BANK LIMITED A.C.N. 004 044 937

3. LEASE No 702810559 27/07/1998 at 16:06
SUMMIT DENMAC PTY LIMITED A.C.N. 057 890 865

4. TRANSFER No 705083675 02/10/2001 at 11:48
LEASE: 702810559
BRISBANE RJV PTY LTD A.C.N. 094 332 519

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

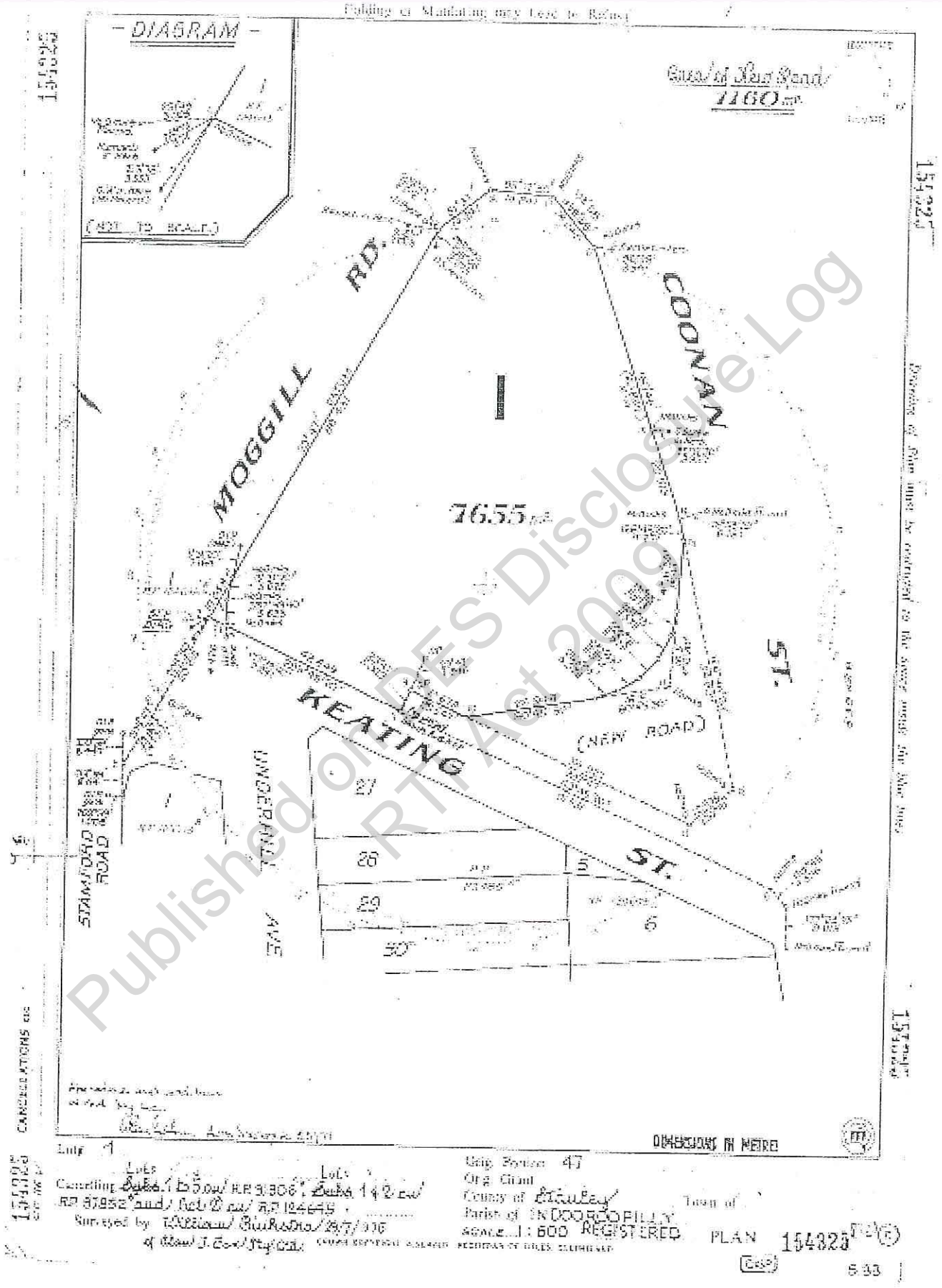
CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

COPYRIGHT THE STATE OF QUEENSLAND (NATURAL RESOURCES AND WATER) [2007]
Requested By: PUBLIC ACCESS CITEC CONFIRM

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RTI Act 2009

## QLD ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 880432 EMR Site Id: 896 13 November 2006
This response relates to a search request received for the site:
Lot: 1 Plan: RP154325

### EMR RESULT

The above site IS included on the Environmental Management Register.
Lot: 1 Plan: RP154325
Address: CNR MOGGILL RD AND COONAN STS
INDOOROOPILLY 4068

The site has been subject to the following Notifiable Activity pursuant to section 374 of the *Environmental Protection Act 1994.*
SERVICE STATIONS - operating a commercial service station.

### CLR RESULT

The above site is NOT included on the Contaminated Land Register.

### ADDITIONAL ADVICE

**Note: Searches may be conducted online through the State Government Website www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au.**

**Alternatively, searches may be posted to Smart Service Queensland (Contaminated Land Search, PO Box 10817, Brisbane Adelaide Street, Queensland 4001) or fax (07) 3 405 0965 or 1300 300 768.**

**If you have any queries in relation to this search please phone (07) 3227 7370.**

**Lindi Bowen**
**Registrar, Contaminated Land Unit**

Published on DES Disclosure Log RTI Act 2009

QUEENSLAND GOVERNMENT

# CURRENT TITLE SEARCH

NATURAL RESOURCES, MINES & WATER, QUEENSLAND

Request No: 1168686
Search Date: 13/11/2006 10:53 am

Title Reference: 15667040
Date Created: 20/07/1977

Previous Title: 13686001
14318079
14318080
14348220
15601206

**REGISTERED OWNER**

DENMAC NOMINEES PTY LTD

**ESTATE AND LAND**

Estate in Fee Simple

LOT 1 REGISTERED PLAN 154325
County of STANLEY Parish of INDOOROOPILLY
Local Government: BRISBANE CITY

**EASEMENTS, ENCUMBRANCES AND INTERESTS**

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10004121 (POR 47)

2. MORTGAGE No 702554477 11/03/1998 at 15:00
NATIONAL AUSTRALIA BANK LIMITED A.C.N. 004 044 937

3. LEASE No 702810559 27/07/1998 at 16:06
SUMMIT DENMAC PTY LIMITED A.C.N. 057 890 865

4. TRANSFER No 705083675 02/10/2001 at 11:48
LEASE: 702810559
BRISBANE RJV PTY LTD A.C.N. 094 332 519

5. CAVEAT No 706419579 07/03/2003 at 14:48
DUPONT PROPERTIES (QLD) PTY LTD A.C.N. 103 457 674

**ADMINISTRATIVE ADVICES - NIL**
**UNREGISTERED DEALINGS - NIL**

**CERTIFICATE OF TITLE ISSUED - No**

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

COPYRIGHT THE STATE OF QUEENSLAND (NATURAL RESOURCES, MINES & WATER) [2006]
Requested By: External Supervisor

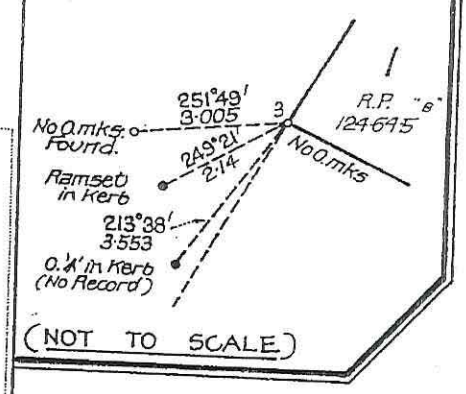


Published on DES Disclosure Log RTI Act 2009

Folding or Mutilating may Lead to Refusal

154325

- DIAGRAM -




(NOT TO SCALE)

Area of New Road
1160 m²

LODGED DATE
REGD DATE

N

154325

Drawing of Plan must be restricted to the space inside the blue lines




CANCELLATIONS etc

Alterations and additions in red by me.
W Bilkstra Auth. Surveyor 3/5/77

Lot# 1

Cancelling Subs 1 to 5 ow/ R.P 91806 "A", Subs 1 & 2 ow/ R.P 97852 "A" and Lot 2 ow/ R.P 124645 "B"

Surveyed by William Bilkstra 29/7/1976 of Alan J. Fox Pty. Ltd.

Orig. Portion 47

Orig. Grant

County of Stanley Town of

Parish of INDOOROOPILLY

SCALE 1:600 REGISTERED PLAN 154325

DIMENSIONS IN METRES

CISP

5.33

154325 C c 1/16 V

CROWN COPYRIGHT RESERVED. REGISTRAR OF TITLES. QUEENSLAND

Copyright protects the plan/s being ordered by you. Unauthorised reproduction or amendments are not permitted.

Release

This plan MUST NOT BE FOLDED but may be rolled.

No 36425

I William Buikstra of Brisbane

Authorised Surveyor, do hereby solemnly and sincerely declare that I have faithfully and truly surveyed, measured and marked on the ground the parcel of land herein referred to, and that the measurements and boundaries given in this plan are correct, and do not to the best of my belief in any way interfere with the rights or property of any persons, owners or occupiers of the land adjoining the above land, and described in the said plan; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the "Oaths Acts, 1867-1960"

W Buikstra
Authorised Surveyor

Made and Signed at Brisbane this 5th day of August 19.77, before me.

Signature of Registrar of Titles or of a Magistrate

The Council of the Brisbane City Council certifies that the requirements of the City of Brisbane Acts 1924-1960, The Queensland Acts of 1936 to 1976 and all By-Laws 1964 to 1967 and all ordinances thereunder have been complied with and approves this plan of subdivision subject to

Dated this 9th day of NOVEMBER 19.76

Mayor or Chairman

Deputy Town ~~or Shire~~ Clerk

I/We DENMAC NOMINEES Pty LTD (Names in full) as proprietor/s of this land, agree to this Plan of subdivision; and dedicate the new roads shown hereon to public use.

Signature of Proprietor/s

The Common Seal of Denmac Nominees Pty.Ltd. was hereunto affixed by authority of a resolution of the Board of Directors in the presence of:

DENIS MICHAEL McENIERY DIRECTOR

EILEEN MARY McENIERY DIRECTOR

WITNESS G.M. Covell

21.4.77

Surveyor to amend to show ... as shown

New C.T. Ref.

| (Re) Sub. | Vol. | Fol. |
|---|---|---|
| 1 | 5667 | 40 |

Calc. Bk. No. 303/180
Examined 28/6/77 JAB
Passed 1/1 28/6/77 JRB
Charted 15/7/77 MD
Located GC116

GC116 Sk 15/9/77

Particulars entered in Register Book Vol. 1348; 3686 Folio 220; 1 4318; 5601 7980; 206

Reg JRB 18.4.77

12 JUL 1977 at 11.07a

REGISTRAR OF TITLES

FOR TITLES OFFICE USE ONLY

Previous Title C.T. 4348 -- 220 Subs 1-4 RP 91806 "B"
C.T. 3686 -- 1 Sub 5 RP 91806 "B"
C.T. 4318 -- 79 Sub 1 RP 97852 "B"
C.T. 4318 -- 80 Sub 2 RP 97852 "B"
C.T. 5601 -- 206 Lot 2 RP 124645 "B"

Note. New road is out of C.T. 4348 -- 220.

N.I.R. 552 so far as relates to Sub 1-4 on RP 91806 satisfied.

154325

For Additional Plan & Document Notings Refer to CISP

Lodged by Horgood and Ganim Solicitors Elizabeth St. Brisbane.

Fees Payable

| | | |
|---|---|---|
| Postal fee and Postage | | |
| 35.00 | Lodgt. & Exam. | 35 |
| 9.50 | Entd. on Docs. | 9 |
| 11.50 | New Title | 11.50 |
| 22.50 | Entd. on Deeds | 22.50 |
| 3.00 | Photo Fee | 3 |
| 81.00 | Total | 91.00 |

$2.50 REQUISITION FEE
1 JUL 1977
Paid Vide No. DS4227

$2.50 REQUISITION FEE
4
Paid Vide No. 054060

Received Registrar of Titles
Journal No. F353447
Receipt No. 80639
RECEIVED TO REGISTER TITLES 14 JUL 1977

F/N's 14.4.77

REGISTERED PLAN 154325

Published on DES Disclosure Log RTI Act 2009

(C)

A 370050

Dealing No. F353447

Reference to previous

| Volume | Folio |
|---|---|
| 3686 | 1 |
| 4318 | 79 and 80 |
| 4348 | 220 |
| 5601 | 206 |

QUEENSLAND.

# CERTIFICATE OF TITLE

REGISTER BOOK

VOL. 5667 FOLIO 40

VOL: 5667 FOLIO:40

15667040

DENMAC NOMINEES PTY. LTD.

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 7655 square metres

more or less, as shown on the Plan hereon, and therein edged red, Being Lot 1 on registered Plan No. 154325

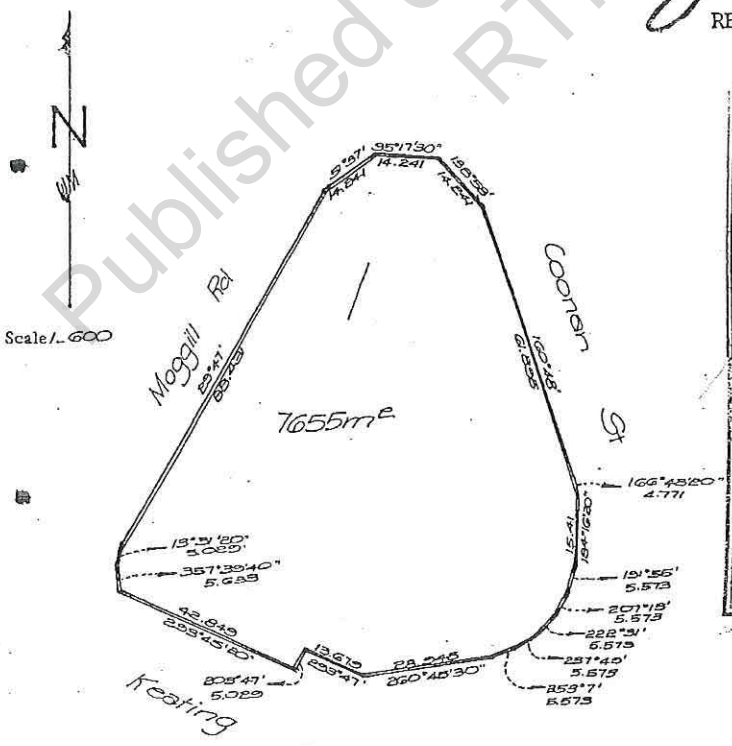
SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No. 4105 for portion 47

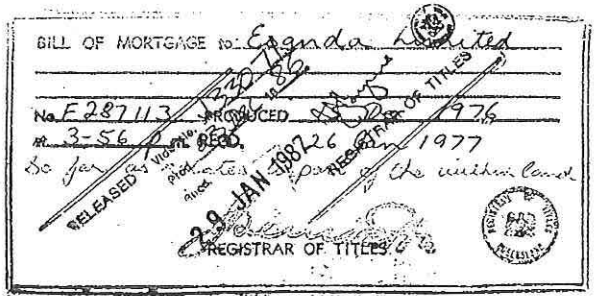
IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 20th day of July One thousand nine hundred and seventy seven

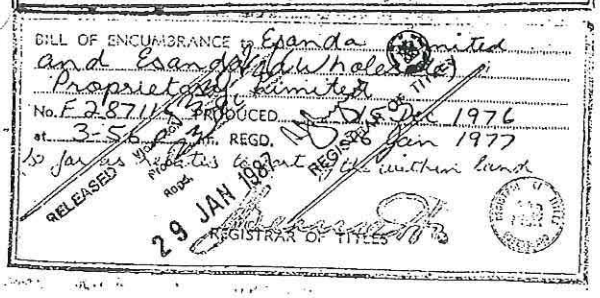
Signed, Sealed, and Delivered )
in presence of )
)
)

REGISTRAR OF TITLES.

REGISTRAR OF TITLES QUEENSLAND




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RTI Act 2009



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LEASE TO: FORD MOTOR COMPANY OF AUSTRALIA LIMITED

FROM: 1 FEB 1993
TO: 31 JAN 1998

No. L406397G PRODUCED 11 MAR 1993
RECORDED

17 MAR 1993

REGISTRAR OF TITLES

SUB LEASE OF: LEASE No. L406397G

TO: SUMMIT DENMAC PTY LIMITED

FROM: 1 FEB 1993
TO: 30 JAN 1998

No. L410941N PRODUCED 15 MAR 1993
RECORDED

24 MAY 1993

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No. F353448 PRODUCED 14 Dec 1977
at 4-14 p.m. REGD. 20 JUL 1977

RELEASED 23 Dec 1977

28 JAN 1987

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. F353449 PRODUCED 14 Dec 1977
at 4-15 p.m. REGD. 20 JUL 1977

RELEASED

28 JAN 1987

REGISTRAR OF TITLES

No. F465035 MEMORANDUM OF VARIATION OF MORTGAGE
No. F353448 PRODUCED 24 Oct 1977
at 10.55 a.m. REGD. 21 NOV 1977

Mortgage released

REGISTRAR OF TITLES

No. F465037 MEMORANDUM OF VARIATION OF MORTGAGE
No. F287113 PRODUCED 24 Oct 1977
at 10.55 a.m. REGD. 21 NOV 1977

Mortgage released

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. F754028 PRODUCED 26 Feb 1982
at 2.53 p.m. REGD. 26 FEB 1982

PARTIAL RELEASE No. J330772 Prod. 23 Dec 1987

Full release at the within Rec'd 28 JAN 1987

28 JAN 1987

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No. G68782G PRODUCED 1 Apr 1986
at 10:13 a.m. REGD. 28 APR 1986

PARTIAL RELEASE No. J330773 Prod. 23 Dec 1987

Full release at the within Rec'd 28 JAN 1987

28 JAN 1987

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. G68782G PRODUCED 1 Apr 1986
at 10:13 a.m. REGD. 28 APR 1986

PARTIAL RELEASE No. J330774 Prod. 23 Dec 1987

Full release at the within Rec'd 28 JAN 1987

28 JAN 1987

REGISTRAR OF TITLES

Unofficial DES Disclosure Log
FOI Act 2009

(C)

# QUEENSLAND

[CERTIFICATE OF TITLE

FULLY CANCELLED

Register Book

Vol. 3686 Folio 1

Dealing No. D43976
Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

VOL: 3686 FOLIO: 1
13686001

A 26087

THE METROPOLITAN FIRE BRIGADES BOARD

is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing Thirty one perches and one tenth of a perch more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 5 of resubdivision 2 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivision 8 of Portion 47 on registered Plan No. 91806

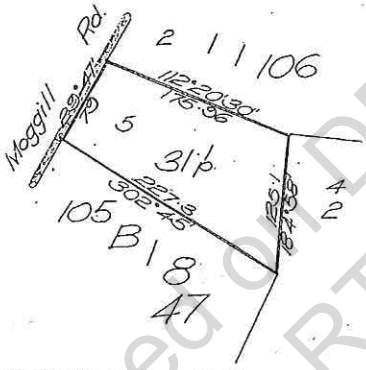
Saving Always to the Crown all the rights and interests reserved to it by Deed of Grant No. 4105

In Witness whereof, I have hereunto signed my name and affixed my seal, this thirty first day of July One thousand nine hundred and sixty four

Signed, Sealed, and Delivered in presence of

REGISTRAR OF TITLES

Scale, 1 chains per inch.




CAVEAT No. E174953

Danmac Nominees Pty. Ltd.
now seised of an Estate in fee-simple in the within land
TRANSFER No. E174952 PRODUCED 17 Jun 1976
at 11.33 a.m. REGD. 5 JUL 1976
REGISTRAR OF TITLES

CAVEAT by Esanda Limited
No. E174953 PRODUCED 17 June 1976
at 11.34 a.m. REGD. 5 JUL 1976
WITHDRAWN No. E174953 Prod. 21 Dec 1976 at 3.56 p.m. Regd.
REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited
No. E287113 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited
No. E287114 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

Reg W/D Caveat E287110 (mtg E287113) Encumb E287114

BILL OF MORTGAGE to Esanda Limited
No. E287115 PRODUCED
at 3.56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

Plan F353447 154325 (Lot 1) (mtge F353448) (Bill of Encumb. F353449)

BY PLAN CAT. No. 154325 the within land is subdivided into 8 lots
No. F353447 PRODUCED 14 Apr 1977
at 4.14 p.m. REGD. 12 JUL 1977
VOL. 6667 FOL. 40
REGISTRAR OF TITLES

FULLY CANCELLED

Release

Published on DES Disclosure Log RTI Act 2009


© The State of Queensland (Department of Natural Resources and Mines) 2006

A 6853

(C)

Dealing No. D739367

Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

VOL: 4318 FOLIO:80

14318080

QUEENSLAND.

CERTIFICATE OF TITLE

REGISTER BOOK

VOL. 4318 FOLIO 80

FULLY CANCELLED

MOBIL OIL AUSTRALIA LIMITED

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 2 roods 8.3 perches

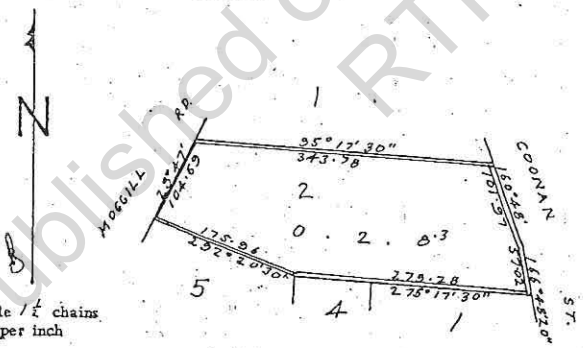
more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 2 of resubdivision 1 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivisions 4, 5 and 8 of Portion 47 on registered Plan No.97852

SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No . 4105

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 26th day of June One thousand nine hundred and sixty nine

Signed, Sealed, and Delivered in presence of

REGISTRAR OF TITLES.




Scale 1 chains per inch

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited
No. E287114 PRODUCED 15 Dec 1976
at 3.56 p m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited
No. E287113 PRODUCED 15 DEC 1976
at 3.56 pm REGD. 26 JAN 1977
REGISTRAR OF TITLES

Denmac Nominees Pty. Ltd.
is now seised of an Estate in fee-simple in the within land
TRANSFER No. E287112 PRODUCED 15 DEC 1976
at 3.56 p.m. REGD. 12 JAN 1977
REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited
No. E287113 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

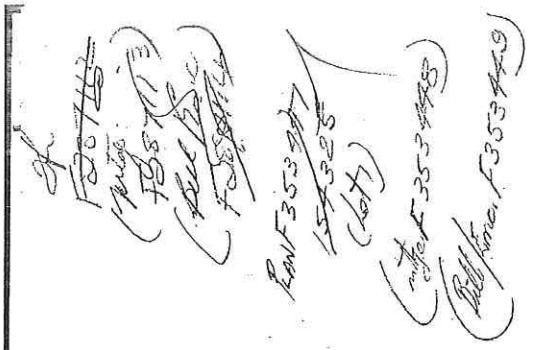
BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1
E353447 PRODUCED 14 Apr 1977
4.14 p.m. REGD. 12 JUL 1977
Reference to other titles Vol: 5667 Fol: 40
REGISTRAR OF TITLES

FULLY CANCELLED

Published on DES Disclosure Log RTI Act 2009



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Published on DES Disclosure Log
RTI Act 2009

A - 6852

(C)

Dealing No. D739367

Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

QUEENSLAND.

# CERTIFICATE OF TITLE

REGISTER BOOK

VOL. 4318 FOLIO 79

VOL: 4318 FOLIO:79

14318079

MOBIL OIL AUSTRALIA LIMITED

**FULLY CANCELLED**

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 2 roods 6.9 perches

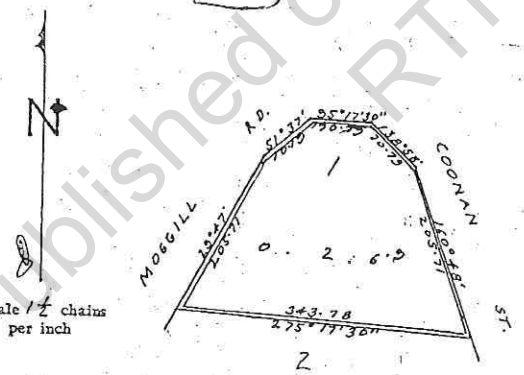
more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 1 of resubdivision 1 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivision 4 of Portion 47 on registered Plan No. 97852

SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No . 4105

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 26th day of June One thousand nine hundred and sixty nine

Signed, Sealed, and Delivered in presence of

REGISTRAR OF TITLES.




BILL OF MORTGAGE to Esanda Limited

No. F287113 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. F287114 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

Denmac Mannines Pty. Ltd.

as now seised of an Estate in fee-simple in the within land

TRANSFER No. F287112 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 12 JAN 1977

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No. F287113 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

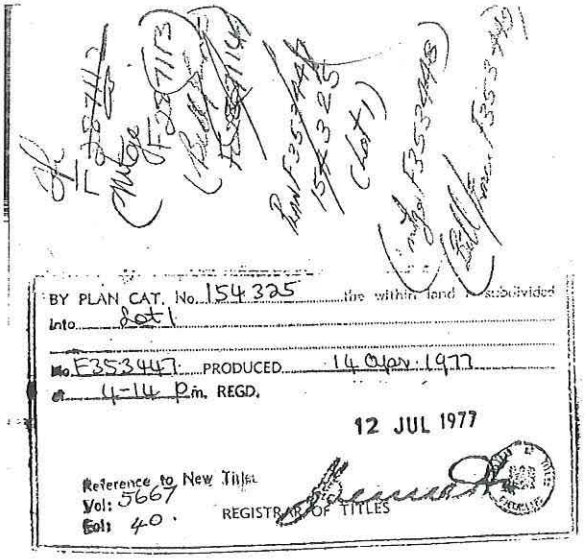
Cancelled

REGISTRAR OF TITLES

Published on DES Disclosure Log RTI Act 2009



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BY PLAN CAT. No. 154325 the within land subdivided
into Lot 1
No. E353447 PRODUCED 14 Apr. 1977
at 4-44 p.m. REGD.

12 JUL 1977

Reference to New Title
Vol: 5667
Fol: 40.

REGISTRAR OF TITLES

Published on DES Disclosure Log
RTI Act 2009

FULLY CANCELLED

A 14019

(C)

Dealing No. D748271

Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

QUEENSLAND

CERTIFICATE OF TITLE

REGISTER BOOK

FULLY CANCELLED

VOL. 4348 FOLIO 220

VOL: 4348 FOLIO:220

14348220

ENGARCH INVESTMENT & FINANCE CO. PTY. LTD.

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane

Containing 2 roods 32.4 perches

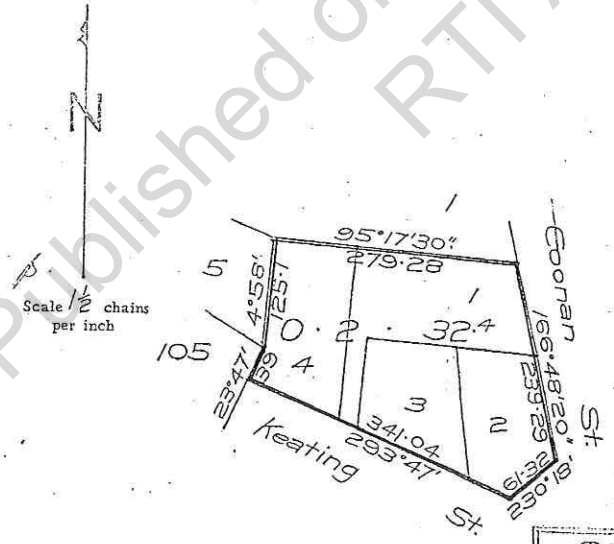
more or less, as shown on the Plan hereon, and therein edged red, Being Subdivisions 1, 2, 3 and 4 of resubdivision 2 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivisions 4, 5 and 8 of Portion 47 on registered Plan No. 91806

SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No . 4105

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 5th day of September One thousand nine hundred and sixty nine

Signed, Sealed, and Delivered )
in presence of )

REGISTRAR OF TITLES.




FULLY CANCELLED

No. D748272 Deed of Mortgage

to Esanda Corporation of Australia Limited

Produced 19 at

Registered 19

RELEASED

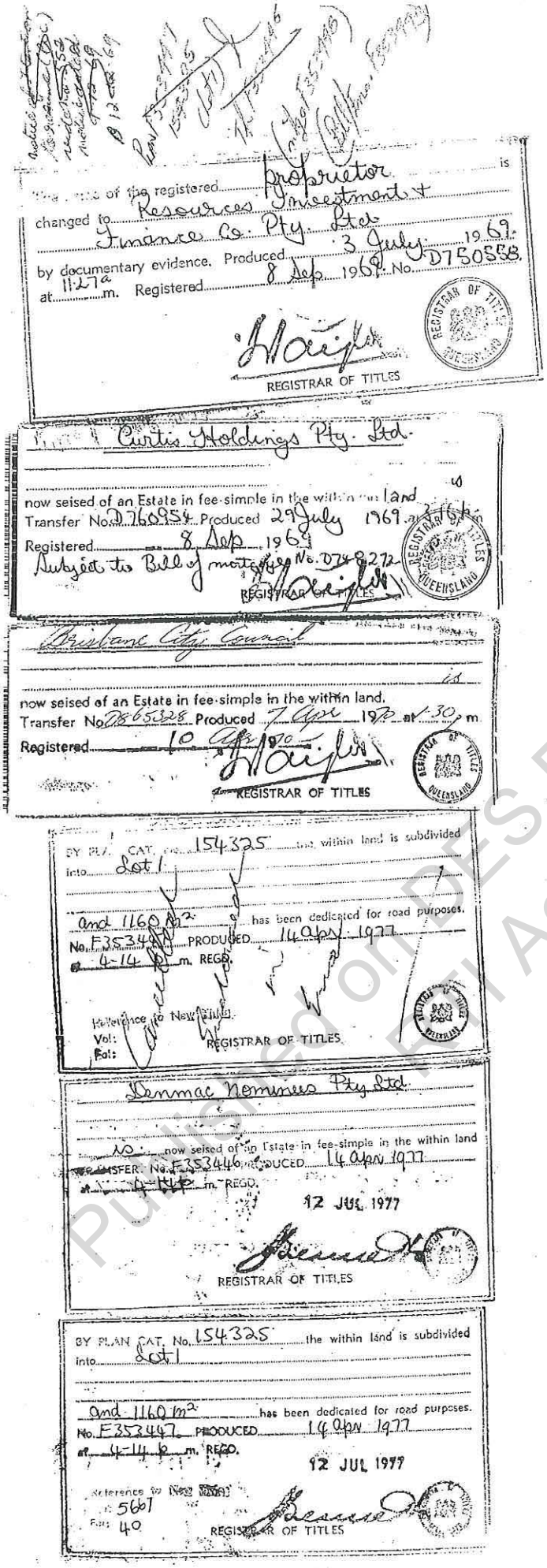
REGISTRAR OF TITLES

REGISTRAR OF TITLES QUEENSLAND

Published on DES Disclosure Log
RTI Act 2009



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Title of the registered proprietor is changed to Resources Investment & Finance Co. Pty. Ltd.
by documentary evidence. Produced 3 July 1969 No. D750558
at 11.27 a.m. Registered 8 Sep 1969
REGISTRAR OF TITLES

Curtis Holdings Pty. Ltd.
now seised of an Estate in fee-simple in the within land
Transfer No. 2760954 Produced 29 July 1969 at 2.16 p.m.
Registered 8 Sep 1969
Subject to Bill of mortgage No. 074827?
REGISTRAR OF TITLES

Brisbane City Council
now seised of an Estate in fee-simple in the within land.
Transfer No. 2865328 Produced 7 Apr 1970 at 30 m.
Registered 10 Apr 1970
REGISTRAR OF TITLES

BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1
and 1160 m² has been dedicated for road purposes.
No. E353446 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.
Reference to New Title
Vol:
Fol:
REGISTRAR OF TITLES

Denmac Nominees Pty Ltd
now seised of an Estate in fee-simple in the within land
TRANSFER No. E353446 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.
12 JUL 1977
REGISTRAR OF TITLES

BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1
and 1160 m² has been dedicated for road purposes.
No. E353447 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.
12 JUL 1977
Reference to New Title
Vol: 5661
Fol: 40
REGISTRAR OF TITLES

FULLY CANCELLED

FULLY CANCELLED

Published on DES Disclosure Log
FOI Act 2009

# Certificate of Title.

VOL:S 2610 FOL:125

12610125

(C)

QUEENSLAND.

No. 521135

| Reference to Previous Volume | Folio |
|---|---|
| 1647 | 61 ✓ |

Register Book, Vol. 2610 Folio 125

c No. 40475

MARGARET FRANCIS UNDERHILL

wife of Walter Underhill

of _____ pursuant to Memorandum of Request No. A973387 received the seventeenth day of October 1950 is now seized _____ of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane containing Two acres one rood seventeen perches

more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 1 of resubdivision 106 of subdivision B of Resubdivision 1 of subdivisions 4, 5 and 8 of Portion 47

on Plan Cat. No. 71206 deposited in the Office of the Registrar of Titles, Brisbane, which said piece of Land is part of the portion marked 47 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted by Deed of Grant No. 4105

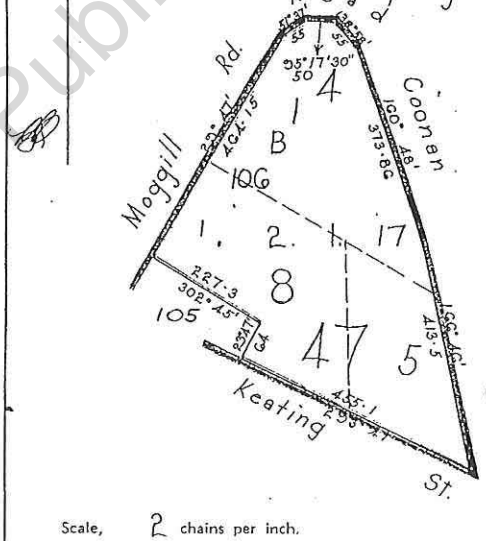
Saving Always to the Crown all the rights and interests reserved to it by the said Deed of Grant.

In Witness whereof, I have hereunto signed my name and affixed my seal, this twenty ninth day of January One thousand nine hundred and fifty two

Signed, Sealed, and Delivered, the 29th day of January 1952, in presence of }

REGISTRAR OF TITLES,

Parish of Indooroopilly




Scale, 2 chains per inch.

PURSUANT to Memo. of TRANSFER No. B584835 produced 19 Aug 19 58 at 12:35 p.m., registered 25 Sep 1958 Vacuum Oil Company Proprietary Limited is now SEISED of an Estate IN FEE SIMPLE in the WHOLE of the within Land.

REGISTRAR OF TITLES

REGISTRAR OF TITLES

Published on DES Disclosure Log RTI Act 2009


Release
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No. B620539 By Plan Cat. No. 91805
the within land
Is subdivided into Resubs 1 and 2
= acres 1 roods 17 9/10 perches part of the land
has been dedicated for road purposes
Produced 2 Feb 19 59 at 3.25 p.m.
Registered 13 May 19 59
REGISTRAR OF TITLES

No. B620540 By Plan Cat. No. 91806
Resub 2 on Plan 91805 of the within land
is subdivided into Subs 1 to 5
Produced 2 Feb 19 59 at 3.25 p.m.
Registered 13 May 19 59
REGISTRAR OF TITLES

No. B857346 By Plan Cat. No. 97852
Resub 1 on Plan No 91805 of the within land
is subdivided into Subs 1 and 2
Produced 21 Aug 19 61 at 4.10 p.m.
Registered 7 Sep 19 61
REGISTRAR OF TITLES

No. D 43976 Request to issue Certificate of
Title for Sub 5 of Resub 2
Produced 11 Sep 1963 at 11.9 a.m. Registered
26 Sep 19 63
Vol.
Fol.
REGISTRAR OF TITLES

By Proclamation dated the 15 Aug 1963, under the provisions of "The Public Works Land Resumption Acts, 1906 to 1953" and "The Fire Brigades Acts 1920 to 1962"
Sub 5 of Resub 2 of the within land
is resumed and is vested in The Metropolitan Fire Brigades Board
for Fire Brigade purposes. Produced 11 Sep 1963
at 11.9 a.m. Registered 26 Sep 1963
No. D43976
Vol 3686
Fol 1
ACTING REGISTRAR OF TITLES

The name of the registered proprietor is
changed to Mobil Oil Australia Proprietary Limited
by documentary evidence. Produced 5 June 19 69
at 2.59 p.m. Registered 10 June 19 69 No. D739365
so far as relates to sub 1 and 2 of Resub 1 and Subs 1 to 4 of Resub 2.
ACTING REGISTRAR OF TITLES

The name of the registered proprietor is
changed to Mobil Oil Australia Limited
by documentary evidence. Produced 5 June 19 69
at 2.59 p.m. Registered 10 June 19 69 No. D739366
so far as relates to Subs 1 and 2 of Resub 1 and Subs 1 to 4 of Resub 2.
ACTING REGISTRAR OF TITLES

No. D 739367 Request to issue Certificate of
Title for Subs 1 and 2 of Resub 1
Produced 5 June 19 69 at 2.59 p.m. Registered
10 June 19 69.
Vol. 4318
Fol. 79/80
ACTING REGISTRAR OF TITLES

No. D 748271 Transfer of Subs 1 to 4 Resub 2 Engarch Investment & Finance Co Pty Ltd
Produced 27 June 1969 at 10.20 a.m.
Registered 17 Aug 1969
Vol. 4348
Fol. 220
REGISTRAR OF TITLES

B857346 (97852) 1/20 of R1.

FULLY CANCELLED

Released D 43976 55.

Pipeline Easement D 730345

Pipeline Easement D 730396

Pipeline D 730367 S14 2

D 748271 Subs 1, 2, 3 & 4 of Resub 2 Lease 30.6.69 Lease 7.7.69 D 748272

Pipeline Easement D 750558

D 760954, Lease 30.7.69 Lease 14.8.69

2.6.17

12.5

Public RTI Act 2009 Disclosure Log

# Certificate of Title.

VOL: S 1647 FOL: 61

11647061

QUEENSLAND.

No. 301821

(C)

REFERENCE TO PREVIOUS

VOL. 832 FOLIO. 60

REGISTER BOOK, VOL. 1647 FOLIO 61

MARGARET FRANCIS UNDERHILL wife

of Walter Underhill pursuant to Memorandum of Conveyance No. 963015 produced the fifteenth day of December 1925, registered the eighth day of January 1926, is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly containing two acres one rood twenty four perches and eight tenths of a perch

more or less, as shown on the Plan hereon, and therein edged red, Being resubdivision 106 of subdivision B of resubdivision 1 of subdivisions 4,5and 8 of portion 47 on plan Cat. No. 41916 deposited in the Office of the Registrar of Titles Brisbane

which said piece of Land is part of the portion marked 47 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted by Deed of Grant No. 4105 to Frederick Tarver Smith

**Saving Always** to the CROWN all the rights and interests reserved to it by the said Deed of Grant.

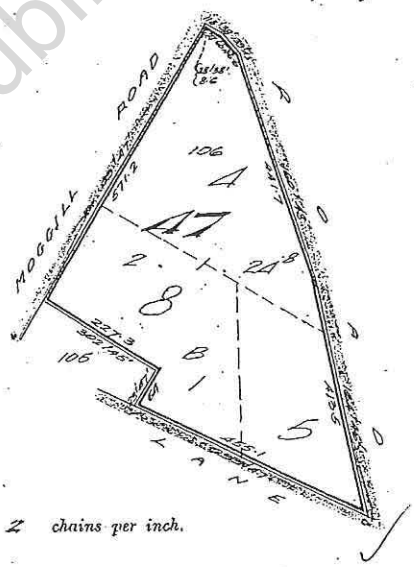
40. IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this thirteenth day of January One thousand nine hundred and twentysix

Signed, Sealed, and Delivered, the thirteenth day of January 1926, in presence of

REGISTRAR OF TITLES QUEENSLAND

REGISTRAR OF TITLES.

Parish of Indooroopilly




Scale, 2 chains per inch.

No. A973386 ROAD DEDICATION produced 17th day 1950 at 4.0 p.m., registered 25 June 1951 78 perchs part of the within land has been dedicated for road purposes vide Plan Cat. No. 71206

REGISTRAR OF TITLES

No. A973387 REQUEST to issue Certificate of Title for Dedicated 17 perchs Sub 1

Produced 17th day 1950 at 4.0 p.m., registered 25 June 1951

Cancelled as above vide Vol. 3610 Fol. 125

REGISTRAR OF TITLES

Plan 71206 51. Rel. Ded A973386 made of Reg A973387 61

Published on DES Disclosure Log RTI Act 2009



Release

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FULLY CANCELLED

Published on DES Disclosure Log
RTI Act 2009

A 351222

(C)

Dealing No. F287111

Reference to previous

| Volume | Folio |
|---|---|
| 1633 | 125 |

QUEENSLAND.

# CERTIFICATE OF TITLE

REGISTER BOOK

FULLY CANCELLED

VOL. 5601 FOLIO 206

VOL: 5601 FOLIO:206

15601206

MOBIL OIL AUSTRALIA LIMITED

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane

Containing 746 square metres

more or less, as shown on the Plan hereon, and therein edged red, Being Lot 2 on registered Plan No. 124645

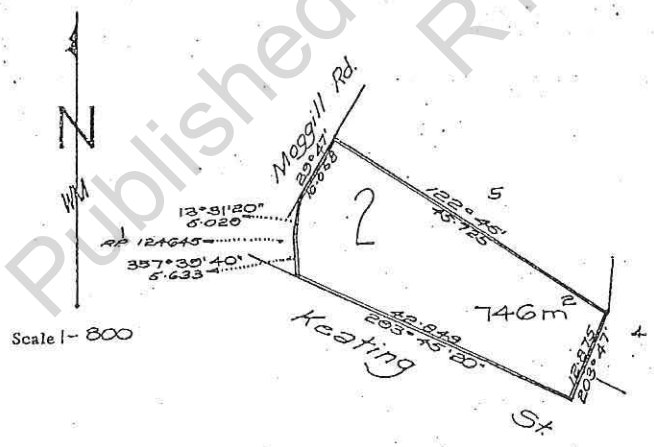
SAVING ALWAYS to the Crown all the rights and interests reserved to it by original Deed of Grant No . 4105 for portion 47

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 12th day of January One thousand nine hundred and seventy seven

Signed, Sealed, and Delivered )
in presence of )
)
)

REGISTRAR OF TITLES.

BEGISTRAR OF TITLES QUEENSLAND




BILL OF MORTGAGE to Esanda Limited

No F287113 PRODUCED 15 Dec 1976.

at 2.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No F287114 PRODUCED 15 Dec 1976

at 2.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

Denmac Nominees Pty. Ltd.

is now seised of an Estate in fee-simple in the within land

TRANSFER No F287112 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 12 JAN 1977

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No F287115 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

Published on DES Disclosure Log RTI Act 2009



Releas
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Pcl F353447 (Lot 1) on P154325 (Lot 1) & F353448 (Lot 2) on P154325 (Lot 2)

BY PLAN No. 154325
into Lot 1

No. F353447 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.

12 JUL 1977

Reference to New Titles
Vol: 5667
Fol: 40

REGISTRAR OF TITLES

FULLY CANCELLED

Published on DES Disclosure Log
RTI Act 2009

# Certificate of Title.

VOL: S 1633 FOL: 125

11633125

FULLY CANCELLED

QUEENSLAND.

(C) No. 298635

REFERENCE TO PREVIOUS

VOL. 832 FOLIO. 60

REGISTER BOOK, VOL. 1633 FOLIO. 125

a No. 305149

ROBERT MILLER DONALDSON and

FRANCES DONALDSON his wife

of pursuant to Memorandum of Conveyance No. 950948 produced the twentyeighth day of August 1925, registered the first day of September 1925, are now seized as joint tenants of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly containing thirty perches and two tenths of a perch more or less, as shown on the Plan hereon, and therein edged red, Being resubdivision 105 of subdivision B of resubdivision 1 of subdivision 8 of portion 47 on plan Cat. No. 41916 deposited in the Office of the Registrar of Titles Brisbane.

which said piece of Land is part of the portion marked 47 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted by Deed of Grant No. 4105 to Frederick Tarver Smith

Saving Always to the CROWN all the rights and interests reserved to it by the said Deed of Grant.

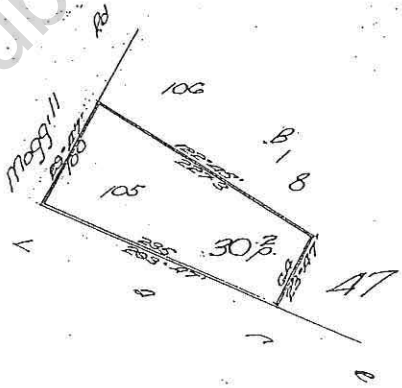
IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this second day of September One thousand nine hundred and twentyfive

Signed, Sealed, and Delivered, the second day of September 1925, in presence of John Reilly.

REGISTRAR OF TITLES, QUEENSLAND

REGISTRAR OF TITLES,

Parish of Indooroopilly




Scale, / chain/ per inch.

No 917773 BILL OF MORTGAGE produced 5 Feb 1926 at 9.46 a.m. registered Feb 1926 Robert Miller Donaldson and Frances Donaldson to

RELEASE No. endorsed on duplicate Bill of Mortgage. Produced 24.12.25 registered 30 Dec 1925

Published on DES Disclosure Log RTI Act 2009



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PURSUANT to Memo. of TRANSFER No. A14804 produced
22 Dec 1926 at 12.25 p.m. registered 30 Dec 1926
Joseph Leech and Lilian Leech
his wife
of are now SEISED of an Estate IN FEE
SIMPLE in the WHOLE of the within Land as joint
tenants

REGISTRAR OF TITLES. QUEENSLAND

Rel A14391

Rel A14799

No. A14805 Bill of Mortgage produced 22 Dec
1926 at 12.25 p.m. registered 30 Dec 1926
from Joseph Leech and Lilian Leech
Widow
to secure the payment of the sums and interest therein referred to.

RELEASE No. A14806
endorsed on duplicate
Bill of Mortgage
No. A14805
produced 7 Feb 1931 at 11.40 a.m., registered 11 Feb 1931

REGISTRAR OF TITLES. QUEENSLAND

Conv A14799

No. A14806 Bill of Mortgage produced 22 Dec
1926 at 12.25 p.m. registered 30 Dec 1926
from Joseph Leech and Lilian Leech
Robert Miller Donaldson and
Frances Donaldson his wife
to secure the payment of the sums and interest therein referred to.

RELEASE No. A14805
endorsed on duplicate
Bill of Mortgage
No. A14806
produced 7 Feb 1931 at 11.40 a.m., registered 11 Feb 1931

REGISTRAR OF TITLES. QUEENSLAND

Cor B5[illegible]

PURSUANT to Memo. of TRANSFER No. A141293 produced
7 Feb 1931 at 11.40 a.m. registered 11 Feb 1931
Margaret Frances Underhill
wife of Walter Robert Underhill
of Brisbane is now SEISED of an Estate IN FEE
SIMPLE in the WHOLE of the within Land.

REGISTRAR OF TITLES. QUEENSLAND

REGISTRAR OF TITLES

PURSUANT to Memo. of TRANSFER No. B584835 produced
19 Aug 1952 at 12.35 p.m., registered 25 Feb 1958
Vacuum Oil Company
Proprietary Limited
is now SEISED of an Estate IN FEE
SIMPLE in the WHOLE of the within Land.

REGISTRAR OF TITLES. QUEENSLAND

Change of Name
D65261
Notice of Intention to Change Name (B.C.C.) under No. 55A published 9-12-64 & 16-12-64

No. B924034
evidence produced 5 June 62 3.50 p.
registered 12 July 62, the name of the
registered proprietor is changed and
shall henceforth be read and taken as Mobil Oil
Australia Proprietary Limited

REGISTRAR OF TITLES. QUEENSLAND

Re-name of the registered proprietor changed to Mobil Oil Australia Limited
by documentary evidence. Produced 21 Nov 1963
at 3.45 p.m. Registered 20 Dec 1964 No. D65061

REGISTRAR OF TITLES. QUEENSLAND

No. D917322 By Plan Cat. No. 124645
the within land is subdivided into Lots 1 and 2
Produced 17 Aug 1970 at 11.37 A.m.
Registered 19 Apr 1971

REGISTRAR OF TITLES. QUEENSLAND

By Proclamation dated the 20 April 1970, under the provisions of "~~The Public Works Land Resumption Acts, 1906 to 19~~, and the "Acquisition of Land Act 1967 to 1969"
Lot 1 on R.P. 124645 of the within land
is resumed and is vested in Brisbane City Council
for road purposes. Produced 17 Aug 1970
at 11.37 A.m. Registered 19 Apr 1971
No. D917323
References to New Titles
Vol: 4583
Fol: 46

REGISTRAR OF TITLES. QUEENSLAND

REQUEST to Issue Certificate of Title for Lot 2 on R.P. 124645
No. E287111 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD 30 DEC 1976
Vol. 5601
Fol. 206

REGISTRAR OF TITLES. QUEENSLAND

FULLY CANCELLED

(renamed File B for Disclosure Log)



Release
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RTI Act 2009

No. 10035 (C)

QUEENSLAND.

No. 133320

No. or Previous Certificate of Title 38043. 38045. 45769. 80582. Register Book, Vol. 832 Folio 60

VOL: S 832 FOL: 60

10832060

# CERTIFICATE OF TITLE.

Harry Clifford Love

of

pursuant to Memorandum of Request No. 254483 received the sixteenth day of March A.D. 1892, is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests, as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly — Being subdivision B of resubdivision 1 of subdivisions 1 to 8 of portion 47 of subdivision 1 of portion 48 and of resubdivision 1 of subdivision B of portion 46. containing by admeasurement twenty four acres one rood eleven perches and two tenths of a perch more or less, commencing at a point bearing 67° 40' and distant one chain eight and one tenth links from the north east corner of subdivision A and bounded thence on the north west by a road bearing 67° 40' twenty five links and nine tenths of a link 29° 58' eight chains ninety one links 28° 49' five chains eighty five links 29° 0' two chains seventy five links on the north east by a road bearing 146° 14' two chains ninety four links and eight tenths of a link on the south east and east by lines bearing 223° 21' one chain eighty six links and seven tenths of a link 214° 29' one chain eighty three links and five tenths of a link 209° 36' two chains three links and five tenths of a link 207° 16' two chains twelve links and five tenths of a link 199° 19' one chain ninety four links 192° 37' two chains one link 184° 14' three chains thirty three links 171° 12' three chains eighty two links 172° 53' four chains three links and three tenths of a link 170° 36' two chains ninety three links and four tenths of a link 165° 56' two chains seventy nine links 168° 58' eight chains eighteen links and three tenths of a link on the south east by a road bearing 268° 18' two chains two links on the south west by a road bearing 348° 18' one chain four teen links on the south by a line bearing 270° in chains eighty six links and one tenth of a link and on the west by a road bearing 360° twelve chains twenty one links to the point of commencement

which said piece of Land is part of the portions marked 47, 48, 46 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted the portions 47 the twenty eighth day of July 1862 48 the twenty first day of January 1861 and 46 the twenty second day of August 1860 by three Deeds of Grant No. 5 4105, 191, 322 under the Seal of the Colony of Queensland and the Hand of Sir George Ferguson Bowen K.C.M.G. then Governor of the said Colony, to Frederick Jarvis Smith, 48 Ellen Anderson 46 & James Henderson 47

Saving Always to the Crown all the rights and interests reserved to it by the said Deed of Grant.

In Witness whereof, I have hereunto signed my name and affixed my seal this Seventh day of April One thousand eight hundred and ninety two

Signed, Sealed, and Delivered, the 7 day of April 1892, in presence of

R. Mills

J. O. Browne

Registrar of Titles.

(Land C.)

No. 18450 Bill of Mortgage produced 18 July 1888 at 11.20 a.m. registered 25 July 1888 from Harry Clifford Love to Louis Stanwix

Principal sum secured Five thousand

31 December 1894

Interest per annum

over

REGISTRAR OF QUEENSLAND

Published on DNRM Disclosure Log under RTI Act 2009



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PARISH OF INDOOROOPILLY.
Scale 4 Chains per Inch.
TITLE No. 991
GRANT to Memo. of TRANSFER No. 319452 Produced
May 1898 at 3.50 pm Regd 31 Oct 1898
Louis Stamm
Brisbane is now SEISED of an Estate IN FEE
E In the WHOLE of the within land.
Dep. Registrar of Titles
No. 752787 TRANSFER of 1rd 37 poles res. 72
to Philip Henry Barringer
8 Nov 1919 at 10.22 am registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 39
No. 752786 TRANSFER of 32 poles res. 29
to Ernest Victor Hambleton
8 Nov 1919 at 10.23 am registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 41
No. 753676 TRANSFER of 32 poles res. 48
to Charles Moreton Woods.
18 Nov 1919 at 12.12 pm registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 63
No. 755991 TRANSFER of 32 poles
to War Service Homes Commission
15 Dec 1919 at 3.39 pm registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 40
No. 760792 TRANSFER of 32 poles
to War Service Homes Commission
9 Jan 1920 at 12.15 pm registered
Cancelled as above vide
Vol. 1446 Fol. 155
No. 765690 TRANSFER of 32½ poles
to David Moffat
25 Mar 1920 at 10.31 am registered 31 May
Cancelled as above vide
Vol. 1452 Fol. 157, 159
No. 790998 TRANSFER of
to Michael Patrick Brocklebank
5 Nov 1920 at 11.32 am registered
Cancelled as above vide
Vol. 1472 Fol. 190
No. 784011 TRANSFER of 32 poles
to Arthur Edward Johnson
Sept 1920 at 11.3 am registered 18
Cancelled as above vide
Vol. 1482 Fol. 146
7054 RECORD OF MARRIAGE of Mary Louisa
to John Brennan
2 Mar 1908 as appears by Certificate of
and declaration of identity. Produced
11.20 am. Registered 29 Sept 1908
Dep. Registrar of Titles
TRANSFER of 2 poles
to Arthur Porter produced
1914 at 3.6 p.m. registered 18 Aug 1914
above vide Vol. 1287
Fol. 30
Dep. Registrar of Titles.
TRANSFER of 2 poles
to Clancy produced
at 11.15 am registered 16 Mar 1911
Vol. 1296
Fol. 63
Dep. Registrar of Titles
of 2 poles
as trustee.
Dep. Registrar of Titles.
Dep. Registrar of Titles
Dep. Registrar of Titles
Dep. Registrar of Titles

Annexed to Certificate of Title No 133370 Vol 832 Fol 60 this 3 day of Jan 1922 for the purpose of recording memorials

D Bayne
Dep Registrar of Titles

No. 823277 Transfer of 1rd 24 4/10 pchs results 54-55
to Walter Thompson
1 Dec 21 at 3.45 pm registered 3 Jan 1922
Cancelled as above vide Vol. 1507 Fol. 181
D. Bayne
Dep. Registrar of Titles

No. 828515 TRANSFER of 1rd 19 3/10 pchs results 6869 and 43
to Herbert Warren Hoey
1 Feb 22 at 3.24 pm registered 2 Mar 1922
Cancelled as above vide Vol. 1573 Fol. 221
Alex Brown
Dep. Registrar of Titles

No. 851602 TRANSFER of 1rd 22 1/10 pchs results 20-21
to Violet Teresa Ward
30 Oct 1922 at 11.11 am registered 1 Dec 1922
Cancelled as above vide Vol. 1536 Fol. 173
D. Bayne
Dep. Registrar of Titles

No. 876467 TRANSFER of 1rd 4 3/10 pchs results 62 and 63
to Ruby Emily Rookwood
20 July 1923 at 10.30 am registered 2 Aug 1923
Cancelled as above vide Vol. 1561 Fol. 37
D. Bayne
Dep. Registrar of Titles

No. 879601 TRANSFER of 32 1/2 pchs, res 80 & 81
to Jannie Taylor
25 Aug 1923 at 2.21 pm registered 3 Sept 1923
Cancelled as above vide Vol. 1563 Fol. 164
D. Bayne
Dep. Registrar of Titles

No. 8782 1/2 TRANSFER of 1rd 6 3/10 pchs, res 60 & 61
to James Celtic Arkell
6 Aug 1923 at 2.45 pm registered 1 Oct 1923
Cancelled as above vide Vol. 1566 Fol. 59
D. Bayne
Dep. Registrar of Titles

No. 883540 TRANSFER of 1rd 33 3/10 pchs res 64 & 66
to Harry Reginald Dorsett Fuller
29 Sept 1923 at 10.20 am registered 1 Oct 1923
Cancelled as above vide Vol. 1566 Fol. 13
W. Manning
Dep. Registrar of Titles

No. 884840 TRANSFER of 32 1/2 pchs Res 14 & 21
to Thomas Bland
13 Oct 1923 at 11.25 am registered 1 Nov 1923
Cancelled as above vide Vol. 1570 Fol. 1
REGISTRAR OF TITLES. QUEENSLAND
REGISTRAR OF TITLES.

No. 885261 TRANSFER of 32 1/2 pchs Res 8 & 9
to Adelaide Frank Sadenwater
17 Oct 1923 at 10.00 am registered 3 Nov 1923
Cancelled as above vide Vol. 1570 Fol. 147
REGISTRAR OF TITLES.

No. 911512 TRANSFER of 32 1/2 pchs res 71 & 79
to Otto John Mullen
19 Aug 1924 at 11.0 pm registered 27 Sep 11
Cancelled as above vide Vol. 1600 Fol. 187
REGISTRAR OF TITLES.

No. 942128 TRANSFER of 32 1/2 pchs Res 76 & 77
to William Rodney Draney
10 June 1925 at 10.30 am registered 1 June 1925
Cancelled as above vide Vol. 1627 Fol. 221
REGISTRAR OF TITLES.

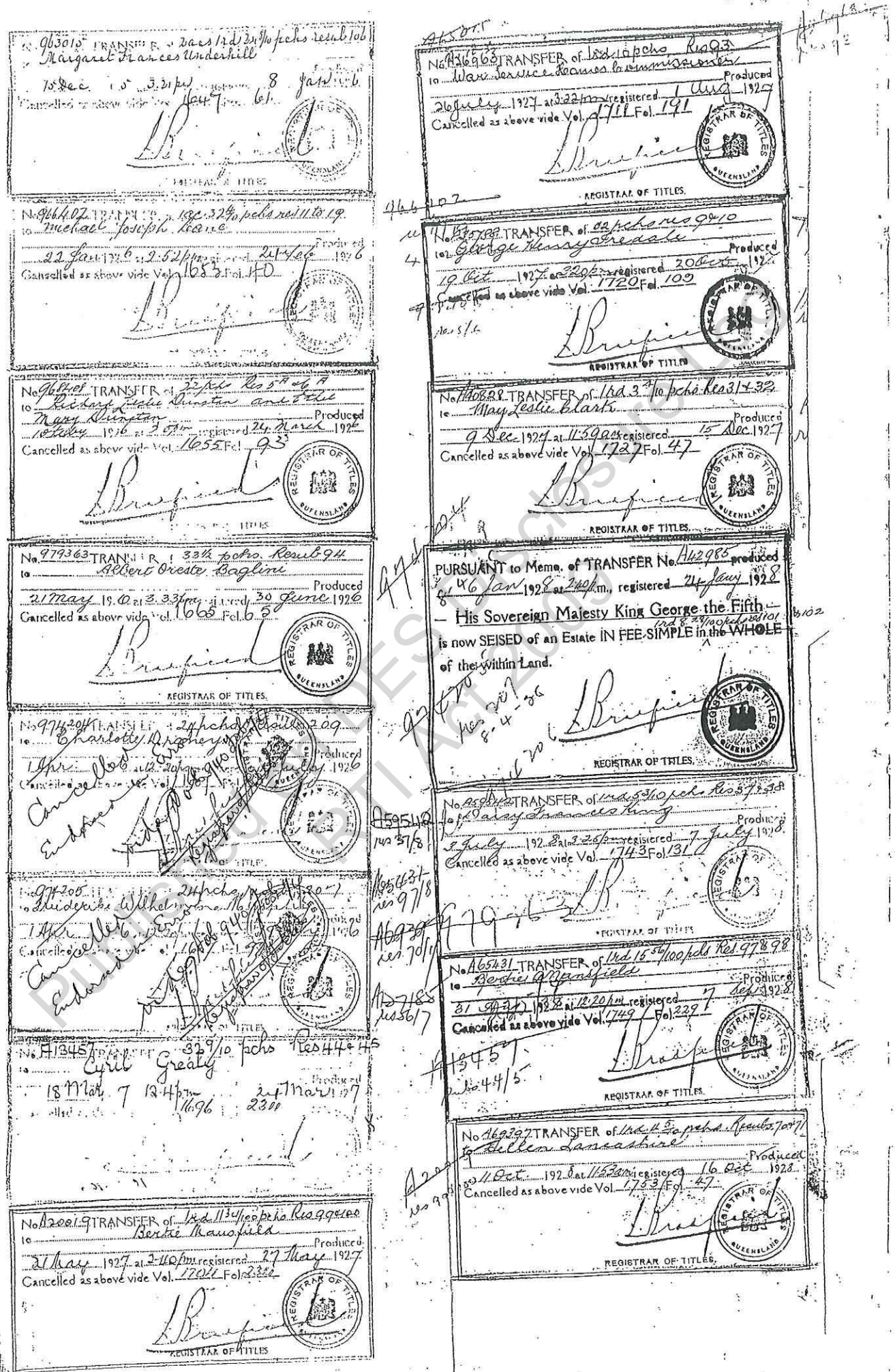
No. 950947 TRANSFER of 1rd 22 1/10 pchs res 95 & 96
to Henry Ernest Probert
25 Aug 1925 2.30 pm registered 1 Sept 1925
Cancelled as above vide Vol. 1634 Fol. 57
REGISTRAR OF TITLES.

No. 950948 TRANSFER of 32 1/2 pchs results 105
to Robert Keller Donaldson and Frances Donaldson
28 Aug 1925 2.30 pm registered 1 Sept 1925
Cancelled as above vide Vol. 1633 Fol. 125
REGISTRAR OF TITLES.

No. 951990. Part of the within land is now dedicated for road purposes vide Plan Cat No. 21916. Produced 8 Sept 1925 at 12.16 p.m. Registered 8 Oct 1925
Registrar of Titles

No. 952227 TRANSFER of 32 1/2 pchs res 82 & 83
to Roland Colquhoun Purdon
10 Sept 1925 at 2.37 registered 5 Oct 1925
Cancelled as above vide Vol. 1638 Fol. 233
REGISTRAR OF TITLES.

BUSINESS DES DISCLOSURE LOG 2008



No. 963015 TRANSFER of 2 acres 1 rd 32 9/10 perches resub 106
to Margaret Frances Underhill
15 Dec 1926 at 3.31 pm registered 8 Jan 1927
Cancelled as above vide Vol. 1644 Fol. 61
REGISTRAR OF TITLES

No. 966407 TRANSFER of 19c. 32 9/10 perches resub 11 to 19
to Michael Joseph Leane
Produced 22 Jan 1926 at 2.52 pm registered 21 Feb 1926
Cancelled as above vide Vol. 1653 Fol. 40
REGISTRAR OF TITLES

No. 967161 TRANSFER of 22 perches Res 5A 3R 6P
to Richard Leslie Dunstan and Ethel Mary Dunstan
Produced 18 March 1926 at 2.07 pm registered 24 March 1926
Cancelled as above vide Vol. 1655 Fol. 93
REGISTRAR OF TITLES

No. 979363 TRANSFER of 33 1/4 perches Resub 94
to Albert Oreste Baglini
Produced 21 May 1926 at 3.33 pm registered 30 June 1926
Cancelled as above vide Vol. 1665 Fol. 65
REGISTRAR OF TITLES.

No. 974204 TRANSFER of 24 perches Resub 209
to Charlotte Agnes Mahoney
Produced 1 Apr 1926 at 12.20 pm registered 7 July 1926
Cancelled as above vide Vol. 1667 Fol. 9
Entered [illegible]
REGISTRAR OF TITLES

No. 974205 TRANSFER of 24 perches Resub 210
to Friederike Wilhelmine Mahoney
Produced 1 Apr 1926 at 12.20 pm registered 7 July 1926
Cancelled as above vide Vol. 1667 Fol. 10
Entered [illegible]
REGISTRAR OF TITLES

No. A13457 TRANSFER of 32 9/10 perches Res 44 & 45
to Cyril Greaty
18 Mar 1926 at 12.44 pm registered 24 March 1927
Cancelled as above vide Vol. 2300
REGISTRAR OF TITLES

No. A20019 TRANSFER of 1 rd 11 3/4 100 perches Ruggeree
to Bertie Mansfield
Produced 21 May 1927 at 2.40 pm registered 27 May 1927
Cancelled as above vide Vol. 1701 Fol. 230
REGISTRAR OF TITLES

No. A16963 TRANSFER of 1 rd 10 perches Res 93
to Mary Jessie Reames Commissioner
Produced 26 July 1927 at 3.22 pm registered 1 Aug 1927
Cancelled as above vide Vol. 1711 Fol. 191
REGISTRAR OF TITLES.

No. A15788 TRANSFER of 02 perches res 9 & 10
to George Henry Greaves
Produced 19 Oct 1927 at 3.20 pm registered 20 Oct 1927
Cancelled as above vide Vol. 1720 Fol. 109
REGISTRAR OF TITLES

No. A16888 TRANSFER of 1 rd 3 perches Res 31 & 32
to Mary Leslie Clark
Produced 9 Dec 1927 at 11.39 am registered 15 Dec 1927
Cancelled as above vide Vol. 1727 Fol. 47
REGISTRAR OF TITLES.

PURSUANT to Memo. of TRANSFER No. A42985 produced
16 Jan 1928 at 2.40 p.m., registered 24 Jany 1928
— His Sovereign Majesty King George the Fifth —
is now SEISED of an Estate IN FEE-SIMPLE in the WHOLE
of the within Land.
1 rd 8 3/4 100 perches res 101
REGISTRAR OF TITLES.

No. A5951 TRANSFER of 1 rd 37 8/10 perches Res 37 & 38
to Daisy Frances King
Produced 9 July 1928 at 2.20 pm registered 7 July 1928
Cancelled as above vide Vol. 1743 Fol. 131
REGISTRAR OF TITLES

No. A65431 TRANSFER of 1 rd 15 5/100 perches Res 97 & 98
to Bertie Mansfield
Produced 31 Aug 1928 at 12.20 pm registered 7 Sept 1928
Cancelled as above vide Vol. 1749 Fol. 228
REGISTRAR OF TITLES.

No. A69397 TRANSFER of 1 rd 4 5/10 perches Resubs 70 & 71
to Helen Lancaster
Produced 11 Oct 1928 at 11.53 am registered 16 Oct 1928
Cancelled as above vide Vol. 1753 Fol. 47
REGISTRAR OF TITLES.

PUBLIC RECORDS ACT 2009

Annexed to C/T No 133320 Vol 832 Folio 60 this 12 day of July 1930 for the purpose of recording memorials

L. Bradfield
Registrar of Titles

No A127185 TRANSFER of 1rd 69/10 pchs Res 56 and
to 57 -to- Andrew Love Hair and
Catherine O'Brien
11 July 1930 at noon registered 12 July 1930
Cancelled as above vide Vol. 1811 Fol. 80

L. Bradfield
REGISTRAR OF TITLES

No A188186 TRANSFER of 3acs 21 3/10 pchs. Resub 92A
to Louis Joseph Keating and Margaret Frances
Underhill
15 Dec 1932 at 12.35 pm registered 1 Feb 1933
Cancelled as above vide Vol 1878 Fol 188/189

L. Bradfield
REGISTRAR OF TITLES.

No A143305 TRANSFER of 1rd 8 7/10 pchs Res 39 and 40
to Onakotai Rex Gargett and Thelma
Gargett
11 Mar 1931 at 10.50 am registered 12 Mar 1931
Cancelled as above vide Vol 1825 Fol 181

L. Bradfield
REGISTRAR OF TITLES

No A216344 TRANSFER of 1rd 2 2/10 pchs Resubs 33-34
to Allan Joseph George Brown and
Edna Beryl Jamieson
31 Jan 1934 at 9.40 am registered 8 Feb 1934
Cancelled as above vide Vol 1978 Fol 199

L. Bradfield
REGISTRAR OF TITLES.

No A179318 TRANSFER of 1rd 7 pchs. Res 27 28
to Marcus Bertram Hohne
25 Aug 1932 at 2.34 pm registered 31 Aug 1932
Cancelled as above vide Vol 1854 Fol 230

L. Bradfield
REGISTRAR OF TITLES.

No A194490 TRANSFER of 1rd 4 pchs Res 29 & 30
to William Holland Andrews
2nd Aug 1936 at 1.13 pm registered 11 Sept 1936
Cancelled as above vide Vol 1964 Fol 192

L. Bradfield
REGISTRAR OF TITLES.

No A182525 TRANSFER of 1rd 5 7/10 pchs. Res 58 59
to Florence Marion Eden
30 Sep 1932 at 2.40 pm registered 14 Oct 1932
Cancelled as above vide Vol 1866 Fol 203

L. Bradfield
REGISTRAR OF TITLES.

No A232842 TRANSFER of 1rd 2 3/10 pch Res 35 & 36
to Frank Nelson Cassone and Kathleen
Michelmore nee Downie
7 July 1937 at 2.35 pm registered 27 July 1937
Cancelled as above vide Vol 2001 Fol 390

L. Bradfield
REGISTRAR OF TITLES.

No A182526 TRANSFER of 3/4 pchs Res 46 47
to Charles Ross Eden
30 Sep 1932 at 2.43 pm registered 14 Oct 1932
Cancelled as above vide Vol 1866 Fol 204 209

L. Bradfield
REGISTRAR OF TITLES.

No A463723 TRANSFER of 1rd 12 3/10 pchs
Resubs 103 and 104
to Louis Keating
19 Nov 1940 at 3.6 pm registered 22 Nov 1940
Cancelled as above vide Vol 2130 Fol 225

John R. Westrie
REGISTRAR OF TITLES

No A182527 TRANSFER of 1rd 10 4/10 pchs Resubs 41 and 42
to Una Doris Eden
30 Sep 1932 at 2.43 pm registered 14 Oct 1932
Cancelled as above vide Vol 1871 Fol 171

L. Bradfield
REGISTRAR OF TITLES.

No A949049 TRANSFER of 3rd 3/10 pchs Resubs 7 & 8
to Louis Keating and Margaret Frances
Underhill
14 July 1950 at 12.35 p.m., registered 15 Dec 1950
Cancelled as above vide Vol 2573 Fol 105 & 106

REGISTRAR OF TITLES

13.1.33

60

A 304490

A 377730

PUBLISHED UNDER RTI Act 2009 Disclosure Log

Published on DES Disclosure Log
RTI Act 2009

# APPENDIX B

## BORE REPORTS WITH EXPLANATORY NOTES

(renamed File B for Disclosure Log)

# BORE REPORT

BUTLER PARTNERS

## BORE 1

***Client:*** Property Solutions Group Australia Pty Ltd

***Project:*** Commercial Development

***Location:*** Cnr Keating Street and Moggill Road, Indooroopilly

***Project No:*** 06253

***Page No:*** 1 of 1

***Date:*** 6 December 2006

***Ground Surface Level:*** RL 28.9m*

| Depth (m) | Description | RL (m) | Lithology | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | **CONCRETE** - 140mm thick pavement | 28.9 | | | | E | 0.14 | | | | B1-1 | |
| | **FILL** - fine to coarse grained sand | | | | | E | 0.22 | | | | B1-2 | |
| 1 | - grey, clayey weathered phyllite | 28.0 | | | | S/E | 0.5 | | | | B1-3 | 4,4,4 N=8 |
| | **PHYLLITE (XW)** - extremely low to very low strength, grey and brown | | | | | E | 0.95 | | | | B1-4 | |
| 2 | | 27.0 | | 2.09-7.52m, smooth and planar/undulating foliation generally dipping 0-15 degrees | | E | 1.5 | | | | B1-5 | |
| | **PHYLLITE (MW)** - medium strength, grey and white with brown | | | | | S | 2.0 | | | | | 30 for 90mm |
| 3 | - high strength with zones of medium strength | 26.0 | | 2.75m, J, 5, vi, clay and fractured phyllite, 7mm | 2 | C | 2.09 | | | | | |
| | | | | | | | 2.5 | 0.6 | | | | |
| 4 | | 25.0 | | 3.68m, J, 5-40, iii, clay, iron and fractured phyllite, 15mm | | | 3.1 | 1.6 | 100 | | | |
| | - very high strength (quartz band) | | | 4.11 & 4.13m, J, 5-10, ix, clay, 1mm 4.15 & 4.17m, J, 10-15, iii, clean | | | 4.0 | 1.5 | | | | |
| | - high to very high strength | 24.0 | | | | | 4.01 | | | | | |
| 5 | | | | | | | 4.6 | 2.6 | | | | |
| | | | | | 3 | C | | | 100 | | | |
| 6 | | 23.0 | | 5.84m, J, 5, ix, iron and fractured phyllite, 2mm | | | 5.6 | 4.5 | | | | |
| | | | | | | | 6.4 | 2.9 | | | | |
| 7 | | 22.0 | | | 10 | C | 6.53 | | | | | |
| | | | | | | | 7.0 | 3.2 | 100 | | | |
| | End of Bore at 7.52 m | | | | | | 7.52 | | | | | |
| 8 | | 21.0 | | | | | | | | | | |
| 9 | | 20.0 | | | | | | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | HB | SPT Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L

**Drilling Method:** Auger to 2.0m, then NMLC core

**Groundwater:** No free groundwater encountered during auger drilling

**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 1

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL 28.9m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|
| 0 | | 28.9 | | | | |
| | **CONCRETE**<br>- 140mm thick pavement | | E | 0.14<br>0.22 | B1-1 | |
| | **FILL**<br>- fine to coarse grained sand<br>- grey, clayey weathered phyllite | | E | | B1-2 | |
| | | | | 0.5 | | |
| | | | S/E | | B1-3 | 4,4,4<br>N=8 |
| | | 28.0 | | 0.95 | | |
| 1 | **PHYLLITE (XW)**<br>- extremely low to very low strength, grey and brown | | E | | B1-4 | |
| | | | | 1.5 | | |
| | | | E | | B1-5 | |
| | | 27.0 | | | | |
| 2 | **PHYLLITE (MW)**<br>- medium strength, grey and white with brown | | S | 2.0<br>2.09 | | 30 for 90mm |
| | | 26.0 | | | | |
| 3 | End of Bore at 3 m | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L
**Drilling Method:** Auger to 2.0m, then NMLC core
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

## BORE 2

***Client:*** Property Solutions Group Australia Pty Ltd

***Project:*** Commercial Development

***Location:*** Cnr Keating Street and Moggill Road, Indooroopilly

***Project No:*** 06253

***Page No:*** 1 of 1

***Date:*** 6 December 2006

***Ground Surface Level:*** RL 29.1m*

| Depth (m) | Description | RL (m) | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | **CONCRETE** - 100mm thick pavement | 29.1 | | | E | 0.1 | | | | B2-1 | 11,30 for 105mm (HB) |
| | **FILL** - grey, gravelly clay, moist | | | | S/E | 0.5 0.755 | | | | B2-2 | |
| 1 | **PHYLLITE (XW)** - very low to medium strength, light grey and brown | 28.0 | | | E | 0.8 1.0 | | | | B2-3 (dup4) | |
| | **PHYLLITE (MW/SW)** - medium strength with zones of high strength | | 1.35-8.28m, smooth and planar foliation plane, dipping 0-15 degrees | | | 1.35 | | | | | |
| 2 | | 27.0 | 1.78m, C, 5, vii, clay and crushed rock, 3mm<br>1.99m, C, 15, vi, clay and crushed phyllite, 6mm<br>2.38m, J, 10, vi, clay, 40mm | 5 | C | 1.5<br>2.1<br>2.52 | 3.0<br>0.5 | 95 | | | |
| 3 | | 26.0 | 2.94-3.15m, clay lined joints, following foliation, 2mm<br>3.20-3.54m, fractured zone, 0-55, vi, iron and clay, 2-10mm<br>3.68m, C, 15, iii, iron, clay and fragmented phyllite, 12mm | 7 | C | 2.85<br>3.8<br>4.17 | 2.0<br>0.9 | 100 | | | |
| 4 | - high strength with zones of medium strength | 25.0 | | | | | | | | | |
| 5 | | 24.0 | | 6 | C | 4.45<br>5.1 | 1.6<br>1.5 | 100 | | | |
| | - medium strength | | 5.48-5.7m, clay lined joints on foliation, dipping 10 degrees<br>5.7m, J, 50, ix, clay, 1mm | | | 5.73 | | | | | |
| 6 | - medium strength with high strength bands | 23.0 | 5.73-8.28m, fractures generally along foliation plane, iv, clean | | | 5.95 | 0.4 | | | | |
| 7 | | 22.0 | | 8 | C | 6.55<br>7.25 | 1.8<br>1.1 | 100 | | | |
| 8 | **PHYLLITE (DW)** - low to medium strength, dark grey and brown | 21.0 | 8.07-8.28m, fractured with 2-4mm clay seams | | | 8.05<br>8.28 | 0.4 | | | | |
| | End of Bore at 8.28 m | | | | | | | | | | |
| 9 | | 20.0 | | | | | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | HB | SPT Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L

**Drilling Method:** Auger to 1.35m, then NMLC core

**Groundwater:** No free groundwater encountered during auger drilling

**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

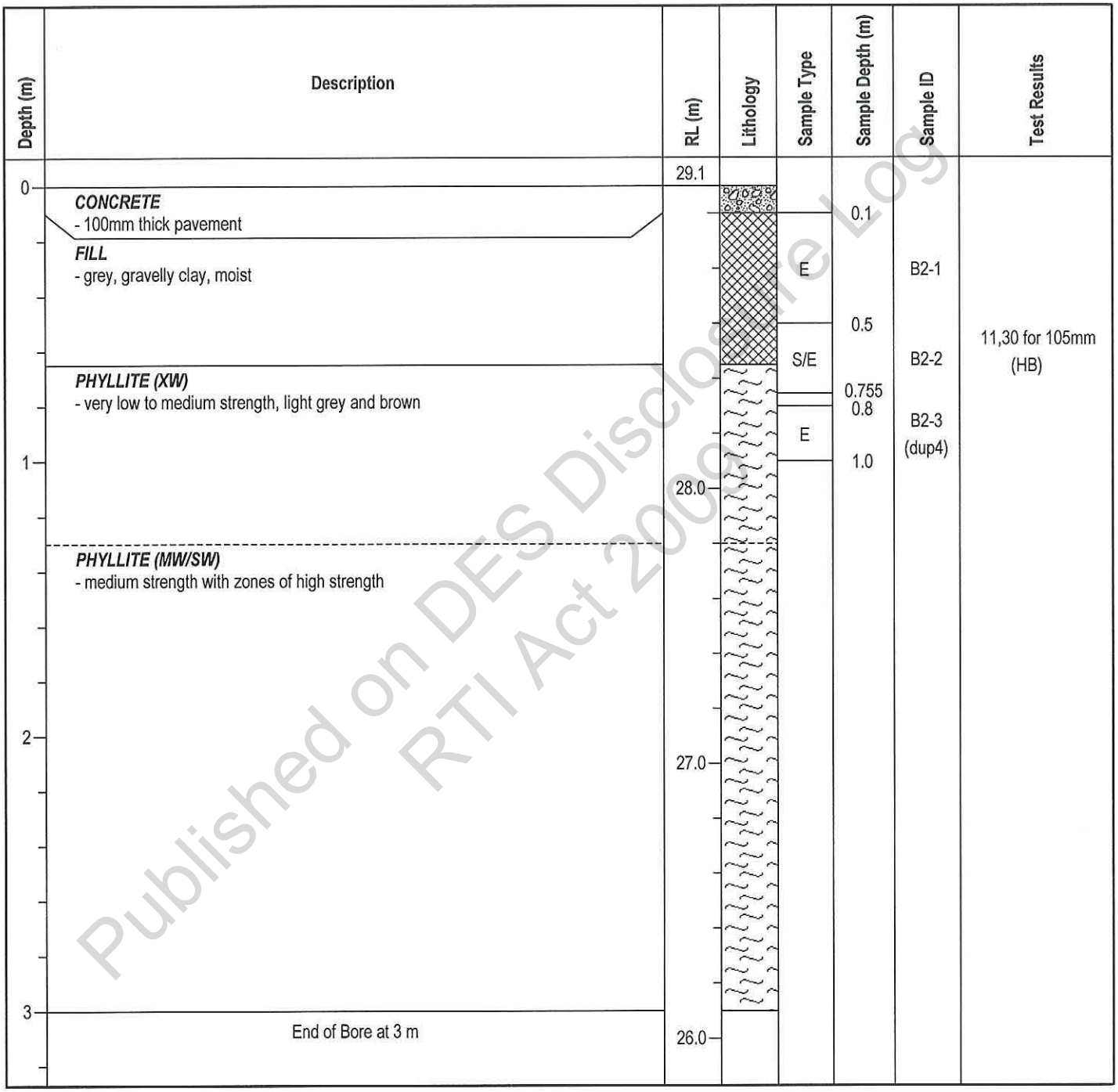
# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 2

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL 29.1m*




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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L
**Drilling Method:** Auger to 1.35m, then NMLC core
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd

**Project:** Commercial Development

**Location:** Cnr Keating Street and Moggill Road, Indooroopilly

**Project No:** 06253

## BORE 3

**Page No:** 1 of 1

**Date:** 7 December 2006

**Ground Surface Level:** RL 26.4m*

| Depth (m) | Description | RL (m) | Lithology | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | **FILL**<br>- brown, clayey silt, with organics | 26.4 | | | | | | | | | | |
| | - brown-grey, clayey gravel, fine to coarse grained | | | | | S | 0.5<br>0.65 | | | | | 30 for 150mm |
| 1 | **PHYLLITE (XW)**<br>- very low strength, grey and brown | | | 0.9-7.35m, smooth and planar foliation generally dipping 5-55 degrees | | | 0.9<br>0.95 | 1.8 | | | | |
| | **PHYLLITE (MW)**<br>- low to high strength, grey and brown | 25.0 | | 1.18m, J, 10, iv, iron, clay and fragmented rock, 10mm | | | 1.3 | 0.5 | | | | |
| 2 | - medium strength | | | | | | 1.9 | 0.9 | | | | |
| | | | | 2.19m, J, 10, ix, clay, 5mm | 4 | C | | | 100 | | | |
| | | 24.0 | | | | | 2.8 | 0.7 | | | | |
| 3 | | | | 3.03-3.13m, foliation tightly folded, highly fractured, v, clay and iron lined fractures, 0.2mm | | | | | | | | |
| | | 23.0 | | 3.45-3.68m, foliation dips to 45 degrees | | | 3.33 | | | | | |
| 4 | | | | 4.0m, quartz band, 70mm | | | 3.95 | 0.4 | | | | |
| | | 22.0 | | 4.47m, C, 15, vi, clay and crushed phyllite, 12mm | 4 | C | 4.45 | 0.7 | 100 | | | |
| | | | | 4.8m, quartz band, 70mm | | | | | | | | |
| 5 | | | | 5.07-5.11m, fractured zone of clay lined joints, <1mm | | | | | | | | |
| | | 21.0 | | | | | 5.45 | 0.5 | | | | |
| 6 | - very low to low strength | | | 5.88m, C, 20, i, iron and clay, 50mm<br>6.05-6.3m, crushed zone | | | 5.93 | | | | | |
| | | 20.0 | | | | | 6.3 | 0.2 | | | | |
| | - medium to high strength | | | | 3 | C | | | 100 | | | |
| 7 | | | | 7.1m, B, clay, 70mm | | | 6.9 | 1.1 | | | | |
| | - very low strength | 19.0 | | | | | 7.35 | | | | | |
| | End of Bore at 7.35 m | | | | | | | | | | | |
| 8 | | 18.0 | | | | | | | | | | |
| 9 | | 17.0 | | | | | | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | HB | SPT Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L

**Drilling Method:** Auger to 0.9m, then NMLC core

**Groundwater:** No free groundwater encountered during auger drilling

**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 3

**Page No:** 1 of 1
**Date:** 7 December 2006
**Ground Surface Level:** RL 26.4m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 26.4 | | | | | |
| | ***FILL*** - brown, clayey silt, with organics - brown-grey, clayey gravel, fine to coarse grained | 26.0 | | | 0.5 | | |
| | ***PHYLLITE (XW)*** - very low strength, grey and brown | | | S | 0.65 | | 30 for 150mm |
| 1 | ***PHYLLITE (MW)*** - low to high strength, grey and brown - medium strength | 25.0 | | | | | |
| 2 | | 24.0 | | | | | |
| 3 | End of Bore at 3 m | | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L
**Drilling Method:** Auger to 0.9m, then NMLC core
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 4

**Page No:** 1 of 1
**Date:** 8 December 2006
**Ground Surface Level:** RL 31.0m*

| Depth (m) | Description | RL (m) | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | **CONCRETE** - 110mm thick pavement | 31.0 | | | E/D | 0.1 | | | | B4-1 | |
| | | | | | E/D | 0.2 | | | | B4-2 | |
| | **FILL** - fine to coarse sand | | | | E/D/S | 0.5 | | | | B4-3 | 2,2,4 N=6 |
| 1 | - brown, clayey, weathered phyllite (possibly natural at 1.0m) | 30.0 | | | E/D | 0.95 1.0 | | | | B4-4 | |
| | **PHYLLITE (XW)** - extremely low to low strength, grey and brown | | | | | 1.3 | | | | | |
| 2 | **PHYLLITE (DW)** - low strength with bands of high strength, grey and brown | 29.0 | 1.86-9.6m, smooth and planar/undulating foliation generally dipping from 0-15 degrees | | | 1.86 1.9 | 0.2 | | | | |
| | | | 1.96m, C, ii, clay, 200mm | 12 | C | | | 95 | | | |
| | | | 2.41m, J, 5, ix, clay, 40mm | | | | | | | | |
| 3 | | 28.0 | 2.84-3.54m, highly fractured | >20 | | 2.84 | | | | | |
| | - high to very high strength | | | | | 3.6 | | | | | |
| 4 | | 27.0 | | 6 | C | 3.65 | 1.0 | 100 | | | |
| | | | 4.66m, J, 10, clay and crushed phyllite, 9mm | | | 4.55 | 3.5 | | | | |
| | - extremely low strength | | 4.8m, J, 10, XW rock, 115mm | | | | | | | | |
| 5 | - low to medium strength | 26.0 | 4.97-5.4m, joints along foliation with 1mm clay infill | >20 | | 4.97 5.4 | | | | | |
| | **PHYLLITE (SW)** - medium to high strength, grey and white | | | | | 5.45 | 0.9 | | | | |
| 6 | | 25.0 | | | | | | | | | |
| | | | | 3 | C | 6.45 | 1.6 | 100 | | | |
| 7 | | 24.0 | | | | 6.9 | 1.5 | | | | |
| | | | 7.8m, C, 60, iv, crumbled phyllite, iron and clay, 170mm | | | 7.91 | | | | | |
| 8 | - dark grey and white | 23.0 | | | | 8.05 | 1.3 | | | | |
| | | | | 3 | C | | | 100 | | | |
| 9 | | 22.0 | | | | 9.1 | | | | | |
| | - very low strength | | 9.25m, C, 5, vii, 180mm | >20 | | | | | | | |
| | - high strength | | | | | 9.6 | | | | | |
| | End of Bore at 9.6 m | | | | | | | | | | |

D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
HB SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Mobile B40L
**Drilling Method:** Auger to 1.86m, then NMLC core
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

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# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 4

**Page No:** 1 of 1
**Date:** 8 December 2006
**Ground Surface Level:** RL 31.0m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|
| 0 | | 31.0 | | | | |
| | **CONCRETE** - 110mm thick pavement | | E/D | 0.1 | B4-1 | |
| | **FILL** - fine to coarse sand | | | 0.2 | | |
| | - brown, clayey, weathered phyllite (possibly natural at 1.0m) | | E/D | | B4-2 | |
| | | | | 0.5 | | |
| | | | E/D/S | | B4-3 | 2,2,4 N=6 |
| | | | | 0.95 | | |
| 1 | | 30.0 | | 1.0 | | |
| | | | E/D | | B4-4 | |
| | **PHYLLITE (XW)** - extremely low to low strength, grey and brown | | | 1.3 | | |
| | **PHYLLITE (DW)** - low strength with bands of high strength, grey and brown | | | | | |
| 2 | | 29.0 | | | | |
| 3 | | 28.0 | | | | |
| | End of Bore at 3 m | | | | | |

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|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L
**Drilling Method:** Auger to 1.86m, then NMLC core
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-


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# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd

**Project:** Commercial Development

**Location:** Cnr Keating Street and Moggill Road, Indooroopilly

**Project No:** 06253

## BORE 5

**Page No:** 1 of 1

**Date:** 13 December 2006

**Ground Surface Level:** RL 26.0m*

| Depth (m) | Description | RL (m) | Lithology | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | **FILL**<br>- light brown, clayey weathered phyllite | 26.0 | | | | S | 0.5<br>0.58 | | | | | 30 for 80mm |
| 1 | **PHYLLITE (DW)**<br>- very low to low strength, grey and light brown<br>- low to medium strength | 25.0 | | 0.9-8.9m, smooth and planar/undulating foliation dipping 5-50 degrees<br>1.1m, B, XW rock, 20mm<br>1.25m, J, 5, vii, Cl, 12mm | | | 0.9<br>1.2 | 0.1 | | | | |
| 2 | | 24.0 | | | 10 | C | 2.1<br>2.3 | 0.3 | 100 | | | |
| 3 | | 23.0 | | 2.8m, B, XW rock, 25mm<br>2.85-3.0m, clay band | | C | 3.0<br>3.05 | 0.4 | 80 | | | |
| | - medium strength | | | | | | 3.2 | | | | | |
| 4 | - very high strength (quartz band)<br>- medium strength | 22.0 | | | 2 | C | 4.0<br>4.5 | 0.6 | 100 | | | |
| 5 | - very low strength<br>- very high strength (quartz band)<br>- low to medium strength<br>- high strength<br>- very low strength | 21.0 | | 5.45m, clayey crushed zone, 13mm<br>5.55m, clayey crushed zone, 20mm<br>5.8-6.1m, highly jointed with clay infill | | C | 5.1<br>5.15 | 1.5 | 100 | | | |
| 6 | - high strength<br>- low to medium strength | 20.0 | | 6.3m, B, 20, vii, XW rock, 30mm<br>6.45m, J, 25, vii, Cl, 60mm | 10 | C | 5.65<br>5.7 | 2.4 | 100 | | | |
| 7 | - medium strength<br>**PHYLLITE (SW)**<br>- high strength, light grey and white | 19.0 | | | | C | 6.55<br>6.65<br>7.0<br>7.55 | 0.4<br>1.7 | 100 | | | |
| 8 | - extremely low strength<br>- high strength | 18.0 | | | 8 | | 8.5 | | | | | |
| 9 | End of Bore at 8.5 m | 17.0 | | | | | | | | | | |

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|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | HB | SPT Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L

**Drilling Method:** Auger to 0.5m, wash bore to 0.7m, then NMLC core. Casing installed to 0.7m

**Groundwater:** No free groundwater encountered during auger drilling

**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-. Standpipe installed

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 5

**Page No:** 1 of 1
**Date:** 13 December 2006
**Ground Surface Level:** RL 26.0m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 26.0 | | | | | |
| | ***FILL*** - light brown, clayey weathered phyllite | | | | | | |
| | ***PHYLLITE (DW)*** - very low to low strength, grey and light brown | | | S | 0.5 - 0.58 | | 30 for 80mm |
| 1 | - low to medium strength | 25.0 | | | | | |
| 2 | | 24.0 | | | | | |
| 3 | End of Bore at 3 m | 23.0 | | | | | |

**D** Disturbed Sample
**B** Bulk Sample
**U** Undisturbed Tube (50mm diameter)
**pp** Pocket Penetrometer Test (kPa)
**E** Environmental Sample
**S** Standard Penetrometer Test (SPT)
**SPT** Hammer Bouncing
**( )** No Sample Recovery
**C** NMLC Coring
**Is(50)** Point Load Test Result (MPa)
**(d)** Diametral Point Load Strength Test
**(a)** Axial Point Load Strength Test

**Rig:** Mobile B40L
**Drilling Method:** Auger to 0.5m, wash bore to 0.7m, then NMLC core. Casing installed to 0.7m
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-. Standpipe installed

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# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 6

**Page No:** 1 of 1
**Date:** 11 December 2006
**Ground Surface Level:** RL 27.2m*

| Depth (m) | Description | RL (m) | Lithology | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | **CONCRETE** - 100mm thick | 27.2 | | | | | | | | | | |
| | **FILL** - grey-brown, clayey gravel | | | | | S/E | 0.5 | | | | B6-1 | 30 for 150mm |
| 1 | - light brown, clayey, weathered phyllite | | | 0.9-8.07m, smooth planar and undulating foliation, dipping 0-10 degrees | | | 0.65 | | | | | |
| | **PHYLLITE (DW)** - very low strength, grey and light brown | 26.0 | | 0.9-3.17m, fractured and crushed with clayey, weathered zones | | | 0.9 | | | | | |
| | - low strength with zones of medium strength, brown and grey | | | | | C | 1.1 | 0.2 | 100 | | | |
| 2 | - very low strength | 25.0 | | | 20 | C | 1.85 | | 100 | | | |
| | - medium to high strength, light grey and brown | | | | | C | 2.42 | | 95 | | | |
| 3 | - medium strength | 24.0 | | | | | 3.17 | | | | | |
| | | | | | | | 3.35 | 0.4 | | | | |
| 4 | | 23.0 | | 3.9m, J, 10, vii, Cl, 1mm | 7 | C | 4.2 | 0.8 | 100 | | | |
| | | | | 4.4m, clayey, weathered zone, 55mm | | | 4.6 | | | | | |
| | **PHLLITE (SW)** - high strength, light grey and white | | | | | | 4.9 | 1.0 | | | | |
| 5 | | 22.0 | | 5.05m, J, 5, vii, Cl, 10mm | | | | | | | | |
| | | | | | 2 | | 5.47 | | | | | |
| 6 | | | | | | | 5.5 | 1.2 | | | | |
| | | 21.0 | | 6.3m, J, 65, viii, Cl, 1mm | | | 6.15 | 2.6 | | | | |
| | - high to very high strength | | | | | | 6.5 | | | | | |
| 7 | | | | | | C | 6.85 | 2.6 | 100 | | | |
| | | 20.0 | | | 1 | | | | | | | |
| 8 | | | | | | | 8.05 | 3.1 | | | | |
| | End of Bore at 8.07 m | 19.0 | | | | | 8.07 | | | | | |
| 9 | | 18.0 | | | | | | | | | | |

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|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | HB | SPT Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L

**Drilling Method:** Auger to 0.9m, then NMLC core. Casing installed to 0.9m

**Groundwater:** No free groundwater encountered during auger drilling

**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 6

**Page No:** 1 of 1
**Date:** 11 December 2006
**Ground Surface Level:** RL 27.2m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|
| 0 | | 27.2 | | | | |
| | **CONCRETE** - 100mm thick | | | | | |
| | **FILL** - grey-brown, clayey gravel | 27.0 | | | | |
| | - light brown, clayey, weathered phyllite | | | | | |
| | **PHYLLITE (DW)** - very low strength, grey and light brown | | S/E | 0.5<br>0.65 | B6-1 | 30 for 150mm |
| 1 | - low strength with zones of medium strength, brown and grey | 26.0 | | | | |
| 2 | - very low strength | 25.0 | | | | |
| | - medium to high strength, light grey and brown | | | | | |
| 3 | End of Bore at 3 m | 24.0 | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L
**Drilling Method:** Auger to 0.9m, then NMLC core. Casing installed to 0.9m
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

## BORE 7

***Client:*** Property Solutions Group Australia Pty Ltd

***Project:*** Commercial Development

***Location:*** Cnr Keating Street and Moggill Road, Indooroopilly

***Project No:*** 06253

***Page No:*** 1 of 1

***Date:*** 12 December 2006

***Ground Surface Level:*** RL 27.2m*

| Depth (m) | Description | RL (m) | Structures | Average Number of Defects/m | Sample Type | Sample Depth (m) | Is(50) (MPa) | Core Recovery (%) | RQD (%) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | 27.2 | | | | | | | | | |
| | ***CONCRETE*** - 110mm thick | | | | | 0.5 | | | | | |
| | ***FILL*** - grey and brown, silty clay with fine gravel (weathered phyllite) | | | | S/E | 0.9 | | | | B7-1 | 4,2,3 N=5 |
| 1 | | | | | E | 1.0 | | | | B7-2 | |
| | - light brown and grey | 26.0 | | | E | 1.5 | | | | B7-3 | |
| | | | | | E | 2.0 | | | | B7-4 | |
| 2 | | 25.0 | | | S/E | 2.45 | | | | B7-5 | 3,3,3 N=6 |
| | | | | | E | 2.5 | | | | B7-6 | |
| 3 | | 24.0 | | | E | 3.0 | | | | B7-7 | |
| | | | | | U/E | 3.5 | | | | B7-8 | |
| | | | | | E | 3.8 | | | | B7-9 | pp=340 |
| 4 | | 23.0 | | | E | 4.0 | | | | B7-10 | |
| | ***PHYLLITE (DW)*** - interbedded very low and medium strength, grey and brown | | 4.57-9.98m, smooth, planar/undulating foliation dipping 5-15 degrees | | | 4.5 | | | | | |
| | | | 4.57-5.5m, contains fractured, crushed and clayey, weathered zones | >20 | C | 4.57 5.0 | 0.6 | 100 | | | |
| 5 | | 22.0 | | | | 5.5 | | | | | |
| | - medium strength with zones of low strength | | 5.6m, J, 5, Cl, 45mm | 15 | C | 5.8 | 0.6 | 100 | | | |
| 6 | | 21.0 | 6.2-6.7m, high fractured zone | | | 6.2 | | | | | |
| | - extremely low to low strength | | | >20 | | 6.31 | | 90 | | | |
| | | | | | C | 6.7 | | | | | |
| 7 | ***PHYLLITE (SW)*** - high strength with zones of medium strength | 20.0 | 7.07m, J, 60, vii, Cl, 5mm | 7 | | 6.8 7.39 7.6 | 1.1 1.1 | 100 | | | |
| | | | | | | 8.4 | | | | | |
| 8 | | 19.0 | 8.05m, B, XW rock, 9mm | | C | 8.55 | 2.4 | | | | |
| | - very high strength with zones of high strength | | | 1 | | | | 100 | | | |
| 9 | | 18.0 | | | | 9.6 | 3.6 | | | | |
| | | | | | | 9.95 | 1.6 | | | | |
| 10 | | | | | | 9.98 | | | | | |
| | End of Bore at 9.98 m | | | | | | | | | | |

**D** Disturbed Sample
**B** Bulk Sample
**U** Undisturbed Tube (50mm diameter)
**pp** Pocket Penetrometer Test (kPa)

**E** Environmental Sample
**S** Standard Penetrometer Test (SPT)
**HB** SPT Hammer Bouncing
**( )** No Sample Recovery

**C** NMLC Coring
**Is(50)** Point Load Test Result (MPa)
**(d)** Diametral Point Load Strength Test
**(a)** Axial Point Load Strength Test

**Rig:** Mobile B40L

**Drilling Method:** Auger to 4.5m, then NMLC core. Casing installed to 4.5m

**Groundwater:** No free groundwater encountered during auger drilling

**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

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# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 7

**Page No:** 1 of 2
**Date:** 12 December 2006
**Ground Surface Level:** RL 27.2m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | **CONCRETE** - 110mm thick | 27.2 | | | | | |
| | **FILL** - grey and brown, silty clay with fine gravel (weathered phyllite) | 27.0 | | | | | |
| | | | | S/E | 0.5 | B7-1 | 4,2,3 N=5 |
| | | | | E | 0.9 | B7-2 | |
| 1 | - light brown and grey | | | | 1.0 | | |
| | | 26.0 | | E | | B7-3 | |
| | | | | | 1.5 | | |
| | | | | E | | B7-4 | |
| 2 | | | | | 2.0 | | |
| | | 25.0 | | S/E | | B7-5 | 3,3,3 N=6 |
| | | | | | 2.45 | | |
| | | | | | 2.5 | | |
| | | | | E | | B7-6 | |
| 3 | | | | | 3.0 | | |
| | | 24.0 | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Mobile B40L
**Drilling Method:** Auger to 4.5m, then NMLC core. Casing installed to 4.5m
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Commercial Development
**Location:** Cnr Keating Street and Moggill Road, Indooroopilly
**Project No:** 06253

## BORE 7

**Page No:** 2 of 2
**Date:** 12 December 2006
**Ground Surface Level:** RL 27.2m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 4 | | | | E | 3.5 | B7-7 | |
| | | | | U/E | 3.8 | B7-8 | pp=340 |
| | | | | E | 4.0 | B7-9 | |
| | | 23.0 | | E | 4.5 | B7-10 | |
| | End of Bore at 4.5 m | | | | | | |
| 5 | | 22.0 | | | | | |
| 6 | | 21.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)
E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery
C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Mobile B40L
**Drilling Method:** Auger to 4.5m, then NMLC core. Casing installed to 4.5m
**Groundwater:** No free groundwater encountered during auger drilling
**Remarks:** * Approximate ground surface level interpolated from PMM Brisbane Pty Ltd's survey drawing, Reference 21454-

# Notes on Description and Classification of Soil

The methods of description and classification of soils used in this report are generally based on Australian Standard AS1726-1993 "Geotechnical Site Investigations".

Soil description is based on an assessment of disturbed samples, as recovered from bores and excavations, or from undisturbed materials as seen in excavations and exposures or in undisturbed samples. Descriptions given on report sheets are an interpretation of the conditions encountered at the time of investigation.

In the case of cone or piezocone penetrometer tests, actual soil samples are not recovered and soil description is inferred based on published correlations, past experience and comparison with bore and/or test pit data (if available).

Soil classification is based on the particle size distribution of the soil and the plasticity of the portion of the material finer than 0.425mm. The description of particle size distribution and plasticity is based on the results of visual field estimation, laboratory testing or both. When assessed in the field, the properties of the soil are estimated; precise description will always require laboratory testing to define soil properties.

Where soil can be clearly identified as FILL this will be noted as the main soil type followed by a description of the composition of the fill (eg. FILL – yellow-brown, fine to coarse grained gravelly clay fill with concrete rubble). If the soil is assessed as possibly being fill this will be noted as an additional observation.

Soils are generally described using the following sequence of terms. In certain instances, not all of the terms will be included in the soil description.

MAIN SOIL TYPE (CLASSIFICATION GROUP SYMBOL)
- strength/density, colour, structure/grain size, secondary and minor components, additional observations

Information on the definition of descriptive and classification terms follows.

**SOIL TYPE and CLASSIFICATION GROUP SYMBOLS**

| | Major Divisions | Particle Size | Classification Group Symbol | Typical Names |
|---|---|---|---|---|
| **COARSE GRAINED SOILS** (more than half of material is larger than 0.075 mm) | BOULDERS | > 200mm | | |
| | COBBLES | 63 – 200mm | | |
| | GRAVELS (more than half of coarse fraction is larger than 2.36 mm) | Coarse: 20 – 63 mm<br>Medium: 6 – 20 mm<br>Fine: 2.36 – 6 mm | GW | Well graded gravels, gravel-sand mixtures, little or no fines. |
| | | | GP | Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels. |
| | | | GM | Silty gravels, gravel-sand-silt mixtures. |
| | | | GC | Clayey gravels, gravel-sand-clay mixtures. |
| | SANDS (more than half of coarse fraction is smaller than 2.36mm) | Coarse: 0.6 – 2.36 mm<br>Medium: 0.2 – 0.6 mm<br>Fine: 0.075 – 0.2 mm | SW | Well graded sands, gravelly sands, little or no fines. |
| | | | SP | Poorly graded sands and gravelly sands; little or no fines, uniform sands. |
| | | | SM | Silty sands, sand-silt mixtures. |
| | | | SC | Clayey sands, sand-clay mixtures. |
| **FINE GRAINED SOILS** (more than half of material is smaller than 0.075 mm) | SILTS & CLAYS (liquid limit <50 %) | | ML | Inorganic silts and very fine sands, silty/clayey fine sands or clayey silts with low plasticity. |
| | | | CL and CI | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays. |
| | | | OL | Organic silts and organic silty clays of low plasticity. |
| | SILTS & CLAYS (liquid limit >50 %) | | MH | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils. |
| | | | CH | Inorganic clays of high plasticity. |
| | | | OH | Organic clays of medium to high plasticity, organic silts. |
| | HIGHLY ORGANIC SOILS | | Pt | Peat and other highly organic soils. |

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# Notes on Description and Classification of Rock

The methods of description and classification of rock used in this report are generally based on Australian Standard AS1726-1993 "Geotechnical Site Investigations".

Rock description is based on an assessment of disturbed samples, as recovered from bores and excavations, or from undisturbed materials as seen in excavations and exposures, or in core samples. Descriptions given on report sheets are an interpretation of the conditions encountered at the time of investigation.

Notes outlining the method and terminology adopted for the description of rock defects are given below, however, detailed information on defects can generally only be determined where rock core is taken, or excavations or exposures allow detailed observation and measurement.

Rocks are generally described using the following sequence of terms. In certain instances not all of the terms will be included in the rock description.

ROCK TYPE (WEATHERING SYMBOL), strength, colour, grain size, defect frequency

Information on the definition of descriptive and classification terms follows.

## ROCK TYPE

In general, simple rock names are used rather than precise geological classifications.

## ROCK MATERIALS WEATHERING CLASSIFICATION

| Term | Weathering Symbol | Definition |
|---|---|---|
| Residual soil | RS | Soil developed from extremely weathered rock; the mass structure and substance fabrics are no longer evident; there is a large change in volume but the soil has not been significantly transported. |
| Extremely weathered | XW | Rock is weathered to such an extent that it has 'soil' properties, ie. it either disintegrates or can be remoulded in water. |
| Distinctly weathered * | DW | Rock strength usually changed by weathering. The rock may be highly discoloured, usually by ironstaining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores. |
| Highly weathered | HW | Rock substance affected by weathering to the extent that limonite staining or bleaching affects the whole of the rock substance and other signs of chemical or physical decomposition are evident. Porosity and strength may be increased or decreased compared to the fresh rock, usually as a result of iron leaching or deposition. The colour and strength of the original fresh rock substance is no longer recognisable. |
| Moderately weathered | MW | Rock substance affected by weathering to the extent that staining extends throughout the whole of the rock substance and the original colour of the fresh rock may be no longer recognisable. |
| Slightly weathered | SW | Rock is slightly discoloured but shows little or no change of strength from fresh rock. |
| Fresh | FR | Rock shows no sign of decomposition or staining. |

** Subdivision of this weathering grade into highly and moderately may be used where applicable.*

## STRENGTH OF ROCK MATERIAL

| Term | Symbol | Point Load Index $I_s$ (50) | Field guide to strength |
|---|---|---|---|
| Extremely low | EL | < 0.03 MPa | Easily remoulded by hand to a material with soil properties. |
| Very low | VL | 0.03 – 0.1 MPa | Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30mm thick can be broken by finger pressure. |
| Low | L | 0.1 – 0.3 MPa | Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150mm long 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling. |
| Medium | M | 0.3 – 1.0 MPa | Readily scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty. |
| High | H | 1.0 – 3.0 MPa | A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer. |
| Very high | VH | 3.0 – 10.0 MPa | Hand specimen breaks with pick after more than one blow; rock rings under hammer. |
| Extremely high | EH | > 10 MPa | Specimen requires many blows with geological pick to break through intact material; rock rings under hammer. |

*Notes:*

1. These terms refer to the strength of the rock material and not to the strength of the rock mass which may be considerably weaker due to the effect of rock defects.
2. The field guide visual assessment for rock strength may be used for preliminary assessment or when point load testing is not available.
3. Anisotropy of rock may affect the field assessment of strength.

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# APPENDIX C

## LABORATORY TEST RESULT SHEETS

# REPORT OF ANALYSIS


Report No. RN589204

| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received | : BUTL01/061208<br>: QT-01288<br>: MB76<br>: 6-DEC-2006<br>: 8-DEC-2006 |
| Attention | : sch4p4( 6) Personal inf | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042028 | B16-1 | SOIL JOB 06253A |
| N06/042043 | DUP01 | SOIL JOB 06253A |

| Lab Reg No.<br>Sample Reference | Units | N06/042028<br>B16-1 | N06/042043<br>DUP01 | | | Method |
|---|---|---|---|---|---|---|
| BTEX | | | | | | |
| Benzene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Toluene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Ethyl Benzene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| m, p - Xylene | mg/kg | < 1 | < 1 | | | NGCMS_1121 |
| o - Xylene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C6 - C9 | mg/kg | < 25 | < 25 | | | NGCMS_1121 |
| TPH C10 - C14 | mg/kg | < 50 | < 50 | | | NGCMS_1112 |
| TPH C15 - C28 | mg/kg | < 100 | < 100 | | | NGCMS_1112 |
| TPH C29 - C36 | mg/kg | < 100 | < 100 | | | NGCMS_1112 |
| Surrogate | | | | | | |
| Surrogate volatile Rec | % | 111 | 99 | | | |
| Dates | | | | | | |
| Date extracted | | 8-DEC-2006 | 8-DEC-2006 | | | |
| Date analysed | | 13-DEC-2006 | 13-DEC-2006 | | | |

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Organics - NSW (Accreditation No. 198)

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# REPORT OF ANALYSIS


Report No. RN589204

| Lab Reg No. | Units | N06/042028 | N06/042043 | | | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B16-1 | DUP01 | | | |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 2.6 | 2.5 | | | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | | | NT2_49 |
| Chromium | mg/kg | 8.4 | 12 | | | NT2_49 |
| Copper | mg/kg | 17 | 4.8 | | | NT2_49 |
| Lead | mg/kg | 29 | 4.2 | | | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | | | NT2_49 |
| Nickel | mg/kg | 5.2 | 11 | | | NT2_49 |
| Zinc | mg/kg | 41 | 25 | | | NT2_49 |
| Total Solids | % | 90.5 | 95.5 | | | NT2_49 |

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Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

15-DEC-2006

All results are expressed on a dry weight basis.

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Results relate only to the sample(s) tested.

This Report supersedes reports: RN588982 RN589139

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received<br>Sampled By | : BUTL01/061214<br>: QT-00782<br>: LA77<br>:<br>: 14-DEC-2006<br>: CLIENT |
| Attention | : sch4p4( 6) Personal | | |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042922 | B4-1 | SOIL JOB 06253A 8/12/06 |
| N06/042926 | B6-1 | SOIL JOB 06253A 11/12/06 |
| N06/042927 | B7-1 | SOIL JOB 06253A 12/12/06 |
| N06/042935 | B7-9 | SOIL JOB 06253A 12/12/06 |

| Lab Reg No. / Sample Reference | Units | N06/042922 B4-1 | N06/042926 B6-1 | N06/042927 B7-1 | N06/042935 B7-9 | Method |
|---|---|---|---|---|---|---|
| Organochlorine (OC) Pesticides | | | | | | |
| HCB | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Heptachlor | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Heptachlor epoxide | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Aldrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| gamma-BHC (Lindane) | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| alpha-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| beta-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| delta-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| trans-Chlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| cis-Chlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Oxychlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Dieldrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| pp-DDE | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| pp-DDD | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| pp-DDT | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endrin Aldehyde | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endrin Ketone | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| alpha-Endosulfan | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| beta-Endosulfan | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endosulfan Sulfate | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Methoxychlor | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Surrogate | | | | | | |
| Surrogate OC Rec. | % | 104 | 112 | 120 | 130 | NR_19 |
| Dates | | | | | | |
| Date extracted | | 14-DEC-2006 | 14-DEC-2006 | 14-DEC-2006 | 14-DEC-2006 | |
| Date analysed | | 19-DEC-2006 | 19-DEC-2006 | 19-DEC-2006 | 19-DEC-2006 | |

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| Lab Reg No. | | N06/042922 | N06/042926 | N06/042927 | N06/042935 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B4-1 | B6-1 | B7-1 | B7-9 | Method |

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Danny Slee, Section Manager
Organics - NSW (Accreditation No. 198)

19-DEC-2006

| Lab Reg No. | | N06/042922 | N06/042926 | N06/042927 | N06/042935 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B4-1 | B6-1 | B7-1 | B7-9 | Method |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 1 | 8.3 | 11 | 10 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 5.9 | 12 | 7.4 | 16 | NT2_49 |
| Copper | mg/kg | 3.4 | 36 | 30 | 21 | NT2_49 |
| Lead | mg/kg | 2 | 31 | 22 | 39 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 5.6 | 33 | 16 | 8.2 | NT2_49 |
| Zinc | mg/kg | 13 | 120 | 66 | 55 | NT2_49 |
| Total Solids | % | 96.1 | 96.1 | 89.5 | 85.8 | NT2_49 |

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Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

19-DEC-2006

All results are expressed on a dry weight basis.

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This Report supersedes reports: RN589616 RN589671

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received | : BUTL01/061208<br>: QT-01288<br>: MB76<br>: 6-DEC-2006<br>: 8-DEC-2006 |
| Attention | : sch4p4( 6) Person | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042004 | B9-2 | SOIL JOB 06253A |
| N06/042006 | B10-2 | SOIL JOB 06253A |
| N06/042015 | B13-1 | SOIL JOB 06253A |
| N06/042025 | B15-2 | SOIL JOB 06253A |

| Lab Reg No. | Units | N06/042004 | N06/042006 | N06/042015 | N06/042025 | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B9-2 | B10-2 | B13-1 | B15-2 | |
| BTEX | | | | | | |
| Benzene | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NGCMS_1121 |
| Toluene | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NGCMS_1121 |
| Ethyl Benzene | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NGCMS_1121 |
| m, p - Xylene | mg/kg | < 1 | < 1 | < 1 | < 1 | NGCMS_1121 |
| o - Xylene | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NGCMS_1121 |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C6 - C9 | mg/kg | < 25 | < 25 | < 25 | < 25 | NGCMS_1121 |
| TPH C10 - C14 | mg/kg | < 50 | < 50 | < 50 | < 50 | NGCMS_1112 |
| TPH C15 - C28 | mg/kg | < 100 | < 100 | < 100 | < 100 | NGCMS_1112 |
| TPH C29 - C36 | mg/kg | < 100 | < 100 | < 100 | < 100 | NGCMS_1112 |
| Surrogate | | | | | | |
| Surrogate volatile Rec | % | 94 | 110 | 110 | 104 | |
| Dates | | | | | | |
| Date extracted | | 8-DEC-2006 | 8-DEC-2006 | 8-DEC-2006 | 8-DEC-2006 | |
| Date analysed | | 13-DEC-2006 | 13-DEC-2006 | 13-DEC-2006 | 13-DEC-2006 | |

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| Lab Reg No. | | N06/042004 | N06/042006 | N06/042015 | N06/042025 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B9-2 | B10-2 | B13-1 | B15-2 | Method |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 11 | 16 | 15 | 2.2 | NT2_49 |
| Cadmium | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | NT2_49 |
| Chromium | mg/kg | 6.1 | 6.5 | 9.6 | 7.2 | NT2_49 |
| Copper | mg/kg | 31 | 32 | 38 | 5.5 | NT2_49 |
| Lead | mg/kg | 23 | 34 | 30 | 3.8 | NT2_49 |
| Mercury | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | NT2_49 |
| Nickel | mg/kg | 10 | 13 | 28 | 8.7 | NT2_49 |
| Zinc | mg/kg | 55 | 67 | 86 | 23 | NT2_49 |
| Total Solids | % | 84.7 | 86.5 | 91.9 | 94.3 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

15-DEC-2006

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# QUALITY ASSURANCE REPORT

**Client:** BUTLER PARTNERS P/L

**NMI QA Report No:** BUTL01/061208 **Sample Matrix:** Soil

| Analyte | Method | LOR | Blank | Sample Duplicates | | | Recoveries | |
|---|---|---|---|---|---|---|---|---|
| | | | | Sample | Duplicate | RPD | LCS | Matrix Spike |
| | | mg/kg | mg/kg | mg/kg | mg/kg | % | % | % |
| **Organics Section** | | | | | | | | |
| **BTEX** | | | | | | | | |
| Benzene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 91 | NA |
| Toluene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 100 | NA |
| Ethyl Benzene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 119 | NA |
| m, p - Xylene | NGCMS_1121 | 1 | <1 | NA | NA | NA | 119 | NA |
| o-Xylene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 116 | NA |
| **TPH** | | | | | | | | |
| TPH C6-C9 | NGCMS_1121 | 25 | <25 | NA | NA | NA | 109 | NA |
| | | | | | | | | |
| TPH C10-C14 | NGCMS_1112 | 50 | <50 | NA | NA | NA | 95 | NA |
| TPH C15-C28 | NGCMS_1112 | 100 | <100 | NA | NA | NA | 92 | NA |
| TPH C29-C36 | NGCMS_1112 | 100 | <100 | NA | NA | NA | - | NA |
| Surrogate Volatile Recovery | | - | - | NA | NA | NA | 106 | NA |

Results expressed in percentage (%) or mg/kg wherever appropriate.
Acceptable Spike recovery is 70-130% (BTEX and TPH $C_6$-$C_9$); 50-150% (TPH C10-C36)
Acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.
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**Signed:**

**Danny Slee**
**Organics Manager, NMI-Pymble**
Date: **12/11/2006**

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Australian Government

National Measurement Institute

# REPORT OF ANALYSIS



Report No. RN589704

| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061214 |
| | | Quote No. | : QT-00782 |
| | | Order No. | : LA77 |
| | | Date Sampled | : |
| | | Date Received | : 14-DEC-2006 |
| Attention | : sch4p4( 6) Personal | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042924 | B4-3 | SOIL JOB 06253A 8/12/06 |
| N06/042933 | B7-7 | SOIL JOB 06253A 12/12/06 |

| Lab Reg No. / Sample Reference | Units | N06/042924<br>B4-3 | N06/042933<br>B7-7 | | | Method |
|---|---|---|---|---|---|---|
| BTEX | | | | | | |
| Benzene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Toluene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Ethyl Benzene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| m, p - Xylene | mg/kg | < 1 | < 1 | | | NGCMS_1121 |
| o - Xylene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C6 - C9 | mg/kg | < 25 | < 25 | | | NGCMS_1121 |
| TPH C10 - C14 | mg/kg | < 50 | < 50 | | | NGCMS_1112 |
| TPH C15 - C28 | mg/kg | < 100 | < 100 | | | NGCMS_1112 |
| TPH C29 - C36 | mg/kg | < 100 | < 100 | | | NGCMS_1112 |
| Surrogate | | | | | | |
| Surrogate volatile Rec | % | 104 | 99 | | | |
| Dates | | | | | | |
| Date extracted | | 14-DEC-2006 | 14-DEC-2006 | | | |
| Date analysed | | 15-DEC-2006 | 15-DEC-2006 | | | |

sch4p4( 6) Personal inf

Danny Slee, Section Manager
Organics - NSW (Accreditation No. 198)

19-DEC-2006

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# REPORT OF ANALYSIS


Report No. RN589704

| Lab Reg No. | Units | N06/042924 | N06/042933 | | | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B4-3 | B7-7 | | | |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 8.9 | 8.4 | | | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | | | NT2_49 |
| Chromium | mg/kg | 7 | 12 | | | NT2_49 |
| Copper | mg/kg | 16 | 16 | | | NT2_49 |
| Lead | mg/kg | 110 | 110 | | | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | | | NT2_49 |
| Nickel | mg/kg | 5.3 | 5.6 | | | NT2_49 |
| Zinc | mg/kg | 57 | 44 | | | NT2_49 |
| Total Solids | % | 85.5 | 83.7 | | | NT2_49 |

sch4p4( 6) Personal informatio

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

19-DEC-2006

All results are expressed on a dry weight basis.

NATA
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This Report supersedes reports: RN589616 RN589671

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# QUALITY ASSURANCE REPORT

**Client:** BUTLER PARTNERS P/L

**NMI QA Report No:** BUTL01/061214 **Sample Matrix:** Soil

| Analyte | Method | LOR | Blank | Sample Duplicates | | | Recoveries | |
|---|---|---|---|---|---|---|---|---|
| | | | | Sample | Duplicate | RPD | LCS | Matrix Spike |
| | | mg/kg | mg/kg | mg/kg | mg/kg | % | % | % |
| **Organics Section** | | | | | | | | |
| BTEX | | | | | | | | |
| Benzene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 91 | NA |
| Toluene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 106 | NA |
| Ethyl Benzene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 118 | NA |
| m, p - Xylene | NGCMS_1121 | 1 | <1 | NA | NA | NA | 116 | NA |
| o-Xylene | NGCMS_1121 | 0.5 | <0.5 | NA | NA | NA | 117 | NA |
| TPH | | | | | | | | |
| TPH C6-C9 | NGCMS_1121 | 25 | <25 | NA | NA | NA | 110 | NA |
| | | | | | | | | |
| TPH C10-C14 | NGCMS_1112 | 50 | <50 | NA | NA | NA | 104 | NA |
| TPH C15-C28 | NGCMS_1112 | 100 | <100 | NA | NA | NA | 101 | NA |
| TPH C29-C36 | NGCMS_1112 | 100 | <100 | NA | NA | NA | - | NA |
| Surrogate Volatile Recovery | | - | - | NA | NA | NA | 102 | NA |

Results expressed in percentage (%) or mg/kg wherever appropriate.
Acceptable Spike recovery is 70-130% (BTEX and TPH $C_6$-$C_9$); 50-150% (TPH C10-C36)
Acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.
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**Signed:**

**Danny Slee**
**Organics Manager, NMI-Pymble**

**Date:** **12/18/2006**

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061208 |
| | | Quote No. | : QT-01288 |
| | | Order No. | : MB76 |
| | | Date Sampled | : 6-DEC-2006 |
| | | Date Received | : 8-DEC-2006 |
| Attention | : sch4p4( 6) Persona | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042001 | B8-1 | SOIL JOB 06253A |
| N06/042008 | B11-2 | SOIL JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N06/042001 B8-1 | N06/042008 B11-2 | | | Method |
|---|---|---|---|---|---|---|
| Organochlorine (OC) Pesticides | | | | | | |
| HCB | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Heptachlor | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Heptachlor epoxide | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Aldrin | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| gamma-BHC (Lindane) | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| alpha-BHC | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| beta-BHC | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| delta-BHC | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| trans-Chlordane | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| cis-Chlordane | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Oxychlordane | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Dieldrin | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| pp-DDE | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| pp-DDD | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| pp-DDT | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Endrin | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Endrin Aldehyde | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Endrin Ketone | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| alpha-Endosulfan | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| beta-Endosulfan | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Endosulfan Sulfate | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| Methoxychlor | mg/kg | < 0.01 | < 0.01 | | | NR_19 |
| BTEX | | | | | | |
| Benzene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Toluene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Ethyl Benzene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| m, p - Xylene | mg/kg | < 1 | < 1 | | | NGCMS_1121 |
| o - Xylene | mg/kg | < 0.5 | < 0.5 | | | NGCMS_1121 |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C6 - C9 | mg/kg | < 25 | < 25 | | | NGCMS_1121 |

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# REPORT OF ANALYSIS


Report No. RN589199

| Lab Reg No. | | N06/042001 | N06/042008 | | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B8-1 | B11-2 | | | Method |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C10 - C14 | mg/kg | < 50 | < 50 | | | NGCMS_1112 |
| TPH C15 - C28 | mg/kg | < 100 | < 100 | | | NGCMS_1112 |
| TPH C29 - C36 | mg/kg | < 100 | < 100 | | | NGCMS_1112 |
| Surrogate | | | | | | |
| Surrogate volatile Rec | % | 109 | 107 | | | |
| Surrogate OC Rec. | % | 113 | 93 | | | NR_19 |
| Dates | | | | | | |
| Date extracted | | 8-DEC-2006 | 8-DEC-2006 | | | |
| Date analysed | | 13-DEC-2006 | 13-DEC-2006 | | | |

sch4p4( 6) Personal inf

Danny Slee, Section Manager
Organics - NSW (Accreditation No. 198)

15-DEC-2006

| Lab Reg No. | | N06/042001 | N06/042008 | | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B8-1 | B11-2 | | | Method |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 19 | 16 | | | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | | | NT2_49 |
| Chromium | mg/kg | 12 | 5.7 | | | NT2_49 |
| Copper | mg/kg | 51 | 31 | | | NT2_49 |
| Lead | mg/kg | 27 | 34 | | | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | | | NT2_49 |
| Nickel | mg/kg | 25 | 11 | | | NT2_49 |
| Zinc | mg/kg | 90 | 66 | | | NT2_49 |
| Total Solids | % | 92.1 | 86.8 | | | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

15-DEC-2006

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# REPORT OF ANALYSIS



All results are expressed on a dry weight basis.

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# QUALITY ASSURANCE REPORT

**Client:** BUTLER PARTNERS P/L

**NMI QA Report No:** BUTL01/061208 **Sample Matrix:** Soil

| Analyte | Method | LOR | Blank | Sample Duplicates | | | Recoveries | |
|---|---|---|---|---|---|---|---|---|
| | | | | Sample | Duplicate | RPD | LCS | Matrix Spike |
| | | mg/kg | mg/kg | mg/kg | mg/kg | % | % | % |
| **Organics Section** | | | | | | | | |
| **OC Pesticides** | | | | | | | | |
| HCB | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Heptachlor | NR19 | 0.01 | <0.01 | NA | NA | NA | 116 | NA |
| Heptachlor epoxide | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Aldrin | NR19 | 0.01 | <0.01 | NA | NA | NA | 128 | NA |
| gamma-BHC (Lindane) | NR19 | 0.01 | <0.01 | NA | NA | NA | 112 | NA |
| alpha-BHC | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| beta-BHC | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| delta-BHC | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| trans-Chlordane | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| cis-Chlordane | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Oxychlordane | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Dieldrin | NR19 | 0.01 | <0.01 | NA | NA | NA | 110 | NA |
| pp-DDE | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| pp-DDD | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| pp-DDT | NR19 | 0.01 | <0.01 | NA | NA | NA | 106 | NA |
| Endrin | NR19 | 0.01 | <0.01 | NA | NA | NA | 112 | NA |
| Endrin Aldehyde | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Endrin Ketone | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| alpha-Endosulfan | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| beta-Endosulfan | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Endosulfan Sulfate | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Methoxychlor | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Surrogate OC Rec. | NR19 | - | - | NA | NA | NA | 94 | NA |

Results expressed in percentage (%) or mg/kg wherever appropriate.
Acceptable Spike recovery is 50-150%
Acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.
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Signed:

Danny Slee
Organics Manager, NMI-Pymble

Date: 12/15/2006

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received<br>Sampled By | : BUTL01/061214<br>: QT-00782<br>: LA77<br>:<br>: 14-DEC-2006<br>: CLIENT |
| Attention | : sch4p4( 6) Persona | | |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042930 | B7-4 | SOIL JOB 06253A 12/12/06 |

| Lab Reg No. | | N06/042930 | | | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B7-4 | | | | Method |
| Organochlorine (OC) Pesticides | | | | | | |
| HCB | mg/kg | < 0.01 | | | | NR_19 |
| Heptachlor | mg/kg | < 0.01 | | | | NR_19 |
| Heptachlor epoxide | mg/kg | < 0.01 | | | | NR_19 |
| Aldrin | mg/kg | < 0.01 | | | | NR_19 |
| gamma-BHC (Lindane) | mg/kg | < 0.01 | | | | NR_19 |
| alpha-BHC | mg/kg | < 0.01 | | | | NR_19 |
| beta-BHC | mg/kg | < 0.01 | | | | NR_19 |
| delta-BHC | mg/kg | < 0.01 | | | | NR_19 |
| trans-Chlordane | mg/kg | < 0.01 | | | | NR_19 |
| cis-Chlordane | mg/kg | < 0.01 | | | | NR_19 |
| Oxychlordane | mg/kg | < 0.01 | | | | NR_19 |
| Dieldrin | mg/kg | < 0.01 | | | | NR_19 |
| pp-DDE | mg/kg | < 0.01 | | | | NR_19 |
| pp-DDD | mg/kg | < 0.01 | | | | NR_19 |
| pp-DDT | mg/kg | < 0.01 | | | | NR_19 |
| Endrin | mg/kg | < 0.01 | | | | NR_19 |
| Endrin Aldehyde | mg/kg | < 0.01 | | | | NR_19 |
| Endrin Ketone | mg/kg | < 0.01 | | | | NR_19 |
| alpha-Endosulfan | mg/kg | < 0.01 | | | | NR_19 |
| beta-Endosulfan | mg/kg | < 0.01 | | | | NR_19 |
| Endosulfan Sulfate | mg/kg | < 0.01 | | | | NR_19 |
| Methoxychlor | mg/kg | < 0.01 | | | | NR_19 |
| BTEX | | | | | | |
| Benzene | mg/kg | < 0.5 | | | | NGCMS_1121 |
| Toluene | mg/kg | < 0.5 | | | | NGCMS_1121 |
| Ethyl Benzene | mg/kg | < 0.5 | | | | NGCMS_1121 |
| m, p - Xylene | mg/kg | < 1 | | | | NGCMS_1121 |
| o - Xylene | mg/kg | < 0.5 | | | | NGCMS_1121 |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C6 - C9 | mg/kg | < 25 | | | | NGCMS_1121 |
| TPH C10 - C14 | mg/kg | < 50 | | | | NGCMS_1112 |

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# REPORT OF ANALYSIS



| Lab Reg No. | Units | N06/042930 | | | | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B7-4 | | | | |
| Total Petroleum Hydrocarbons | | | | | | |
| TPH C15 - C28 | mg/kg | < 100 | | | | NGCMS_1112 |
| TPH C29 - C36 | mg/kg | < 100 | | | | NGCMS_1112 |
| Surrogate | | | | | | |
| Surrogate volatile Rec | % | 97 | | | | |
| Surrogate OC Rec. | % | 136 | | | | NR_19 |
| Dates | | | | | | |
| Date extracted | | 14-DEC-2006 | | | | |
| Date analysed | | 15-DEC-2006 | | | | |

sch4p4( 6) Personal info

Danny Slee, Section Manager
Organics - NSW (Accreditation No. 198)

19-DEC-2006

| Lab Reg No. | Units | N06/042930 | | | | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B7-4 | | | | |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 8.6 | | | | NT2_49 |
| Cadmium | mg/kg | 1.6 | | | | NT2_49 |
| Chromium | mg/kg | 11 | | | | NT2_49 |
| Copper | mg/kg | 23 | | | | NT2_49 |
| Lead | mg/kg | 520 | | | | NT2_49 |
| Mercury | mg/kg | < 0.2 | | | | NT2_49 |
| Nickel | mg/kg | 6.2 | | | | NT2_49 |
| Zinc | mg/kg | 140 | | | | NT2_49 |
| Total Solids | % | 86.6 | | | | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

19-DEC-2006

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# REPORT OF ANALYSIS



All results are expressed on a dry weight basis.

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National Measurement Institute

# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061208 |
| | | Quote No. | : QT-01288 |
| | | Order No. | : MB76 |
| | | Date Sampled | : 6-DEC-2006 |
| | | Date Received | : 8-DEC-2006 |
| Attention | : sch4p4( 6) Personal | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/041993 | B1-1 | SOIL JOB 06253A |
| N06/042023 | B14-4 | SOIL JOB 06253A |
| N06/042026 | B15-3 | SOIL JOB 06253A |
| N06/042032 | BV17-2 | SOIL JOB 06253A |

| Lab Reg No. | | N06/041993 | N06/042023 | N06/042026 | N06/042032 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B1-1 | B14-4 | B15-3 | BV17-2 | Method |
| Organochlorine (OC) Pesticides | | | | | | |
| HCB | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Heptachlor | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Heptachlor epoxide | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Aldrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| gamma-BHC (Lindane) | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| alpha-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| beta-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| delta-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| trans-Chlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| cis-Chlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Oxychlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Dieldrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| pp-DDE | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| pp-DDD | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| pp-DDT | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endrin Aldehyde | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endrin Ketone | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| alpha-Endosulfan | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| beta-Endosulfan | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Endosulfan Sulfate | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Methoxychlor | mg/kg | < 0.01 | < 0.01 | < 0.01 | < 0.01 | NR_19 |
| Surrogate | | | | | | |
| Surrogate OC Rec. | % | 113 | 99 | 98 | 97 | NR_19 |
| Dates | | | | | | |
| Date extracted | | 11-DEC-2006 | 11-DEC-2006 | 11-DEC-2006 | 11-DEC-2006 | |
| Date analysed | | 15-DEC-2006 | 15-DEC-2006 | 15-DEC-2006 | 15-DEC-2006 | |

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| Lab Reg No. | Units | N06/041993 | N06/042023 | N06/042026 | N06/042032 | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B1-1 | B14-4 | B15-3 | BV17-2 | |

sch4p4( 6) Personal inform

Danny Slee, Section Manager
Organics - NSW (Accreditation No. 198)

15-DEC-2006

| Lab Reg No. | Units | N06/041993 | N06/042023 | N06/042026 | N06/042032 | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B1-1 | B14-4 | B15-3 | BV17-2 | |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 5.6 | 14 | 2.2 | 14 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 11 | 13 | 8.7 | 10 | NT2_49 |
| Copper | mg/kg | 5.6 | 34 | 4.6 | 29 | NT2_49 |
| Lead | mg/kg | 2 | 35 | 2.7 | 110 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 7.9 | 25 | 9.4 | 13 | NT2_49 |
| Zinc | mg/kg | 17 | 91 | 20 | 81 | NT2_49 |
| Total Solids | % | 84.8 | 89.1 | 93.6 | 90.5 | NT2_49 |

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Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061208 |
| | | Quote No. | : QT-01288 |
| | | Order No. | : MB76 |
| | | Date Sampled | : 6-DEC-2006 |
| | | Date Received | : 8-DEC-2006 |
| Attention | : sch4p4( 6) Persona | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042034 | B18-1 | SOIL JOB 06253A |
| N06/042041 | B19-3 | SOIL JOB 06253A |
| N06/042045 | DUP03 | SOIL JOB 06253A |

| Lab Reg No. | | N06/042034 | N06/042041 | N06/042045 | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B18-1 | B19-3 | DUP03 | | Method |
| Organochlorine (OC) Pesticides | | | | | | |
| HCB | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Heptachlor | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Heptachlor epoxide | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Aldrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| gamma-BHC (Lindane) | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| alpha-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| beta-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| delta-BHC | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| trans-Chlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| cis-Chlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Oxychlordane | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Dieldrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| pp-DDE | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| pp-DDD | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| pp-DDT | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Endrin | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Endrin Aldehyde | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Endrin Ketone | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| alpha-Endosulfan | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| beta-Endosulfan | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Endosulfan Sulfate | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Methoxychlor | mg/kg | < 0.01 | < 0.01 | < 0.01 | | NR_19 |
| Surrogate | | | | | | |
| Surrogate OC Rec. | % | 98 | 95 | 95 | | NR_19 |
| Dates | | | | | | |
| Date extracted | | 11-DEC-2006 | 11-DEC-2006 | 11-DEC-2006 | | |
| Date analysed | | 15-DEC-2006 | 15-DEC-2006 | 15-DEC-2006 | | |

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| Lab Reg No. | | N06/042034 | N06/042041 | N06/042045 | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B18-1 | B19-3 | DUP03 | | Method |

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Organics - NSW (Accreditation No. 198)

15-DEC-2006

| Lab Reg No. | | N06/042034 | N06/042041 | N06/042045 | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B18-1 | B19-3 | DUP03 | | Method |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 15 | 8.5 | 16 | | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | | NT2_49 |
| Chromium | mg/kg | 13 | 6.3 | 4 | | NT2_49 |
| Copper | mg/kg | 24 | 25 | 35 | | NT2_49 |
| Lead | mg/kg | 35 | 54 | 30 | | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | | NT2_49 |
| Nickel | mg/kg | 11 | 13 | 26 | | NT2_49 |
| Zinc | mg/kg | 51 | 71 | 87 | | NT2_49 |
| Total Solids | % | 84.4 | 89.5 | 92 | | NT2_49 |

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Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

15-DEC-2006

All results are expressed on a dry weight basis.

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received<br>Sampled By | : BUTL01/061208<br>: QT-01288<br>: MB76<br>: 6-DEC-2006<br>: 8-DEC-2006<br>: CLIENT |
| Attention | : sch4p4( 6) Personal | | |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/041996 | B1-4 | SOIL JOB 06253A |
| N06/041998 | B2-1 | SOIL JOB 06253A |
| N06/042000 | B2-3 | SOIL JOB 06253A |
| N06/042002 | B8-2 | SOIL JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N06/041996 B1-4 | N06/041998 B2-1 | N06/042000 B2-3 | N06/042002 B8-2 | Method |
|---|---|---|---|---|---|---|
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 12 | 13 | 13 | 14 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 13 | 17 | 19 | 5.6 | NT2_49 |
| Copper | mg/kg | 36 | 39 | 41 | 40 | NT2_49 |
| Lead | mg/kg | 28 | 44 | 30 | 29 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 18 | 20 | 31 | 22 | NT2_49 |
| Zinc | mg/kg | 79 | 91 | 79 | 98 | NT2_49 |
| Total Solids | % | 83.3 | 85.4 | 97.2 | 87.3 | NT2_49 |

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|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received | : BUTL01/061208<br>: QT-01288<br>: MB76<br>: 6-DEC-2006<br>: 8-DEC-2006 |
| Attention | : sch4p4( 6) Persona | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042003 | B9-1 | SOIL JOB 06253A |
| N06/042005 | B10-1 | SOIL JOB 06253A |
| N06/042010 | B11-4 | SOIL JOB 06253A |
| N06/042011 | B12-1 | SOIL JOB 06253A |

| Lab Reg No. | | N06/042003 | N06/042005 | N06/042010 | N06/042011 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B9-1 | B10-1 | B11-4 | B12-1 | Method |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 6.4 | 13 | 3.3 | 13 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 13 | 11 | 1.9 | 8 | NT2_49 |
| Copper | mg/kg | 20 | 36 | 16 | 35 | NT2_49 |
| Lead | mg/kg | 12 | 25 | 11 | 44 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 16 | 23 | 4.3 | 16 | NT2_49 |
| Zinc | mg/kg | 50 | 82 | 26 | 81 | NT2_49 |
| Total Solids | % | 92.5 | 91 | 90.8 | 89.1 | NT2_49 |

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Dr. Honway Louie, Section Manager
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|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061208 |
| | | Quote No. | : QT-01288 |
| | | Order No. | : MB76 |
| | | Date Sampled | : 6-DEC-2006 |
| | | Date Received | : 8-DEC-2006 |
| Attention | : sch4p4( 6) Persona | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042013 | B12-3 | SOIL JOB 06253A |
| N06/042014 | B12-4 | SOIL JOB 06253A |
| N06/042016 | B13-2 | SOIL JOB 06253A |
| N06/042019 | B13-5 | SOIL JOB 06253A |

| Lab Reg No. | | N06/042013 | N06/042014 | N06/042016 | N06/042019 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B12-3 | B12-4 | B13-2 | B13-5 | Method |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 9.3 | 20 | 13 | 21 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 7.7 | 10 | 6.2 | 9.8 | NT2_49 |
| Copper | mg/kg | 14 | 28 | 43 | 26 | NT2_49 |
| Lead | mg/kg | 18 | 32 | 32 | 37 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 3.7 | 15 | 19 | 11 | NT2_49 |
| Zinc | mg/kg | 24 | 76 | 82 | 50 | NT2_49 |
| Total Solids | % | 85.6 | 93 | 91.3 | 86.4 | NT2_49 |

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Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

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|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061208 |
| | | Quote No. | : QT-01288 |
| | | Order No. | : MB76 |
| | | Date Sampled | : 6-DEC-2006 |
| | | Date Received | : 8-DEC-2006 |
| Attention | : sch4p4( 6) Personal i | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042021 | B14-2 | SOIL JOB 06253A |
| N06/042024 | B15-1 | SOIL JOB 06253A |
| N06/042027 | B15-4 | SOIL JOB 06253A |
| N06/042029 | B16-2 | SOIL JOB 06253A |

| Lab Reg No. | Units | N06/042021 | N06/042024 | N06/042027 | N06/042029 | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B14-2 | B15-1 | B15-4 | B16-2 | |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 11 | 7.6 | 12 | 15 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 13 | 10 | 9.2 | 5.6 | NT2_49 |
| Copper | mg/kg | 27 | 12 | 24 | 24 | NT2_49 |
| Lead | mg/kg | 41 | 16 | 35 | 22 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 9.8 | 11 | 26 | 7.3 | NT2_49 |
| Zinc | mg/kg | 99 | 40 | 86 | 41 | NT2_49 |
| Total Solids | % | 81.6 | 87.7 | 97.9 | 88.6 | NT2_49 |

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Dr. Honway Louie, Section Manager
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| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received | : BUTL01/061208<br>: QT-01288<br>: MB76<br>: 6-DEC-2006<br>: 8-DEC-2006 |
| Attention | : sch4p4( 6) Personal | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042030 | B16-3 | SOIL JOB 06253A |
| N06/042033 | BV17-3 | SOIL JOB 06253A |
| N06/042037 | B18-4 | SOIL JOB 06253A |
| N06/042038 | B18-5 | SOIL JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N06/042030 B16-3 | N06/042033 BV17-3 | N06/042037 B18-4 | N06/042038 B18-5 | Method |
|---|---|---|---|---|---|---|
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 13 | 13 | 11 | 22 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 13 | 3.6 | 8.1 | 3.7 | NT2_49 |
| Copper | mg/kg | 32 | 30 | 29 | 38 | NT2_49 |
| Lead | mg/kg | 39 | 36 | 30 | 27 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 30 | 6.8 | 16 | 7.1 | NT2_49 |
| Zinc | mg/kg | 95 | 42 | 65 | 37 | NT2_49 |
| Total Solids | % | 95.4 | 94.2 | 89.1 | 93.9 | NT2_49 |

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Inorganics - NSW (Accreditation No. 198)

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| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No.<br>Quote No.<br>Order No.<br>Date Sampled<br>Date Received | : BUTL01/061208<br>: QT-01288<br>: MB76<br>: 6-DEC-2006<br>: 8-DEC-2006 |
| Attention | : sch4p4( 6) Personal i | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042039 | B19-1 | SOIL JOB 06253A |
| N06/042042 | B19-4 | SOIL JOB 06253A |
| N06/042044 | DUP02 | SOIL JOB 06253A |
| N06/042046 | DUP04 | SOIL JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N06/042039 B19-1 | N06/042042 B19-4 | N06/042044 DUP02 | N06/042046 DUP04 | Method |
|---|---|---|---|---|---|---|
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 14 | 4.1 | 16 | 15 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | < 0.5 | < 0.5 | < 0.5 | NT2_49 |
| Chromium | mg/kg | 7.8 | 8 | 4.6 | 21 | NT2_49 |
| Copper | mg/kg | 24 | 15 | 35 | 41 | NT2_49 |
| Lead | mg/kg | 35 | 15 | 33 | 40 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 13 | 12 | 14 | 32 | NT2_49 |
| Zinc | mg/kg | 57 | 48 | 50 | 82 | NT2_49 |
| Total Solids | % | 88.2 | 92.2 | 86.5 | 97.4 | NT2_49 |

sch4p4( 6) Personal informat

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

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# REPORT OF ANALYSIS



Report No. RN589705

| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/061214 |
| | | Quote No. | : QT-00782 |
| | | Order No. | : LA77 |
| | | Date Sampled | : |
| | | Date Received | : 14-DEC-2006 |
| Attention | : sch4p4( 6) Personal | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : BRIAN WOODWARD | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N06/042925 | B4-4 | SOIL JOB 06253A 8/12/06 |
| N06/042928 | B7-2 | SOIL JOB 06253A 12/12/06 |
| N06/042932 | B7-6 | SOIL JOB 06253A 12/12/06 |
| N06/042936 | DUP05 | SOIL JOB 06253A 12/12/06 |

| Lab Reg No. | Units | N06/042925 | N06/042928 | N06/042932 | N06/042936 | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B4-4 | B7-2 | B7-6 | DUP05 | |
| Trace Elements | | | | | | |
| Arsenic | mg/kg | 11 | 12 | 9.9 | 8.7 | NT2_49 |
| Cadmium | mg/kg | < 0.5 | 1.7 | < 0.5 | 1.4 | NT2_49 |
| Chromium | mg/kg | 9.6 | 10 | 11 | 5.8 | NT2_49 |
| Copper | mg/kg | 24 | 28 | 19 | 21 | NT2_49 |
| Lead | mg/kg | 81 | 690 | 150 | 410 | NT2_49 |
| Mercury | mg/kg | < 0.2 | < 0.2 | < 0.2 | < 0.2 | NT2_49 |
| Nickel | mg/kg | 12 | 8.6 | 6.5 | 6.7 | NT2_49 |
| Zinc | mg/kg | 71 | 210 | 53 | 130 | NT2_49 |
| Total Solids | % | 88 | 86 | 85.9 | 84 | NT2_49 |

sch4p4( 6) Personal informatio

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

19-DEC-2006

All results are expressed on a dry weight basis.

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# REPORT OF ANALYSIS



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National Measurement Institute

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Job No: 06253A Order No: MB76

**NMI**
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Ph: (02) 9449 0111
Fax: (02) 9449 1653

Project Manager: SKW
Sampled By: MB
Results To: MB
Relinquished by: MB
Due Date: 15 dec0 6

| NMI Sample ID | Sample Reference | Sample Depths | Sample Type | No. of Jars/Vials | Date Sampled | TPH | BTEX | PAH | OC / OP | TOTAL PHENOLS | TOTAL CYANIDE | As, Cd, Cr, Cu ,Hg, Ni, Pb, Zn | OC Pesticides | PCB | | Cr (VI) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B12-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B13-1 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | | | | | | | | | | | |
| | B13-2 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B13-3 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | | | | | | | | | |
| | B13-4 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | | | | | | | | | |
| | B13-5 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B14-1 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | | | | | | | | | |
| | B14-2 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B14-3 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | | | | | | | | | |
| | B14-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | | | | | | | | | |
| | B15-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B15-2 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | | | | | | | | | | | |
| | B15-3 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | | | | | | | | | |
| | B15-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B16-1 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | | | | | | | | | | | |
| | B16-2 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | B16-3 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| | BV17-1 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | | | | | | | | | |
| | BV17-2 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | | | | | | | | | |
| | BV17-3 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | | | | | | | | | |
| TOTALS: | | | | | | | | | | | | | | | | | | | | | | | |

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Project Manager: SKW
Sampled By: MB
Results To: MB
Relinquished by: MB
Due Date: 15 dec0 6

| NMI Sample ID | Sample Reference | Sample Depths | Sample Type | No. of Jars/Vials | Date Sampled | TPH | BTEX | PAH | OC / OP | TOTAL PHENOLS | TOTAL CYANIDE | As, Cd, Cr, Cu ,Hg, Ni, Pb, Zn | OC Pesticides | PCB | Cr (VI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B1-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | |
| | B1-2 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B1-3 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B1-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B1-5 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B2-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B2-2 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B2-3 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B8-1 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | X | | |
| | B8-2 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B9-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B9-2 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | | | |
| | B10-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B10-2 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | | | |
| | B11-1 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B11-2 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | X | | |
| | B11-3 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B11-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B12-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B12-2 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B12-3 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| TOTALS: | | | | | | | | | | | | | | | |

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Project Manager: SKW
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Due Date: 15 dec0 6

| NMI Sample ID | Sample Reference | Sample Depths | Sample Type | No. of Jars/Vials | Date Sampled | TPH | BTEX | PAH | OC / OP | TOTAL PHENOLS | TOTAL CYANIDE | As, Cd, Cr, Cu, Hg, Ni, Pb, Zn | OC Pesticides | PCB | Cr (VI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B18-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | |
| | B18-2 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B18-3 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B18-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B18-5 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B19-1 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | B19-2 | | Soil | 1 | 6-Dec-06 | | | | | | | | | | |
| | B19-3 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | |
| | B19-4 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | Dup01 | | Soil | 1 | 6-Dec-06 | X | X | | | | | X | | | |
| | Dup02 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| | Dup03 | | Soil | 1 | 6-Dec-06 | | | | | | | X | X | | |
| | Dup04 | | Soil | 1 | 6-Dec-06 | | | | | | | X | | | |
| TOTALS: | | | | | | | | | | | | | | | |

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# APPENDIX D

## GW BORE SEARCH

(renamed File B for Disclosure Log)
File A


Release

# GROUNDWATER DATABASE

DATE 17/01/2007

## BORE CARD REPORT

REG NUMBER 134365

### REGISTRATION DETAILS

| | | | | | |
|---|---|---|---|---|---|
| OFFICE | Brisbane | BASIN | 1430 | LATITUDE | 27-29-28 |
| DATE LOG RECD | 08/NOV/06 | SUB-AREA | | LONGITUDE | 152-58-53 |
| D/O FILE NO. | | SHIRE | 1000-BRISBANE C. | EASTING | 498171 |
| R/O FILE NO. | | LOT | 3 | NORTHING | 6959179 |
| H/O FILE NO. | | PLAN | RP54441 | ZONE | 56 |
| | | ORIGINAL DESCRIPTION | sch4p4( 6) Per | ACCURACY | GPS |
| | | | | GPS ACC | 10 |
| GIS LAT | -27.4910072 | PARISH NAME | 2426-INDOOROOPILLY | | |
| GIS LNG | 152.9814858 | COUNTY | STANLEY | | |
| CHECKED | Y | PROPERTY NAME | SHANNON NOMINEES PTY LTD | | |
| | | FIELD LOCATION | 20 HARRYS ROAD, TARINGA | | |
| FACILITY TYPE | SF | DATE DRILLED | 12/10/2006 | | |
| STATUS | AD | DRILLERS NAME | sch4p4( 6) Personal info | | |
| ROLES | WS | DRILL COMPANY | DRILLPOWER | | |
| | | METHOD OF CONST. | ROTARY AIR | | |

| | |
|---|---|
| MAP-SCALE | |
| MAP-SERIES | |
| MAP-NO | |
| MAP NAME | |
| PROG SECTION | |
| PRES EQUIPMENT | |
| ORIGINAL BORE NO | |
| BORE LINE | - |
| POLYGON | |
| RN OF BORE REPLACE | |
| DATA OWNER | |
| CONFIDENTIAL | Y |

### LICENSE DETAILS

**** NO RECORDS FOUND ****

### CASING DETAILS

| PIPE | DATE | RECORD NUMBER | MATERIAL DESCRIPTION | MAT | SIZE (mm) | SIZE DESC | OUTSIDE DIAM (mm) | TOP (m) | BOTTOM (m) |
|---|---|---|---|---|---|---|---|---|---|
| A | 12/10/2006 | 1 | Cuttings or other fill between casing and hc | | | | | 5.00 | 42.00 |
| A | 12/10/2006 | 2 | Grout | | | | 200 | 0.00 | 5.00 |

### STRATA LOG DETAILS

| RECORD NUMBER | STRATA TOP (m) | STRATA BOT (m) | STRATA DESCRIPTION |
|---|---|---|---|
| 1 | 0.00 | 3.00 | YELLOW CLAY |
| 2 | 3.00 | 15.00 | BROKEN SHALE |
| 3 | 15.00 | 42.00 | HARD SHALE |

### STRATIGRAPHY DETAILS

**** NO RECORDS FOUND ****

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# GROUNDWATER DATABASE

DATE 17/01/2007

## BORE CARD REPORT

REG NUMBER 134365

### AQUIFER DETAILS

**** NO RECORDS FOUND ****

### PUMP TEST DETAILS PART 1

**** NO RECORDS FOUND ****

### PUMP TEST DETAILS PART 2

**** NO RECORDS FOUND ****

### BORE CONDITION

**** NO RECORDS FOUND ****

### ELEVATION DETAILS

**** NO RECORDS FOUND ****

### WATER ANALYSIS PART1

**** NO RECORDS FOUND ****

### WATER ANALYSIS PART 2

**** NO RECORDS FOUND ****

### WATER LEVEL DETAILS

**** NO RECORDS FOUND ****

### WIRE LINE LOG DETAILS

**** NO RECORDS FOUND ****

### FIELD MEASUREMENTS

**** NO RECORDS FOUND ****

### SPECIAL WATER ANALYSIS

**** NO RECORDS FOUND ****

### VALIDATION LOG - PART 1

**** NO RECORDS FOUND ****

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DATE 17/01/2007

# GROUNDWATER [redacted]TABASE

## BORE CARD R[redacted]ORT

REG NUMBER 134365

### VALIDATION LOG - PART 2

**** NO RECORDS FOUND ****

### GENERAL NOTES

**** NO RECORDS FOUND ****

### METERED USE

**** NO RECORDS FOUND ****

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BUTLER PARTNERS

# ADDITIONAL ENVIRONMENTAL SITE ASSESSMENT COMMERCIAL/RETAIL DEVELOPMENT CNR KEATING STREET AND MOGGILL ROAD INDOOROOPILLY

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**Prepared for**
Property Solutions (Australia) Pty Ltd

Project No. 06253A
April 2007

CONTAMINATED LAND SECTION
17 OCT 2007

RECEIVED
15 OCT 2007
EPA SOUTHERN REGION

GEOTECHNICAL AND GEO-ENVIRONMENTAL CONSULTANTS

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Release

BUTLER PARTNERS

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Drawing No. 2 Summary of Results Exceeding the EIL Criteria

Appendix A Current and Historical Titles and EPA Registers Search Response
Appendix B Bore Reports with Explanatory Notes
Appendix C Laboratory Test Result Sheets for Additional ESA


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# SECTION 1 - INTRODUCTION

## 1.1 Project

It is understood that the proposed development design allows for a mix of one and two level retail and commercial uses, over a two level basement. The site is currently used as a car yard. However, part of the site has formerly been used as a Service Station for which it is listed on the Queensland Environmental Protection Agency's (EPA's) Environmental Management Register (EMR).

This Additional Environmental Site Assessment (ESA) follows a Stage 1 ESA undertaken by Butler Partners Pty Ltd which indicated that contamination was present in fill materials across the site.

Details of the Stage 1 ESA are provided in Butler Partners' report:

*Stage 1 Environmental Site Assessment*
*Commercial/Retail Development*
*Cnr Keating Street and Moggill Road*
*Indooroopilly*
March 2007

This report should be read in conjunction with the above document.

## 1.2 Proposed Scope of Work

Based on the result of the Stage 1 ESA it was proposed to further investigate the extent of contamination identified across the site. The following scope of work was proposed:

- drilling of 8 bores to delineate the vertical and horizontal extent of Pb contamination identified in bore 7;
- drilling of 3 bores within the south western portion of the site (used car lot); and
- preparation of a report detailing the investigation undertaken, the results and any further investigation and remedial action that may be required.

## 1.3 Commission

Based on the proposed nature of the development, the anticipated subsurface conditions and the scope of work, a fee to undertake the investigation was presented in a proposal of 21 September 2006. Butler Partners Pty Ltd were subsequently commissioned by Property Solutions (Australia) Pty Ltd to conduct the additional environmental investigation as proposed.

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## 1.4 Technical Framework

In general, this Additional ESA has been carried out in accordance with:

- *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland,* May 1998;
- *Draft Investigation Thresholds for Underground Storage Tanks,* January 1999;
- Australian Oil Industry Environmental Guidelines Working Group document *'Guidelines for the Management of Petroleum Hydrocarbon Impacted Land',* April 1999;
- The Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council *Guidelines for the Assessment and Management of Contaminated Sites (the ANZECC/NHMRC Guidelines)* January 1992;
- Australian Standard AS 4482.2-2005 *Guide to the Sampling and Investigation of Potentially Contaminated Soil – Part 1: Non-volatile and Semi-volatile compounds; and*
- *National Environmental Protection (Assessment of Site Contamination) Measure* 1999 (National Environment Protection Council NEPM).

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# SECTION 2 - THE SITE

## 2.1 Site Identification

Details of the site are given in Table 1. Copies of the Current Land Title and Registered Plan information are presented in Appendix A.

**Table 1: Summary of Registered Plan and Current Title Search Information**

| | |
|---|---|
| **Real Property Description** | Parish of Indooroopilly, County of Stanley |
| | Lot 1 on RP154325 |
| **Registered Owner** | Denmac Nominees Pty Ltd |
| **Current Land Use (At the time of investigation)** | Leased by Brisbane RJV Pty Ltd |
| **Local Government** | Brisbane City |
| **Under Caveat** | Dupont Properties (Qld) Pty Ltd (2003) No. 706419579 |

## 2.2 Site Description

The site is located on the large roundabout at the intersection of Moggill Road, Coonan Street, and Keating Street. At the time of the investigation, the site was occupied by a car dealership. Single storey buildings were located on the south-eastern half of the site, and a small single storey building existed at the northern end of the site. Concrete paved areas existed throughout the central area of the site, surrounded by grassed areas, which bordered on to the surrounding roads. Ground surface levels on the western half of the site generally sloped downwards towards the south-west, and on the eastern half of the site ground surface levels sloped towards the south and south-east. A steep rock face fronts the south-eastern corner of the site where site surface levels are approximately 4.5m above Coonan and Keating Streets.

At the time of the investigation, the site was leased for a vehicle viewing and sales yard with associated office space (refer to Photographs 1 and 2).




Photograph 1: View from the south-western corner of the site looking east

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Photograph 2: View from the northern corner of the site looking south

## 2.3 Government Records

A search of the EPA's EMR and Contaminated Land Register (CLR) indicates that Lot 1 on RP154325 is listed on the EMR but is NOT listed on the CLR.

## 2.4 Published Information

### 2.4.1 Fire Ants

Review of the Department of Primary Industries *Fire Ant Eradication and Surveillance Zone Plan* updated March 2005, indicates the site is not located in a Fire Ant infested area.

### 2.4.2 Geology

Reference to the Geological Survey of Queensland's 1:31,680 Series City of Brisbane Sheet, indicates that the site is located in an area mapped as underlain by Bunya Phyllite, which comprises phyllite with minor phyllonite.

## 2.5 Hydrogeology/Hydrology

A search conducted by NRM found that one bore was drilled approximately 800m to the north-east of the site at 20 Harrys Road, Taringa. There was no water reported to a maximum depth of 42m, with yellow clay reported to three metres, then broken and hard shale. The bore was reportedly backfilled with cuttings and grout.

A study of the hydrogeology of the site was not conducted as part of this investigation. Groundwater flow beneath the site is anticipated to be to the south, toward the Brisbane River located approximately 800m away.

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## 2.6 Additional Information

Mr Bruce Kelly from Denmac Nominees, the current owner of the site, oversaw the construction of the current facilities, in particular he was able to provide information on the following:

- any fill material utilised in the construction of the current facility was sourced from onsite;
- there is very little fill on the site except where it has been locally used to level the building pad on which the showroom and offices have been constructed;
- the former service station was located in the northern corner of the site with the bowsers and canopy facing the Moggill Road and Coonan Street intersection;
- the UFSTs were located to the south of the service station buildings and forecourt; and
- the UFSTs, fuel bowsers and associated pipework have been removed.

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# SECTION 3 - SITE HISTORY

## 3.1 Aerial Photograph Review

1946 The site is approximately triangular in shape and bound by Moggill Road, Coonan Street and Keating Street. A single structure is located in the south-west corner of the site while a cluster of larger structures is visible in approximately the centre of the site. The remainder of the site appears vacant with a few isolated trees. The surrounding area is occupied by residential properties.



Photograph 3: Extract from 1946 Aerial Photograph

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1964 The isolated structure located in the south-west corner is the only structure remaining from the photograph taken in 1946, with the buildings in the centre having been demolished. A cluster of three small buildings now occupies the northern portion of the site with the remainder of the site appearing vacant.



Photograph 4: Extract from 1964 Aerial Photograph

1974 The site is similar to that seen in the photograph taken in 1964 except the isolated building located in the south-west corner has been demolished. A number of cars are using the site for informal parking.



Photograph 5: Extract from 1974 Aerial Photograph

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1981 A large split level building (show room observed today) occupies the southwest corner of the site with frontage on Coonan Street and Keating Street. The south-west and northern portions of the site are paved and used for the storage and display of additional motor vehicles. One of the three buildings that occupied the northern portion of the site in 1974 remains in the centre of the northern display yard. A retractable shade structure appears to be present over much of the south-west display yard.



Photograph 6: Extract from 1981 Aerial Photograph

2002 The site appears similar to that seen in the photograph taken in 2002



Photograph 7: Extract from 2002 Aerial Photograph

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### 3.2 Historical Title Search

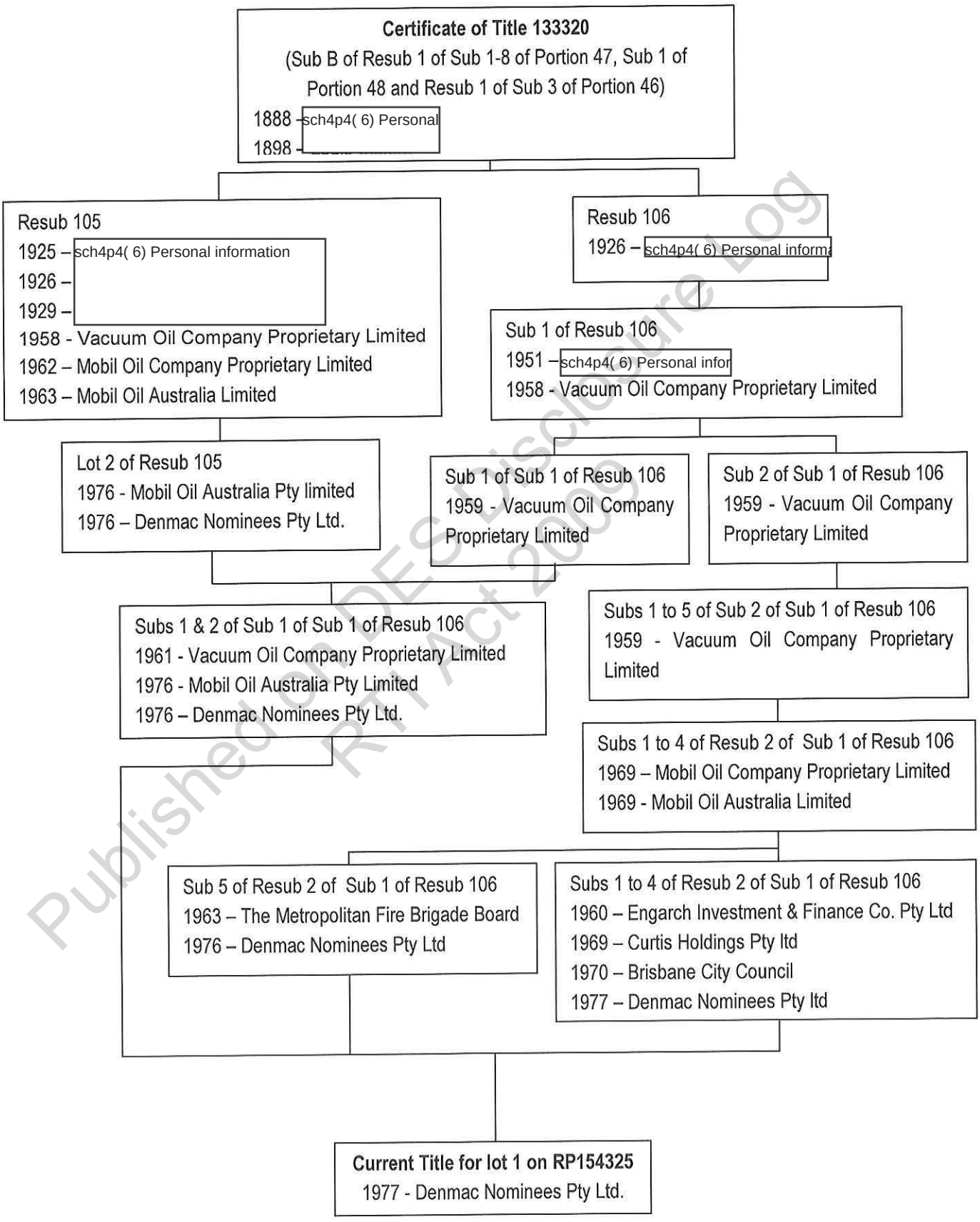
The Department of Natural Resources (DNR) carried out a historical title search for Lot 1 RP154325. Historical titles were traced for the allotments back to the year 1888.

Review of the historical Certificates of Title indicate that Lot 1 RP154325 was owned by individuals until it was purchased by The Vacuum Oil Company Proprietary Limited in 1958. Mobil Oil gradually resumed subdivision portions in 1962, 1969 and 1976. Denmac Nominees purchased the Subdivision 5 in 1976 from the Metropolitan Fire Brigade Board and Subdivisions 1 to 4 from the Brisbane City Council.

Demac Nominees Pty Ltd was the owner of the lot at the time of the current title searches 13 November 2006. A copy of the titles are provided in Appendix A, with a summary of the historical Certificates of Title reviewed provided in Figure 1.

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**Figure 1: Site Occupancy Flow Chart**




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# SECTION 4 - FIELDWORK

## 4.1 Drilling and Sampling Methods

The additional ESA investigation was undertaken on 15 March 2007 and comprised the drilling and sampling of three (3) bores to a depth of 3.0m (Bores 20, 21 & 22) within the south western corner of the site (used car yard) and eight (8) bores to a depth of 2.5m (Bores 23 to 30) in the vicinity of bore 7. Bores 23 to 26 were drilled radially approximately 2.5m from bore 7, with bores 27 to 30 drilled radially approximately 5m from bore 7 as shown by Drawing No. 1C. Bores were drilled using a Geoprobe 6620DT operating push tubes, with strata identification was from material returned to the surface.

To minimise the potential for cross contamination of samples, each environmental sample was collected using disposable gloves, which were replaced between each sample.

Samples were placed immediately into laboratory prepared jars that were sealed, labelled with a unique identifier and placed into a chilled ice chest. Each sample was immediately recorded on a chain of custody register, which was used to track the movement of the samples. The samples remained in the chilled ice chest and were transported to the analytical laboratory for analysis.

## 4.2 Test Locations and Supervision

Bore locations were determined on site by direct measurement from existing site features and are shown approximately on Drawing No. 1, attached. Ground surface levels were determined by interpolation of contours presented on PMM Brisbane Pty Ltd Detail Survey, Drawing Reference 21454.

An experienced geo-environmental scientist set out the test locations, logged the stratigraphy encountered in the bores and directed the in-situ sampling and testing program

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# SECTION 5 - INVESTIGATION RESULTS

## 5.1 Results

The subsurface conditions encountered at the bore locations are given in detail on Bore Reports presented in Appendix B, using classification and descriptive terms defined in attached notes. For completeness results from both this Additional ESA and the Stage 1 ESA have been combined and will be discussed below.

## 5.2 Groundwater

Groundwater was not encountered during push tube or auger drilling of the Additional ESA or the Stage 1 ESA. The depth to free water in a standpipe installed in Bore 5 at the completion of drilling was approximately 5.1m (i.e. RL 21.1m), measured 5 days and 8 days after standpipe installation.

It is considered that groundwater levels could vary considerably across the site, and would be dependent upon seasonal affects and the prevailing weather. It is also considered highly likely that 'perched' groundwater conditions could also occur in areas of fill across the site, particularly after prolonged periods of rain.

It should be noted that the groundwater level would be expected to vary both seasonally and with the prevailing weather conditions. It is recommended that groundwater presence/levels be confirmed if construction is undertaken during/following wet weather or if a significant period of time elapses between the investigation and construction.

## 5.3 Laboratory Testing

In general, soil samples from each 0.5m depth interval and/or from each strata unit down the soil profile until natural soils were encountered, were submitted to National Measurement Institute, a laboratory registered by NATA for the analyses required. Based on site history and fieldwork observations soil samples were submitted for a combination of the following analyses:

- heavy metals;
- monocyclic aromatic hydrocarbons as benzene, toluene, ethyl benzene and xylenes (BTEX);
- total petroleum hydrocarbons (TPH); and
- organochlorine pesticides.

Soil samples with laboratory results exceeding the adopted assessment criteria and having the greatest concentration of either heavy metals were submitted for Total Characteristic Leaching Procedure (TCLP) analysis to simulate a landfill environment to enable assessment of the potential leachability of the contaminants from the soil matrix in each scenario.

Tables 2 and 3 summarise the analytical results obtained during both the Stage 1 and Additional ESAs with laboratory reports for this Additional ESA only provided in Appendix C.



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## 5.4 Subsurface Conditions

The general stratigraphy encountered across the site consisted of subsurface conditions comprising 0.4m to 4.1m depth of fill, overlain by a concrete slab at some bore locations. The fill was underlain by phyllite (rock). The bores were terminated in the phyllite between 7.35m and 9.98m depth.

## 5.5 Quality Assurance/Quality Control (QA/QC) Methods

The samples were dispatched under Chain of Custody documentation provided in Appendix C in order to identify sample movements. The laboratory's internal QA/QC measures included spike analyses, method blanks and duplicates. The laboratory's internal QA/QC results for each batch are included in the laboratory reports.

To ensure the integrity of data transfer the electronic data supplied by the laboratory has been used to develop the results summary tables.

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Client: Property Solutions (Australia) Pty Ltd
Project: Proposed Commercial Development
Location: Cnr Keating Street & Moggill Road, Indooroopilly

Project Number: 06253A
Date: April 2007

BUTLER PARTNERS

## Table 2 - Analytical Results for Soils (Total Concentrations)

| Test Duplicate | Sample Number | Sample Depth | Material Type | Organics (mg/kg) | | | | | | | | | | | | | | Inorganics (mg/kg) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TPH | | | | BTEX | | | | Pesticides | | | | | | Metals | | | | | | | |
| | | | | $C_6$-$C_9$ | $C_{10}$-$C_{14}$ | $C_{15}$-$C_{28}$ | $C_{29}$-$C_{36}$ | Benzene | Toluene | Ethyl-benzene | Xylene | Total OPs | Aldrin & Dieldrin | Chlordane | DDT | Heptachlor | | As | Cd | Total Cr | Cu | Pb | Hg | Ni | Zn |
| **Background Levels** | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | 0.2-30 | 0.04-2 | 0.5-110 | 1-190 | <2-200 | 0.001-0.1 | 2-400 | 2-180 |
| **EPA EIL (mg/kg)** | | | | 100 [1] | 100 [1] | 1000 [1] | 1000 [1] | 1 | - | - | - | - | 0.2 | - | 0.2 | - | | 20 | 3 | 50 | 60 | 300 | 1 | 60 | 200 |
| **EPA HIL-A (mg/kg)** | | | | - | - | - | - | - | - | - | - | - | 10 | 50 | 200 | 10 | | 100 | 20 | 12% | 1,000 | 300 | 15 | 600 | 7000 |
| **Phytotoxicity Levels** | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | 200 | - | - | - | 400 |
| **EPA HIL-F (mg/kg)** | | | | - | - | - | - | - | - | - | - | - | 50 | 250 | 1,000 | 50 | | 500 | 100 | 60% | 5,000 | 1,500 | 75 | 3000 | 35 000 |
| **Landfill Criteria - Day Cover (mg/kg)** | | | | 500 | 5,000 | 10,000 | 10,000 | 10 | 500 | 300 | 250 | 10 | 5 | 5 | 5 | 5 | | 200 | 40 | 240,000 | 2,000 | 600 | 30 | 600 | 14000 |
| **Landfill Criteria - Maximum (mg/kg)** | | | | 1,000 | 10,000 | 50,000 | 50,000 | 20 | 1,000 | 600 | 500 | 50 | 50 | 50 | 50 | 50 | | - | - | - | - | - | - | - | - |
| **Laboratory Level of Reporting (mg/kg)** | | | | 25 | 50 | 100 | 100 | 0.5 | 0.5 | 0.5 | 1.0 | 1.4 | 0.2 | 0.2 | 0.2 | 0.2 | | 1.0 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| - | B1-1 | 0.14-0.22 | Concrete/ Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 5.6 | <0.5 | 11 | 5.6 | 2 | <0.2 | 7.9 | 17 |
| - | B1-4 | 0.95-1.5 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 12 | <0.5 | 13 | 36 | 28 | <0.2 | 18 | 79 |
| - | B2-1 | 0.1-0.5 | Concrete/ Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 17 | 39 | 44 | <0.2 | 20 | 91 |
| - | B2-3 | 0.8-1.0 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 19 | 41 | 30 | <0.2 | 31 | 79 |
| Blind | B2-3 | 0.8-1.0 | Phyllite | - | - | - | - | - | - | - | - | - | | | | | | 15 | <0.5 | 21 | 41 | 40 | <0.2 | 32 | 82 |
| - | B4-1 | 0.1-0.2 | Concrete/ Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 1 | <0.5 | 5.9 | 3.4 | 2 | <0.2 | 5.6 | 13 |
| - | B4-3 | 0.5-0.95 | Phyllite | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 8.9 | <0.5 | 7 | 16 | 110 | <0.2 | 5.3 | 57 |
| - | B4-4 | 1.0-1.3 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 11 | <0.5 | 9.6 | 24 | 81 | <0.2 | 12 | 71 |
| - | B6-1 | 0.5-0.65 | Phyllite | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 8.3 | <0.5 | 12 | 36 | 31 | <0.2 | 33 | 120 |
| - | B7-1 | 0.5-0.9 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 11 | <0.5 | 7.4 | 30 | 22 | <0.2 | 16 | 66 |
| - | B7-2 | 0.9-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 12 | 2 | 10 | 28 | 690 | <0.2 | 8.6 | 210 |
| - | B7-4 | 1.5-2.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | <LOR | <LOR | <LOR | <LOR | | 8.6 | 2 | 11 | 23 | 520 | <0.2 | 6.2 | 140 |
| Blind | B7-4 | 1.5-2.0 | Fill | - | - | - | - | - | - | - | - | - | | | | | | 8.7 | 1 | 5.8 | 21 | 410 | <0.2 | 6.7 | 130 |
| - | B7-6 | 2.5-3.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 9.9 | <0.5 | 11 | 19 | 150 | <0.2 | 6.5 | 53 |
| - | B7-7 | 3.0-3.5 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 8.4 | <0.5 | 12 | 16 | 110 | <0.2 | 5.6 | 44 |
| - | B7-9 | 3.8-4.0 | Fill | | | | | | | | | - | <LOR | <LOR | <LOR | <LOR | | 10 | <0.5 | 16 | 21 | 39 | <0.2 | 8.2 | 55 |
| - | B8-1 | 0.1-0.5 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | <LOR | <LOR | <LOR | <LOR | | 19 | <0.5 | 12 | 51 | 27 | <0.2 | 25 | 90 |
| - | B8-2 | 0.5-0.85 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 14 | <0.5 | 5.6 | 40 | 29 | <0.2 | 22 | 98 |
| - | B9-1 | 0.1-0.3 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 6.4 | <0.5 | 13 | 20 | 12 | <0.2 | 16 | 50 |
| - | B9-2 | 0.3-0.5 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 11 | <0.5 | 6.1 | 31 | 23 | <0.2 | 10 | 55 |
| - | B10-1 | 0.1-0.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 11 | 36 | 25 | <0.2 | 23 | 82 |
| - | B10-2 | 0.5-0.8 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 16 | <0.5 | 6.5 | 32 | 34 | <0.2 | 13 | 67 |
| - | B11-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | <LOR | <LOR | <LOR | <LOR | | 16 | <0.5 | 5.7 | 31 | 34 | <0.2 | 11 | 66 |
| - | B11-4 | 1.7-2.0 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 3.3 | <0.5 | 1.9 | 16 | 11 | <0.2 | 4.3 | 26 |
| - | B12-1 | 0.1-0.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 8 | 35 | 44 | <0.2 | 16 | 81 |
| - | B12-3 | 1.0-1.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 9.3 | <0.5 | 7.7 | 14 | 18 | <0.2 | 3.7 | 24 |
| - | B12-4 | 1.6-1.8 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 20 | <0.5 | 10 | 28 | 32 | <0.2 | 15 | 76 |
| - | B13-1 | 0.1-0.5 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 15 | <0.5 | 9.6 | 38 | 30 | <0.2 | 28 | 86 |
| - | B13-2 | 0.5-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 6.2 | 43 | 32 | <0.2 | 19 | 82 |
| - | B13-5 | 2.1-2.3 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 21 | <0.5 | 9.8 | 26 | 37 | <0.2 | 11 | 50 |
| - | B14-2 | 0.5-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 11 | <0.5 | 13 | 27 | 41 | <0.2 | 9.8 | 99 |
| - | B14-4 | 1.5-1.7 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 14 | <0.5 | 13 | 34 | 35 | <0.2 | 25 | 91 |
| - | B15-1 | 0.1-0.4 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 7.6 | <0.5 | 10 | 12 | 16 | <0.2 | 11 | 40 |
| - | B15-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 2.2 | <0.5 | 7.2 | 5.5 | 3.8 | <0.2 | 8.7 | 23 |
| Blind | B15-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 2.5 | <0.5 | 12 | 4.8 | 4.2 | <0.2 | 11 | 25 |
| - | B15-3 | 1.0-1.2 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 2.2 | <0.5 | 8.7 | 4.6 | 2.7 | <0.2 | 9.4 | 20 |
| - | B15-4 | 1.2-1.3 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 12 | <0.5 | 9.2 | 24 | 35 | <0.2 | 26 | 86 |
| - | B16-1 | 0.1-0.4 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | - | | 2.6 | <0.5 | 8.4 | 17 | 29 | <0.2 | 5.2 | 41 |
| - | B16-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 15 | <0.5 | 5.6 | 24 | 22 | <0.2 | 7.3 | 41 |
| Blind | B16-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 16 | <0.5 | 4.6 | 35 | 33 | <0.2 | 14 | 50 |
| - | B16-3 | 0.9-1.2 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 13 | 32 | 39 | <0.2 | 30 | 95 |
| - | B17-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 14 | <0.5 | 10 | 29 | 110 | <0.2 | 13 | 81 |
| - | B17-3 | 1.0-1.2 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 13 | <0.5 | 3.6 | 30 | 36 | <0.2 | 6.8 | 42 |
| - | B18-1 | 0.3-0.5 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 15 | <0.5 | 13 | 24 | 35 | <0.2 | 11 | 51 |
| - | B18-4 | 1.6-1.9 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 11 | <0.5 | 8.1 | 29 | 30 | <0.2 | 16 | 65 |
| - | B18-5 | 2.0-2.3 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 22 | <0.5 | 3.7 | 38 | 27 | <0.2 | 7.1 | 37 |
| - | B19-1 | 0.1-0.4 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 14 | <0.5 | 7.8 | 24 | 35 | <0.2 | 13 | 57 |
| - | B19-3 | 1.0-1.3 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 8.5 | <0.5 | 6.3 | 25 | 54 | <0.2 | 13 | 71 |
| Blind | B19-3 | 1.0-1.3 | Fill | - | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | | 16 | <0.5 | 4 | 35 | 30 | <0.2 | 26 | 87 |
| - | B19-4 | 1.5-1.6 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | - | | 4.1 | <0.5 | 8 | 15 | 15 | <0.2 | 12 | 48 |
| - | B20-2 | 0.4-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 15 | <0.5 | 9.1 | 35 | 23 | <0.2 | 21 | 97 |
| - | B20-4 | 1.8-2.2 | Fill | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | <LOR | | 20 | 12 | 9.7 | 75 | 1760 | <0.2 | 8.5 | 2650 |
| - | B21-1 | 0.1-0.3 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 2.3 | <0.5 | 7.7 | 4.1 | 2.4 | <0.2 | 7.7 | 16 |
| - | B21-3 | 0.6-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 18 | <0.5 | 20 | 24 | 18 | <0.2 | 7.3 | 51 |
| - | B22-2 | 0.3-0.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | 7.2 | <0.5 | 12 | 19 | 21 | <0.2 | 14 | 77 |
| - | B22-3 | 0.6-1.0 | Fill | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <LOR | <LOR | | 16 | <0.5 | 14 | 32 | 19 | <0.2 | 13 | 61 |
| - | B23-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 120 | - | - | - |
| - | B23-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 95 | - | - | - |
| - | B23-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 15 | - | - | - |
| - | B24-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 38 | - | - | - |
| - | B24-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 86 | - | - | - |
| - | B24-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 16 | - | - | - |
| - | B25-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 39 | - | - | - |
| - | B25-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 20 | - | - | - |
| - | B25-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 13 | - | - | - |
| - | B26-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 350 | - | - | - |
| - | B26-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 180 | - | - | - |
| - | B26-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 14 | - | - | - |
| - | B27-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 19 | - | - | - |
| - | B27-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 39 | - | - | - |
| - | B27-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 12 | - | - | - |
| - | B28-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 1310 | - | - | - |
| - | B28-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 180 | - | - | - |
| - | B28-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 13 | - | - | - |
| - | B29-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 1310 | - | - | - |
| - | B29-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 32 | - | - | - |
| - | B29-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 11 | - | - | - |
| - | B30-1 | 0.8-1.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 38 | - | - | - |
| - | B30-2 | 1.5-1.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 38 | - | - | - |
| - | B30-3 | 2.0-2.5 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | 8.7 | - | - | - |

NOTES:
- 1 — Analyte exceeds the EIL Guideline Criteria
- 1 — Analyte exceeds the HIL-A Guideline Criteria
- 1 — Analyte exceeds the HIL-F Guideline Criteria
- <LOR — Below the limit of reporting
- 100 [1.] — QLD EPA Draft Investigation Thresholds for Underground Storage Tanks - January 1999
- - — Not analysed

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| | |
|---|---|
| Client: | Property Solutions (Australia) Pty Ltd |
| Project: | Proposed Commercial Development |
| Location: | Cnr Keating Street & Moggill Road, Indooroopilly |
| Project Number: | 06253A |
| Date: | April 2007 |

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## Table 3 - TCLP Results for Soils (Total Concentrations)

| Test Duplicate | Sample Number | Sample Depth (m) | Material Type | Inorganics (mg/L) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Metals | | | |
| | | | | Cd | Total Cr | Pb | Zn |
| **Landfill Criteria - Unlined (mg/L)** | | | | **0.1** | **0.5** | **0.5** | **50** |
| **Landfill Criteria - Lined (mg/L)** | | | | **0.5** | **5** | **5** | **500** |
| **Laboratory Level of Reporting (mg/L)** | | | | **0.005** | **0.01** | **0.01** | **0.1** |
| | | | | | | | |
| - | B20-4 | 1.8-2.2 | Fill | 0.02 | 0.017 | **7.8** | 1.2 |
| - | B26-1 | 0.8-1.0 | Fill | - | - | 0.3 | - |
| - | B29-1 | 0.8-1.0 | Fill | - | - | **0.64** | - |

| NOTES: | | |
|---|---|---|
| | **1** | Analyte exceeds the Unlined Landfill Guideline Criteria |
| | **1** | Analyte exceeds the Lined Landfill Guideline Criteria |
| | <LOR | Below the limit of reporting |
| | - | Not analysed |

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# SECTION 6 - ENVIRONMENTAL DISCUSSION

## 6.1 Contaminated Land

### 6.1.1 Potential Contamination Sources

Potentially contaminating activities identified in the site history review and observations made on site include:

- use of the site as a former service station;
- former storage of fuel in UFSTs; and
- filling of this site.

Potential contaminants of concern associated with the identified potentially contaminating activities listed above comprise:

- heavy metals;
- monocyclic aromatic hydrocarbons as benzene, toluene, ethyl benzene and xylenes (BTEX);
- total petroleum hydrocarbons (TPH); and
- pesticides.

### 6.1.2 Results and Assessment Criteria

To assess the suitability of the site for its proposed use, assessment criteria is required for heavy metals, TPH, BTEX and OCPs.

**Heavy Metals, and OCPs**

Assessment of heavy metal and OCP soil contamination is based on the Queensland EPA's *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland*, May 1998 (*'the Guidelines'*).

Investigation levels for contaminants are presented in the Guidelines for a range of categories:

- *Background levels* provide levels of contaminants which would be expected to occur naturally in soils in Queensland;
- *Environmental Investigation Levels (EILs)* are levels below which contaminants in soils are not considered to adversely impact the environment;
- *Phytotoxicity Investigation Levels (PILs)* are levels below which contaminants in soil are not considered toxic to plant life; and
- *Health-based Investigation Levels (HILs)* are levels below which contaminants in soils are not considered to adversely impact human health. HILs are divided into six exposure settings depending upon proposed land-use type. Exposure settings range from standard residential settings with garden accessible soil, to commercial/industrial type exposure that includes offices/shops, factories and industrial sites.

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Results are assessed against EILs by the Queensland EPA to determine a property's status on the EMR. HIL-A criteria for PAH and phytotoxicity levels for Cu and Zn are suitable for use as clean fill criteria for material exported from a site. HIL Exposure Setting 'F' (HIL-F), which includes 'Commercial/Industrial: includes premises such as shops and offices as well as factories and industrial sites" has been selected as appropriate in this case for long-term protection of human health, assuming on-going use of the site for industrial purposes. Each of these criteria is presented in Table 2.

**TPH and BTEX**

Assessment of TPH and BTEX soil contamination is based on Queensland EPA's *Draft Investigation Threshold for Underground Storage Tanks* – January 1999.

The threshold concentrations for both TPH and BTEX are based on suitable levels for sensitive land use.

### 6.1.3 Comparison of Results to Assessment Criteria

The results of the laboratory analyses for both this Additional ESA and the Stage 1 ESA have been compared with the assessment criteria and the results are summarised below. A summary of results exceeding the adopted guideline criteria is presented in Drawing No. 2.

#### *6.1.3.1 Metals*

- Arsenic (As) – two (2) of the fifty six (56) samples tested returned concentrations above the EIL criterion, with all samples below the HIL-A criterion;
- Cadmium – one (1) of the fifty six (56) samples tested returned concentrations above the EIL criterion, with all samples below the HIL-A criterion;
- Chromium, Mercury and Nickel (Cr, Hg & Ni) – all of the fifty six (56) samples tested returned concentrations below the EIL criterion;
- Copper (Cu) - one (1) of the fifty six (56) samples tested returned concentrations above the EIL criterion, with all samples below the HIL-A criterion;
- Lead (Pb) – seven (7) of the eighty (80) samples tested returned concentrations above the EIL/HIL-A criterion, with one of these samples recording a concentration above the HIL-F criterion; and
- Zinc (Zn) – two of the fifty six (56) samples tested returned concentrations above the EIL criterion, with one of these samples recording a concentration above the HIL-A criterion;

#### *6.1.3.2 Total Petroleum Hydrocarbons (TPH)*

All ten (10) samples submitted for TPH analysis were below the laboratory limit of reporting.

#### *6.1.3.3 Benzene, Toluene, Ethyl benzene and Xylene (BTEX)*

All ten (10) samples submitted for BTEX analysis were below the laboratory limit of reporting.

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*6.1.3.4 Organochlorine Pesticides and Organophosphorus Pesticides (OC/OP)*

- OC Pesticides - all sixteen (16) samples tested for OCs returned concentrations below the laboratory's Limit of Reporting (LOR); and
- OP Pesticides – both of the two (2) samples tested for OPs returned concentrations below the laboratory's LOR.

*6.1.3.5 Leachability*

- The TCLP analysis conducted under acidic conditions for Cadmium, Chromium and Zinc indicates that leachability of Cadmium, Chromium and Zinc from the soil matrix in a simulated landfill scenario is below the unlined landfill acceptance criteria indicating that, if the soil were to be disposed to landfill it would be classified for unlined landfill disposal; and
- The TCLP analysis conducted under acidic conditions for Lead indicates that leachability of Lead from the soil matrix in a simulated landfill scenario is above the lined landfill acceptance criteria in sample B20-4, above the unlined landfill acceptance criteria in samples B26-1 and below the unlined landfill acceptance criteria in sample B29-1, indicating that, if the soil were to be disposed to landfill it would be classified for a combination of unlined, lined and treatment/monofill landfill disposal.

## 6.2 Quality Assurance/Quality Control (QA/QC) Methods

The samples were dispatched under Chain of Custody documentation provided in Appendix C in order to identify sample movements. To ensure the integrity of data transfer the electronic data supplied by the laboratory has been used to develop the results summary tables.

Data quality is assessed with respect to completeness, accuracy, precision, sensitivity, laboratory blanks, holding times, field duplicates and representativeness. The QA parameters are discussed in what follows as indicators of data quality.

### 6.2.1 Completeness

The following information is required to check for completeness of data sets:

- chain-of-custody forms (signed by Butler Partners and the laboratory);
- sample receipt forms;
- all sample results reported;
- all blank data reported;
- all lab duplicates reported and relative percent differences (RPDs) calculated;
- all surrogate spike data reported;
- all matrix spike and matrix spike duplicate (MS/MSD) data reported and RPDs calculated; and
- NATA stamp on reports.

The results of this check indicated that required documentation and data has been reported on NATA approved reports.

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### 6.2.2 Accuracy

Accuracy is a measure of the agreement between an experimental determination and the true value of the parameter being measured. The determination of accuracy can be achieved through the analysis of known reference materials or assessed by the analysis of matrix spikes. Spiking of reference materials into an actual sample matrix is the preferred technique because it provides a measure of the matrix effects on the analytical accuracy. Accuracy is measured in terms of percentage recovery as defined by the following equation:

$$\%R = \frac{SSR - SR}{SA} X\ 100$$

where: %R = percentage recovery of the spike
SSR = spiked sample result
SR = sample result (native)
SA = spike added

Laboratory personnel calculate percentage recoveries of spiked compounds, which are evaluated against control or acceptance limits taken from the appropriate NATA approved method. If the spike recovery for a sample does not fall within the prescribed control limits, laboratory based corrective action is taken, although the sample is not necessarily reanalysed.

Surrogate spikes consist of spiking non-target compounds into the sample prior to analysis. The spiked compounds are expected to behave during analysis in the same way as the target compounds. Every sample is spiked prior to extraction or analysis with surrogate compounds that are representative of the analysis. If surrogate spike recovery does not meet the prescribed control limits, samples are generally reanalysed.

Matrix spikes and matrix spike/matrix spike duplicates (MS/MSDs) are analysed at a frequency of one in 10 samples or one per analytical batch, whichever is more frequent. Matrix spike/matrix spike duplicates are analysed by splitting a field sample. Each portion is spiked with known quantities of the target compound in order to ascertain the effects of the specific sample matrix on the recovery of analytes.

The sample batch may contain samples from other sources. Therefore, MS/MSDs may be analysed on other samples from the batch or on a 'clean' matrix (eg distilled water). However, the laboratory's QA/QC procedures require all batch MS/MSDs to conform to the prescribed criteria. The laboratory may report this analysis as laboratory control samples, which may be used to assess the laboratory's methods and procedures.

According to guidelines, sample results are qualified when a matrix spike recovery is below or above the QA acceptance criteria. Typically, results are qualified when percentage recovery is below QA acceptance criteria, indicating that sample results may be biased low. However, results are also qualified when percentage recovery is above QA acceptance criteria, indicating that sample results may be biased high.

The laboratory reports indicated that analyses met acceptance criteria.

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### 6.2.3 Precision

Precision is a measure of the ability to reproduce results, and is assessed on the basis of agreement between a set of replicate results obtained from duplicate analyses. The precision of a duplicate determination can be measured as relative percentage difference (RPD), and is calculated from the following equation:

$$RPD = \left[ \frac{X1 - X2}{\left( \frac{X1 + X2}{2} \right)} \right] \times 100$$

where: X1 is the first duplicate value
X2 is the second duplicate value

Laboratory personnel calculate the RPDs of laboratory duplicates and matrix spike/matrix spike duplicates. Control or acceptance limits are taken from the appropriate method. If the RPD for a sample does not fall within the control limits, laboratory based corrective action is taken; however, the sample is not necessarily reanalysed. All laboratory duplicates and matrix spike/matrix spike duplicate RPDs were reported within prescribed limits.

As previously noted, a laboratory batch may contain samples from other sources. Therefore, laboratory duplicates and MS/MSDs may be analysed on other samples from the batch. However, the laboratory's QA/QC procedures require all batch laboratory duplicates and MS/MSDs to conform to prescribed criteria. This was achieved for this batch of samples.

### 6.2.4 Sensitivity

Sensitivity criteria are used to monitor achievement of quantification using method detection limits. Method detection limits depend on the method of analysis, the instrument's ability to measure analytes and the sample matrix; in particular, background interferences.

When interferences are present in the sample, a loss of sensitivity can occur resulting in an increase in the method detection limit. In some instances (e.g. where one or more compounds have particularly high concentrations) the sample must be diluted for analysis. This increases the method detection limit by the dilution factor.

Method detection limits for soil/sediments are based on 'wet weight'. Actual detection limits are calculated on a 'dry weight' basis and are higher. The detection limits achieved by the laboratory were below the site criteria for all analytes.

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### 6.2.5 Laboratory blanks

Laboratory blanks monitor externally introduced contaminants that potentially derive from glassware, cleaning reagents and digestion reagents during the analysis process. The blank consists of water and digestion reagents prepared in the laboratory. The laboratory blank is treated as a sample in the laboratory, going through the same sample preparation and analysis procedures as corresponding samples.

To meet the QC acceptance criteria the laboratory blanks should have no detectable concentrations of the target compounds. The laboratory blank results are presented in the laboratory analytical reports. All laboratory blank results were reported within prescribed acceptance criteria.

### 6.2.6 Holding times

Holding times from field sampling to laboratory analysis must be minimised to ensure the representativeness of the result obtained. Delays between sampling and analysis can lead to analytes changing due to processes such as volatilisation, mineralisation, and biological modification.

Where standard holding times are exceeded, professional judgement as to the integrity of the data will be required, taking into account such factors as field storage, laboratory storage and even sample bottle characteristics. The laboratory reported that all samples were received and analysed within prescribed holding times.

### 6.2.7 Field Duplicates

Blind duplicates were collected and the pair of samples (i.e. duplicate and primary) were submitted for analyses for the contaminants of concern. The duplicate analytical results are compared to the primary results using relative percentage difference (RPD). The RPD is the absolute difference between two results divided by their mean values and expressed as a percentage. Where either primary or duplicate results have concentrations below the laboratory level of reporting, the RPD is not calculated. A value of 50% is considered an acceptable data quality objective (DQO).

Results exceeding the RPD DQO (shown in Table 4) for Nickel (Ni) analysed in sample B16-2 and DUP02 (primary and duplicate sample respectively) was 63%, which exceeds the acceptable 50% RPD.

Results exceeding the RPD for Chromium (total Cr) analysed in sample B7-4 and DUP05 (primary and duplicate sample respectively) was 62%, which exceeds the acceptable 50% RPD.

The calculated RPD for Arsenic, Lead, Nickel for sample B19-3 and duplicate DUP03 was 61%, 57% and 67%, respectively, also exceeding the acceptable RPD of 50%.

The variability in results maybe due to matrix heterogeneity and as such, the RPD's reported in this investigation are therefore considered to be acceptable.

Refer to Table 4 for summary of RPD calculations.

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### 6.2.8 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition.

Representativeness is primarily dependent on the design and implementation of the sampling program and is partially ensured by the avoidance of contamination, adherence to sample handling and analysis protocols, and use of proper chain-of-custody and documentation procedures. Blanks, holding times and field duplicates are all QA parameters that can assist in the analysis of representativeness.

The QA/QC evaluation presented in this report generally confirms the representativeness of the samples analysed. Therefore, the analytical data reported is considered suitable for the assessment of the site.

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Client: Property Solutions (Australia) Pty Ltd
Project: Commercial Development
Location: Cnr Keating Street and Moggill Road, Indooroopilly

Project Number: 06253A
Date: April 2007

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## Table 4 - Data Quality Results for Field Duplicate RPDs

| Test Duplicate | Sample Number | Sample Depth (m) | Material Type | Organics (mg/kg) | | | | | | | | | | | | Inorganics (mg/kg) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TPH | | | | BTEX | | | | Pesticides | | | | Metals | | | | | | | |
| | | | | $C_6$-$C_9$ | $C_{10}$-$C_{14}$ | $C_{15}$-$C_{28}$ | $C_{29}$-$C_{36}$ | Benzene | Toluene | Ethyl-benzene | Xylene | Aldrin & Dieldrin | Chlordane | DDT | Heptachlor | As | Cd | Total Cr | Cu | Pb | Hg | Ni | Zn |
| **Laboratory Level of Reporting (mg/kg)** | | | | 25 | 50 | 100 | 100 | 0.5 | 0.5 | 0.5 | 1.0 | 0.2 | 0.2 | 0.2 | 0.2 | 1.0 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| - | B15-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | 2.2 | <0.5 | 7.2 | 5.5 | 3.8 | <0.2 | 8.7 | 23 |
| Blind | B15-2 | 0.5-1.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | - | - | - | - | 2.5 | <0.5 | 12 | 4.8 | 4.2 | <0.2 | 11 | 25 |
| **RPD Blind** | | | | NA | NA | NA | NA | NA | NA | NA | NA | - | - | - | - | 13 | NA | 50 | 14 | 10 | NA | 23 | 8 |
| - | B16-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | 15 | <0.5 | 5.6 | 24 | 22 | <0.2 | 7.3 | 41 |
| Blind | B16-2 | 0.5-0.8 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | 16 | <0.5 | 4.6 | 35 | 33 | <0.2 | 14 | 50 |
| **RPD Blind** | | | | - | - | - | - | - | - | - | - | - | - | - | - | 6 | NA | 20 | 37 | 40 | NA | **63** | 20 |
| - | B19-3 | 1.0-1.3 | Fill | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <0.01 | 8.5 | <0.5 | 6.3 | 25 | 54 | <0.2 | 13 | 71 |
| Blind | B19-3 | 1.0-1.3 | Fill | - | - | - | - | - | - | - | - | <LOR | <LOR | <LOR | <0.01 | 16 | <0.5 | 4 | 35 | 30 | <0.2 | 26 | 87 |
| **RPD Blind** | | | | - | - | - | - | - | - | - | - | NA | NA | NA | NA | **61** | NA | 45 | 33 | **57** | NA | **67** | 20 |
| - | B2-3 | 0.8-1.0 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | 13 | <0.5 | 19 | 41 | 30 | <0.2 | 31 | 79 |
| Blind | B2-3 | 0.8-1.0 | Phyllite | - | - | - | - | - | - | - | - | - | - | - | - | 15 | <0.5 | 21 | 41 | 40 | <0.2 | 32 | 82 |
| **RPD Blind** | | | | - | - | - | - | - | - | - | - | - | - | - | - | 14 | NA | 10 | 0 | 29 | NA | 3 | 4 |
| - | B7-4 | 1.5-2.0 | Fill | <25 | <50 | <100 | <100 | <0.5 | <0.5 | <0.5 | <LOR | <LOR | <LOR | <LOR | <0.01 | 8.6 | 1.6 | 11 | 23 | 520 | <0.2 | 6.2 | 140 |
| Blind | B7-4 | 1.5-2.0 | Fill | - | - | - | - | - | - | - | - | - | - | - | - | 8.7 | 1.4 | 5.8 | 21 | 410 | <0.2 | 6.7 | 130 |
| **RPD Blind** | | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1 | 13 | **62** | 9 | 24 | NA | 8 | 7 |

NOTES:
**61** RPD value exceeds 50%
NA Not Applicable
- Not Analysed

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### 6.3 Discussion

Elevated concentrations of arsenic above the EIL criterion of 20mg/kg where reported in samples B13-5 and B18-5. Although the reported arsenic levels exceed the EIL criterion, these values were within the background level of 30 mg/kg listed by the EPA and as such are not considered to be significant.

### 6.4 Conclusions

Based on the results of this Additional ESA undertaken by Butler Partners, the following conclusions are made:

- Lot 1 on RP154234 is listed on the EPA's EMR;
- the site has been filled with sands and gravely clays and covered with concrete hardstand;
- potentially contaminating activities identified on site include operation of a service station with associated underground fuel storage;
- levels of arsenic, cadmium and zinc above EIL/PIL criteria have been detected within fill and natural soil material;
- elevated levels of lead and zinc above the HIL-A criterion have been detected within fill material;
- elevated levels of lead above the HIL-F criterion have been detected within fill material;
- leachability tests undertaken in acidic conditions indicates that cadmium, copper and zinc leach from the soil matrix at concentrations below the unlined criteria;
- leachability tests undertaken in acidic conditions indicates that lead leachs from the soil matrix at concentrations above the lined criteria;
- the extent of identified contamination has been limited vertically at 2.5m depth; and
- all other soil samples analysed from across the site for TPH, BTEX and OCPs returned concentrations below the EIL criteria.

### 6.5 Recommendations

Based on the findings of this Additional ESA it is recommended that the site should remain on the EMR and a Draft Site Management Plan (SMP) and Remediation Action Plan (RAP) should be prepared and submitted to the EPA for review and approval. The RAP would be required by the EPA to provide a framework for any excavation that will occur during site development.

If any soil is removed from the site it should be covered by a Disposal Permit issued pursuant to Section 424 of the Environmental Protection Act 1994. As part of this process, leachability testing results should be issued to suitable landfills for review. An acceptance letter from the selected landfill will need to be included with the applications for the Disposal Permit. Soil should not be removed from the site until such a permit has been issued.

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**BUTLER PARTNERS PTY LTD**

sch4p4( 6) Personal information

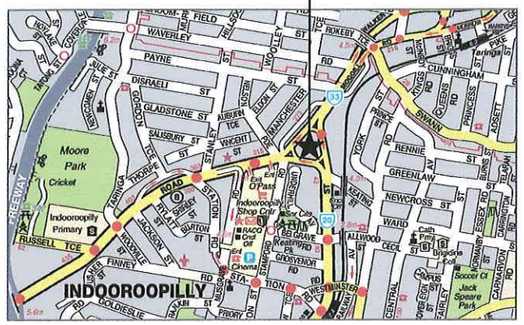
Environmental Scientist

sch4p4( 6) Personal information

SUZANNE WALKER
Principal

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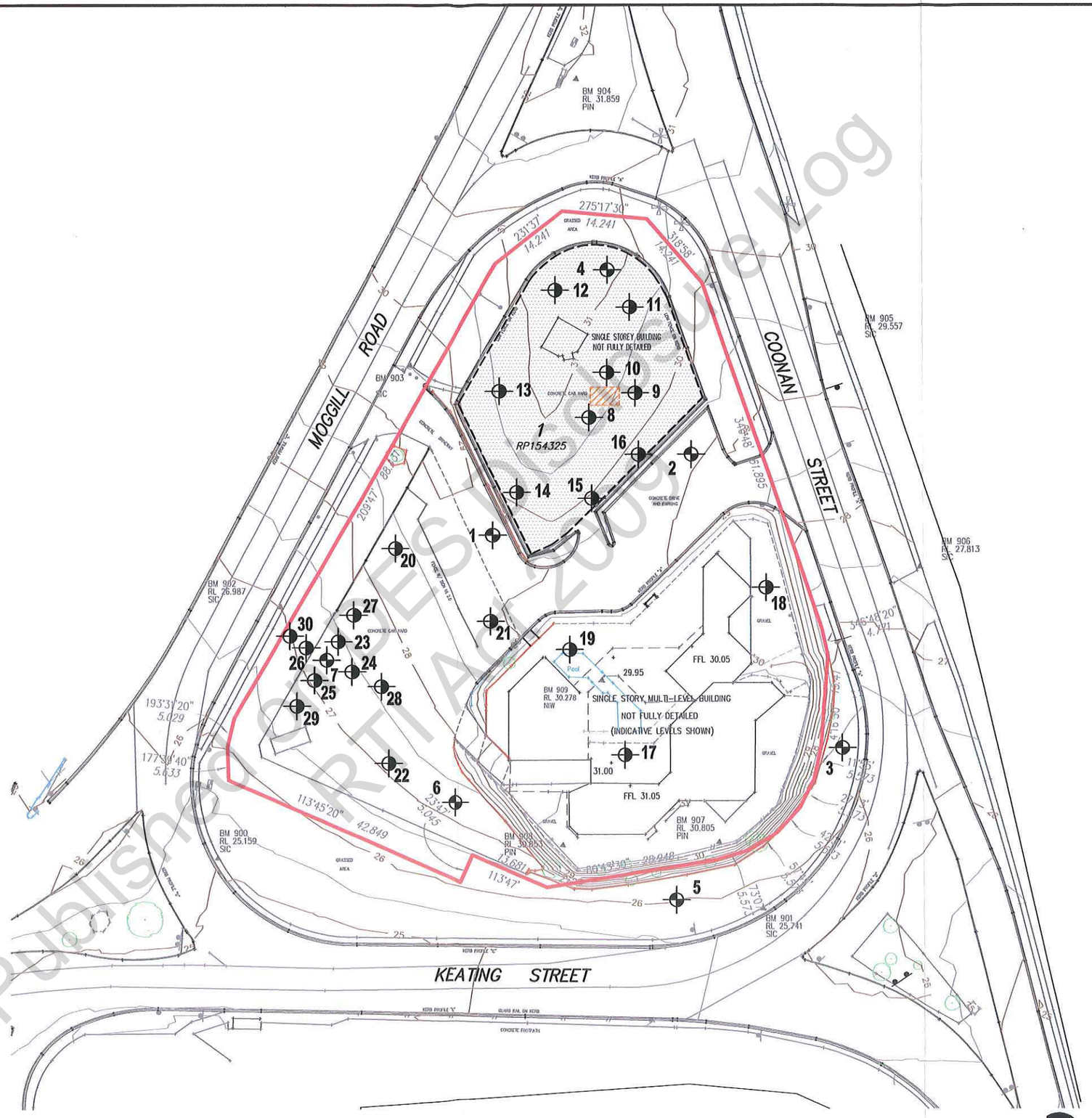
SITE




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UBD Reference: Map 178 Ref K3 (50th Edition) N.T.S.

LEGEND

- 1 Bore
- 8 Environmental Bore
- Site Boundary
- Approximate Location of Former Service Station
- Approximate Location of Former UFSTs




Reference: PMM Pty Ltd's 'Detail Survey', Drawing No.21454det.dwg, dated 28.11.06

CLIENT:
PROPERTY SOLUTIONS (AUSTRALIA) PTY LTD

BUTLER PARTNERS
79 Doggett Street, Newstead
Queensland 4006 Australia
Telephone 61 7 3852 3800
Facsimilie 61 7 3852 3808

# COMMERCIAL AND RETAIL DEVELOPMENT

CORNER KEATING STREET AND MOGGILL ROAD, INDOOROOPILLY

## LOCALITY PLAN AND TEST LOCATIONS

NORTH

0 10 20 30m

SCALE: 1:750 (A3)

DATE: APRIL 2007

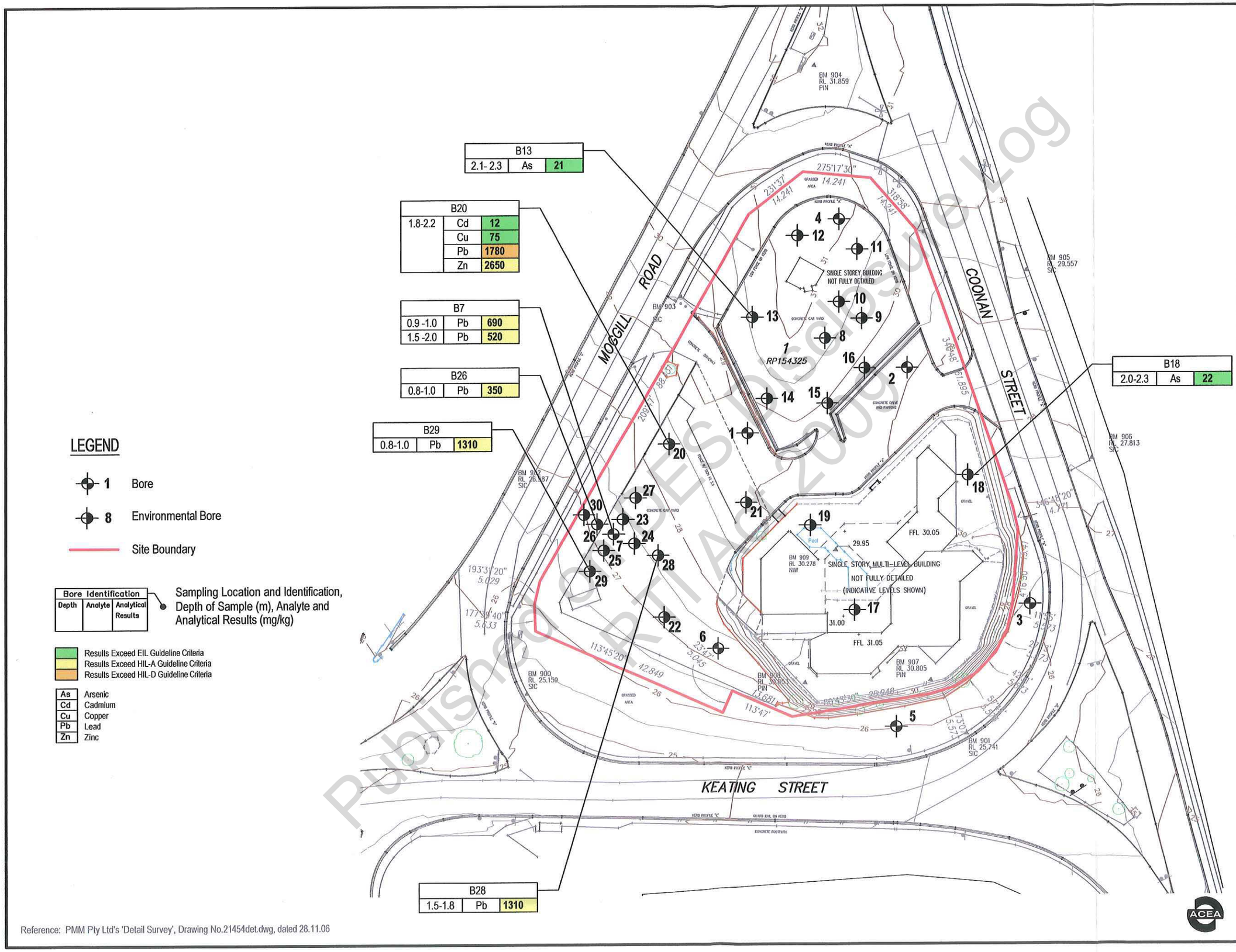
DRAWN BY: FD

APPROVED: sch4p4( 6) Perso

PROJECT No: 06253A

DRAWING No: 1 REV: C

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CLIENT:
PROPERTY SOLUTIONS (AUSTRALIA) PTY LTD

BUTLER PARTNERS
79 Doggett Street, Newstead
Queensland 4006 Australia
Telephone 61 7 3852 3800
Facsimilie 61 7 3852 3808

# COMMERCIAL AND RETAIL DEVELOPMENT

CORNER KEATING STREET AND MOGGILL ROAD, INDOOROOPILLY

## SUMMARY OF RESULTS EXCEEDING THE EIL CRITERIA

NORTH

0 10 20 30m

SCALE: 1:750 (A3)

DATE: APRIL 2007

DRAWN BY: FD

APPROVED: sch4p4( 6) Per

PROJECT No: 06253A

DRAWING No: 2 REV: B

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# APPENDIX A

## CURRENT AND HISTORICAL TITLES AND EPA REGISTERS SEARCH RESPONSE

QLD ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Transaction ID: 880432 EMR Site Id: 896 13 November 2006
This response relates to a search request received for the site:
Lot: 1 Plan: RP154325

## EMR RESULT

The above site IS included on the Environmental Management Register.
Lot: 1 Plan: RP154325
Address: CNR MOGGILL RD AND COONAN STS
INDOOROOPILLY 4068

The site has been subject to the following Notifiable Activity pursuant to section 374 of the *Environmental Protection Act 1994*.
SERVICE STATIONS - operating a commercial service station.

## CLR RESULT

The above site is NOT included on the Contaminated Land Register.

## ADDITIONAL ADVICE

**Note: Searches may be conducted online through the State Government Website www.smartservice.qld.gov.au or Citec Confirm www.confirm.com.au.**

**Alternatively, searches may be posted to Smart Service Queensland (Contaminated Land Search, PO Box 10817, Brisbane Adelaide Street, Queensland 4001) or fax (07) 3 405 0965 or 1300 300 768.**

**If you have any queries in relation to this search please phone (07) 3227 7370.**

Lindi Bowen
Registrar, Contaminated Land Unit

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QUEENSLAND GOVERNMENT

# CURRENT TITLE SEARCH

NATURAL RESOURCES, MINES & WATER, QUEENSLAND

Request No: 1168686
Search Date: 13/11/2006 10:53 am

Title Reference: 15667040
Date Created: 20/07/1977

Previous Title: 13686001
14318079
14318080
14348220
15601206

REGISTERED OWNER

DENMAC NOMINEES PTY LTD

ESTATE AND LAND

Estate in Fee Simple

LOT 1 REGISTERED PLAN 154325
County of STANLEY Parish of INDOOROOPILLY
Local Government: BRISBANE CITY

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10004121 (POR 47)

2. MORTGAGE No 702554477 11/03/1998 at 15:00
NATIONAL AUSTRALIA BANK LIMITED A.C.N. 004 044 937

3. LEASE No 702810559 27/07/1998 at 16:06
SUMMIT DENMAC PTY LIMITED A.C.N. 057 890 865

4. TRANSFER No 705083675 02/10/2001 at 11:48
LEASE: 702810559
BRISBANE RJV PTY LTD A.C.N. 094 332 519

5. CAVEAT No 706419579 07/03/2003 at 14:48
DUPONT PROPERTIES (QLD) PTY LTD A.C.N. 103 457 674

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: External Supervisor



Published on DES Disclosure Log
RTI Act 2009

(C)

A 370050

Dealing No. F353447

Reference to previous

| Volume | Folio |
|---|---|
| 3686 | 1 |
| 4318 | 79 and 80 |
| 4348 | 220 |
| 5601 | 206 |

QUEENSLAND.

# CERTIFICATE OF TITLE

REGISTER BOOK

VOL. 5667 FOLIO 40

VOL: 5667 FOLIO:40

15667040

DENMAC NOMINEES PTY. LTD.

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 7655 square metres

more or less, as shown on the Plan hereon, and therein edged red, Being Lot 1 on registered Plan No. 154325

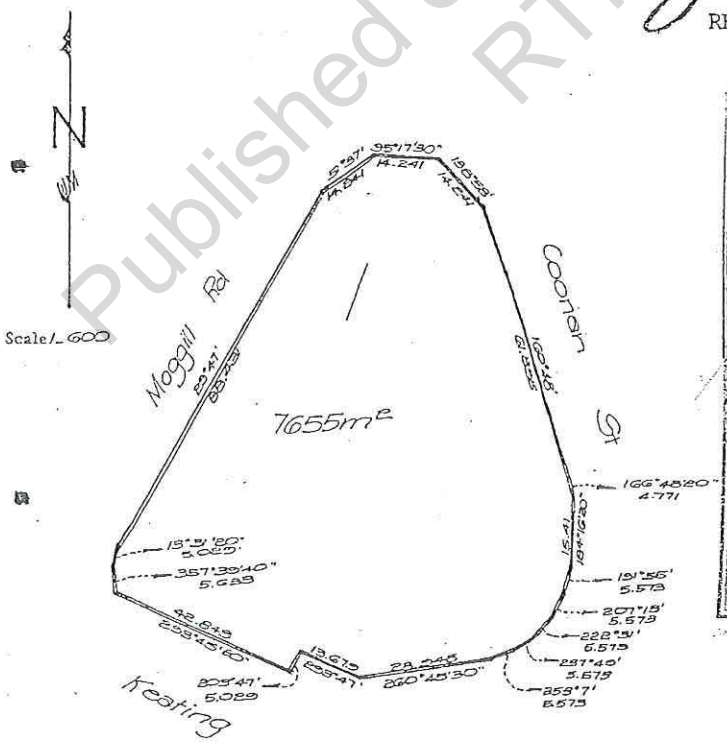
SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No. 4105 for portion 47

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 20th day of July One thousand nine hundred and seventy seven

Signed, Sealed, and Delivered )
in presence of )
)

REGISTRAR OF TITLES.

REGISTRAR OF TITLES QUEENSLAND




BILL OF MORTGAGE to Esanda Limited
No. F287113 PRODUCED 29 Dec 1976
at 3-56 p.m. REGD. 5 Jan 1977
To secure the moneys therein mentioned
RELEASED as to the land therein comprised
29 JAN 1987
REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda Finance Corporation Australia Proprietary Limited
No. F287114 PRODUCED 29 Dec 1976
at 3-56 p.m. REGD. 5 Jan 1977
To secure the moneys therein mentioned
RELEASED as to the land therein comprised
29 JAN 1987
REGISTRAR OF TITLES

Published on DES Disclosure Log
RTI Act 2009

TO: FORD MOTOR COMPANY OF AUSTRALIA LIMITED

FROM: 1 FEB 1993
TO: 31 JAN 1998

No. L406397Q PRODUCED 11 MAR 1993
RECORDED

17 MAR 1993

REGISTRAR OF TITLES

SUB LEASE OF: LEASE No. L406397Q

TO: SUMMIT DENMAC PTY LIMITED

FROM: 1 FEB 1993
TO: 30 JAN 1998

No. L410941N PRODUCED 15 MAR 1993
RECORDED

24 MAY 1993

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No. F353448 PRODUCED 14 Oct 1977
at 4-14 p.m. REGD. 20 JUL 1977

RELEASED Vide No. Prod. 23 Dec 1987 20 JUL 1987 REGISTRAR OF

29 JAN 1987

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. F353449 PRODUCED 14 Oct 1977
at 4-15 p.m. REGD. 20 JUL 1977

RELEASED Vide No. Prod. 23 Dec 1987 20 JUL 1987 REGISTRAR OF

29 JAN 1987

REGISTRAR OF TITLES

No. F465035 MEMORANDUM OF VARIATION OF MORTGAGE
No. F353448 PRODUCED 24 Oct 1977
at 10.55 a.m. REGD. 21 NOV 1977

Mortgage released

REGISTRAR OF TITLES

No. F465037 MEMORANDUM OF VARIATION OF MORTGAGE
No. F353449 PRODUCED 24 Oct 1977
at 10.55 a.m. REGD. 21 NOV 1977

Mortgage released

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. F754028 PRODUCED 30 Jan 1986
at 2.53 p.m. REGD. 28 FEB 1986

PARTIAL RELEASE No. J330776 Prod. 23 Dec 1987 29 JAN 1987 REGISTRAR OF

Full release of Bond

29 JAN 1987

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No. G687826 PRODUCED 8 Apr 1986
at 10.13 a.m. REGD. 28 APR 1986

PARTIAL RELEASE No. J330776 Prod. 23 Dec 1987 29 JAN 1987 REGISTRAR OF

Full release of Bond

29 JAN 1987

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. G687827 PRODUCED 8 Apr 1986
at 10.15 a.m. REGD. 28 APR 1986

PARTIAL RELEASE No. J330776 Prod. 23 Dec 1987 29 JAN 1987 REGISTRAR OF

Full release of Bond

29 JAN 1987

REGISTRAR OF TITLES

Subject to DES Disclosure Log
RTI Act 2009

(C)

# QUEENSLAND

# [CERTIFICATE OF TITLE

FULLY CANCELLED

Register Book

Vol. 3686 Folio 1

Dealing No. D43976
Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

VOL: 3686 FOLIO:1
13686001

A 26087

THE METROPOLITAN FIRE BRIGADES BOARD

is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane

Containing Thirty one perches and one tenth of a perch

more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 5 of resubdivision 2 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivision 8 of Portion 47 on registered Plan No. 91806

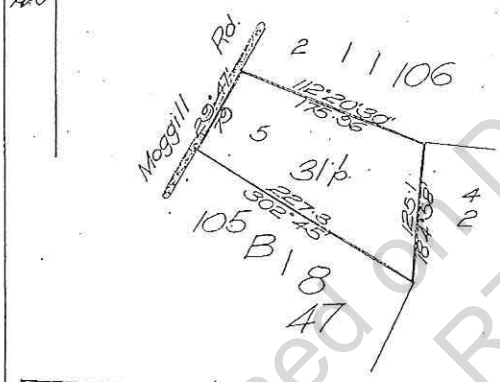
Saving Always to the Crown all the rights and interests reserved to it by Deed of Grant No. 4105

In Witness whereof, I have hereunto signed my name and affixed my seal, this thirty first day of July One thousand nine hundred and sixty four

Signed, Sealed, and Delivered in presence of

R M Miller
REGISTRAR OF TITLES

Scale, 1 chains per inch.




BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited
No. F287114 PRODUCED 15 Dec 1976
at 3:56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

Regi W/D Caveat F287112 (mtg F287113) Encumb F287114

BILL OF MORTGAGE to Esanda Limited
No. F287113 PRODUCED
at 3:56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

Plan F353447 154325 (Lot 1) (mtge F353448) (Rel/Encs. F353449)

CAVEAT No. F174953

Dawnaca Nominees Pty. Ltd.
a now seised of an Estate in fee-simple in the within land
TRANSFER No. F174952 PRODUCED 17 June 1976
at 11:39 a.m. REGD. 5 JUL 1976
REGISTRAR OF TITLES

BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1
No. F353447 PRODUCED 14 Dec 1977
at 4-14 p.m. REGD. 12 JUL 1977
VOL. 6667 FOL. 40
REGISTRAR OF TITLES

CAVEAT by Esanda Limited
No. F174953 PRODUCED 17 June 1976
at 11:39 a.m. REGD. 5 JUL 1976
WITHDRAWN No. 82 Prod. 21 FEB 1978
REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited
No. F287113 PRODUCED 15 Dec 1976
at 3:56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

FULLY CANCELLED

Published on DES Disclosure Log RTI Act 2009

A 6853

(C)

Dealing No. D739367

Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

VOL: 4318 FOLIO:80

14318080

QUEENSLAND.

DIEU ET MON DROIT

# CERTIFICATE OF TITLE

REGISTER BOOK

VOL. 4318 FOLIO 80

FULLY CANCELLED

MOBIL OIL AUSTRALIA LIMITED

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 2 roods 8.3 perches

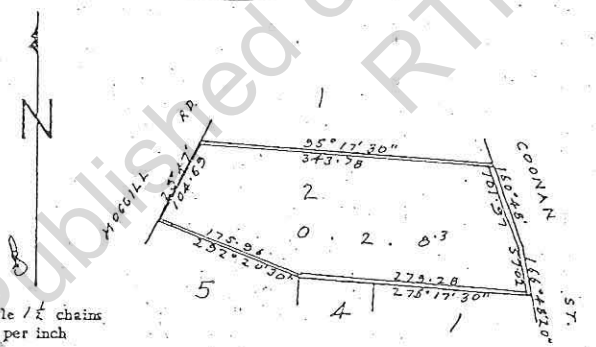
more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 2 of resubdivision 1 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivisions 4, 5 and 8 of Portion 47 on registered Plan No.97852

SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No . 4105

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 26th day of June One thousand nine hundred and sixty nine

Signed, Sealed, and Delivered )
in presence of )

REGISTRAR OF TITLES.




Scale 1 chains per inch

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited
No. F287114 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited
No. F287113 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD.
REGISTRAR OF TITLES

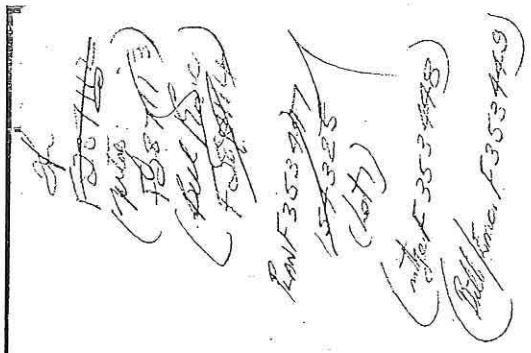
Denmac Nominees Pty. Ltd.
is now seised of an Estate in fee-simple in the within land
TRANSFER No. F287112 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD. 12 JAN 1977
REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited
No. F287113 PRODUCED 15 Dec 1976
at 3.56 p.m. REGD. 26 JAN 1977
REGISTRAR OF TITLES

BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1
No. F353447 PRODUCED 14 Apr 1977
at 4.14 p.m. REGD. 12 JUL 1977
Reference to other titles Vol: 3667 Fol: 40
REGISTRAR OF TITLES

FULLY CANCELLED

Published on DES Disclosure Log
RTI Act 2009



Published on DES Disclosure Log
RTI Act 2009

A 6852

(C)

Dealing No. D739367

Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

QUEENSLAND.

# CERTIFICATE OF TITLE

REGISTER BOOK

VOL. 4318 FOLIO 79

VOL: 4318 FOLIO:79

14318079

MOBIL OIL AUSTRALIA LIMITED

**FULLY CANCELLED**

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 2 roods 6.9 perches

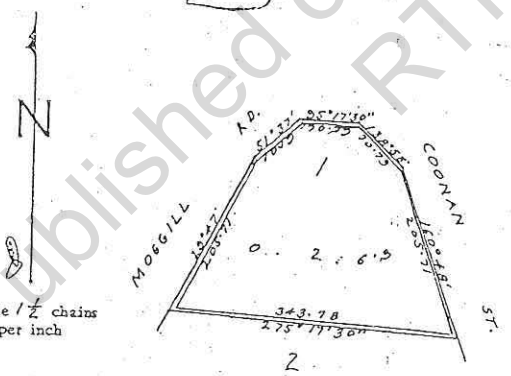
more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 1 of resubdivision 1 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivision 4 of Portion 47 on registered Plan No. 97852

SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No . 4105

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 26th day of June One thousand nine hundred and sixty nine

Signed, Sealed, and Delivered )
in presence of )

REGISTRAR OF TITLES.




BILL OF MORTGAGE to Esanda Limited

No F287113 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No F287114 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

Denmar Nominees Pty. Ltd.

is now seised of an Estate in fee-simple in the within land

TRANSFER No. F287113 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 12 JAN 1977

REGISTRAR OF TITLES

BILL OF MORTGAGE to Esanda Limited

No F287115 PRODUCED 15 Dec 1976

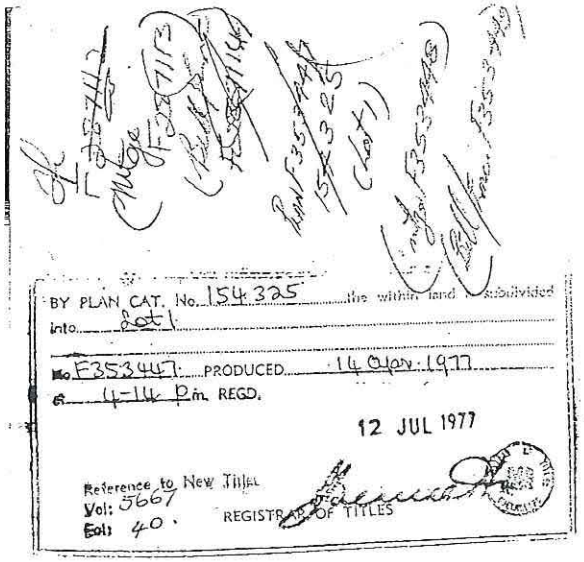
at 3.56 p.m. REGD. 26 JAN 1977

Cancelled

Endorsed

REGISTRAR OF TITLES

Published on DES Disclosure Log RTI Act 2009


BY PLAN CAT. No. 154325 the within land subdivided into Lot 1

No. E353447 PRODUCED 14 Nov. 1977

at 4-14 p.m. REGD.

12 JUL 1977

Reference to New Title(s)
Vol: 5667
Fol: 40.

REGISTRAR OF TITLES

Published on DES Disclosure Log
RTI Act 2009

FULLY CANCELLED

A 14019

(C)

Dealing No. D748271

Reference to previous

| Volume | Folio |
|---|---|
| 2610 | 125 |

QUEENSLAND.

CERTIFICATE OF TITLE

REGISTER BOOK

FULLY CANCELLED

VOL. 4348 FOLIO 220

VOL: 4348 FOLIO:220

14348220

ENGARCH INVESTMENT & FINANCE CO. PTY. LTD.

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane Containing 2 roods 32.4 perches

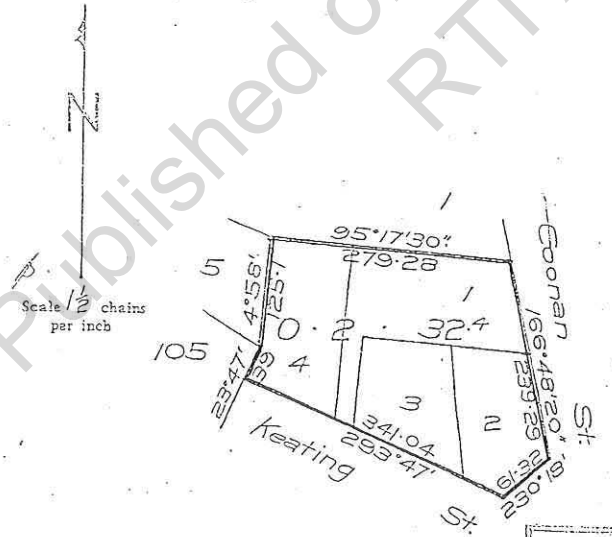
more or less, as shown on the Plan hereon, and therein edged red, Being Subdivisions 1, 2, 3 and 4 of resubdivision 2 of subdivision 1 of resubdivision 106 of subdivision B of resubdivision 1 of subdivisions 4, 5 and 8 of Portion 47 on registered Plan No. 91806

SAVING ALWAYS to the Crown all the rights and interests reserved to it by the original Deed of Grant No . 4105

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 5th day of September One thousand nine hundred and sixty nine

Signed, Sealed, and Delivered )
in presence of )
)
)

REGISTRAR OF TITLES.




FULLY CANCELLED

No. D748272 of Mortgage to Finance Corporation of Australia Limited

Produced ... at ...

Registered ... at ...

RELEASED

REGISTRAR OF TITLES

REGISTRAR OF TITLES QUEENSLAND

Published on DES Disclosure Log RTI Act 2009

The name of the registered proprietor is changed to Resources Investment & Finance Co. Pty. Ltd.
by documentary evidence. Produced 3 July 1969.
at 11:27 a.m. Registered 8 Sep 1969. No. D750558

REGISTRAR OF TITLES

FULLY CANCELLED

Curtis Holdings Pty. Ltd.

now seised of an Estate in fee-simple in the within land
Transfer No. 760954 Produced 29 July 1969. at 3 p.m.
Registered 8 Sep 1969
Subject to Bill of mortgage No. 078272

REGISTRAR OF TITLES

Brisbane City Council

now seised of an Estate in fee-simple in the within land.
Transfer No. 765328 Produced 7 Apr 1970 at 1.30 p.m.
Registered 10 Apr 1970

REGISTRAR OF TITLES

BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1

and 1160 m² has been dedicated for road purposes.
No. F353447 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.

Reference to New Title:
Vol:
Fol:

REGISTRAR OF TITLES

FULLY CANCELLED

Lemmac Nominees Pty. Ltd.

now seised of an Estate in fee-simple in the within land
TRANSFER No. F353446 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.

12 JUL 1977

REGISTRAR OF TITLES

BY PLAN CAT. No. 154325 the within land is subdivided into Lot 1

and 1160 m² has been dedicated for road purposes.
No. F353447 PRODUCED 14 Apr 1977
at 4-14 p.m. REGD.

12 JUL 1977

Reference to New Title:
Vol: 5667
Fol: 40

REGISTRAR OF TITLES

Published on DES Disclosure Log
RTI Act 2009

# Certificate of Title.

VOL:S 2610 FOL:125

12610125

(C)

QUEENSLAND.

No. 521135

c No. 40475

| Reference to Previous Volume | Folio |
|---|---|
| 1647 | 61 ✓ |

Register Book, Vol. 2610 Folio 125

MARGARET FRANCIS UNDERHILL

wife of Walter Underhill

of _____ pursuant to Memorandum of Request No. A973387 received the seventeenth day of October 1950 is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane containing Two acres one rood seventeen perches more or less, as shown on the Plan hereon, and therein edged red, Being Subdivision 1 of resubdivision 106 of subdivision B' of Resubdivision 1 of subdivisions 4, 5 and 8 of Portion 47

on Plan Cat. No. 71206 deposited in the Office of the Registrar of Titles, Brisbane, which said piece of Land is part of the portion marked 47 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted by Deed of Grant No. 4105

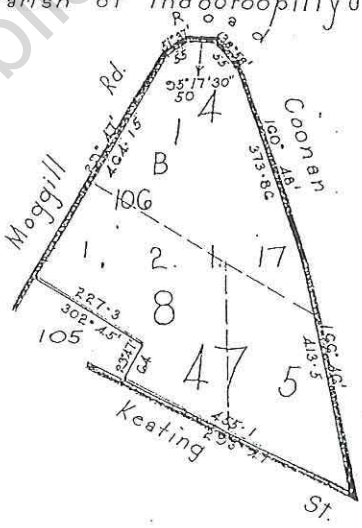
Saving Always to the Crown all the rights and interests reserved to it by the said Deed of Grant.

In Witness whereof, I have hereunto signed my name and affixed my seal, this twenty ninth day of January One thousand nine hundred and fifty two

Signed, Sealed, and Delivered, the 29th day of January 1952, in presence of

REGISTRAR OF TITLES,

Parish of Indooroopilly




Scale, 2 chains per inch.

PURSUANT to Memo. of TRANSFER No. 5814835 produced 19 Aug 19 58 at 12:35 p.m., registered 25 Sep 1958 Vacuum Oil Company Proprietary Limited now SEISED of an Estate IN FEE SIMPLE in the WHOLE of the within Land.

REGISTRAR OF TITLES

REGISTRAR OF TITLES BRISBANE

Published on DES Disclosure Log RTI Act 2009


© The State of Queensland

No. B620539 By Plan Cat. No. 91805
the within land
Is subdivided into Resubs 1 and 2
acres 1 roods 17 9/10 perches part of the land
has been dedicated for road purposes
Produced 2 Feb 1959 at 3.25 p.m.
Registered 13 May 1959
REGISTRAR OF TITLES

No. B620540 By Plan Cat. No. 91806
Resub 2 on Plan 91805 of the within land
is subdivided into Subs 1 to 5
Produced 2 Feb 1959 at 3.25 p.m.
Registered 13 May 1959
REGISTRAR OF TITLES

B857346 By Plan Cat. No. 97852
Resub 1 on Plan No. 91805 of the within land
is subdivided into Subs 1 and 2
Produced 21 Aug 1961 at 4.10 p.m.
Registered 7 Sep 1961
REGISTRAR OF TITLES

No. D 43976 Request to issue Certificate of
Title for Sub 5 of Resub 2
Produced 11 Sep 1963 at 11.9 a.m. Registered
Sep 19..
Vol.
Fol.
REGISTRAR OF TITLES

By Proclamation dated the 15 Aug 1963, under the provisions of "The Public Works Land Resumption Acts, 1906 to 1955" and The Fire Brigades Acts 1920 to 1962
Subs 5 of Resub 2 of the within land
is resumed and is vested in The Metropolitan Fire Brigades Board
for Fire Brigade purposes. Produced 11 Sep 1963
at 11.9 a.m. Registered 26 Sep 1963
No. D43976
Vol 3686
Fol 1
E R King
ACTING REGISTRAR OF TITLES

The name of the registered proprietor is
changed to Mobil Oil Australia Proprietary Limited
by documentary evidence. Produced 5 June 1969
at 2.59 p.m. Registered 10 June 1969 No. D739365
so far as relates to Sub 1 and 2 of Resub 1 and Subs 1 to 4 of Resub 2.
ACTING REGISTRAR OF TITLES

The name of the registered proprietor is
changed to Mobil Oil Australia Limited
by documentary evidence. Produced 5 June 1969
at 2.59 p.m. Registered 10 June 1969 No. D739366
so far as relates to Subs 1 and 2 of Resub 1 and Subs 1 to 4 of Resub 2.
ACTING REGISTRAR OF TITLES

No. D 739367 Request to issue Certificate of
Title for Subs 1 and 2 of Resub 1
Produced 5 June 1969 at 2.59 p.m. Registered
10 June 1969.
Vol. 4318
Fol. 79/80
ACTING REGISTRAR OF TITLES

No. D748271 Transfer of Subs 1 to 4 Resub 2 Edwes Ernest & Finance Co Pty. Ltd
Produced 10 June 1969 at 10.22a
Registered 17 Aug 1969
Vol. 4348
Fol. 220
REGISTRAR OF TITLES

FULLY CANCELLED

B857346
(97852)
1/20 pt 1

Resubmit
D45990
55.

Pay to Change Name
D730395

Pay to Change Name
D739366

Pay
D730367
5142

D748271
Subs 1, 2, 3 & 4
of Resub 2
Surv 30.6.69
Surv 7.7.69
Surv 30.7.69
D748272

Pay Change Name
D750558

D760954
Surv 30.7.69
Surv 14.8.69

2617
125

Published on DES Disclosure Log
RTI Act 2009

a No. 53201

# Certificate of Title.

VOL: S 1647 FOL: 61

11647061

QUEENSLAND.

No. 301821

(C)

REFERENCE TO PREVIOUS

VOL. 832 FOLIO. 60

REGISTER BOOK, VOL. 1647 FOLIO. 61

MARGARET FRANCIS UNDERHILL wife

of Walter Underhill pursuant to Memorandum of Conveyance No. 963015 produced the fifteenth day of December 1925 registered the eighth day of January 1926, is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly containing two acres one rood twenty four perches and eight tenths of a perch

more or less, as shown on the Plan hereon, and therein edged red, Being resubdivision 106 of subdivision B of resubdivision 1 of subdivisions 4,5and 8 of portion 47 on plan Cat. No. 41916 deposited in the Office of the Registrar of Titles Brisbane

which said piece of Land is part of the portion marked 47 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted by Deed of Grant No. 4105 to Frederick Tarver Smith

Saving Always to the CROWN all the rights and interests reserved to it by the said Deed of Grant.

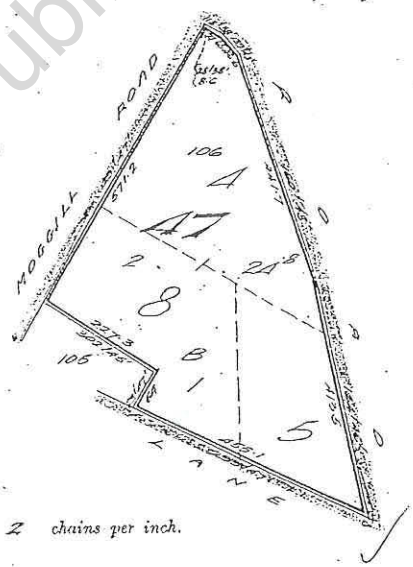
GO. IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this thirteenth day of January One thousand nine hundred and twentysix

Signed, Sealed, and Delivered, the thirteenth day of January 1926, in presence of

REGISTRAR OF TITLES. QUEENSLAND

REGISTRAR OF TITLES.

Parish of Indooroopilly




Scale, 2 chains per inch.

No A773386 ROAD DEDICATION produced 17.6.51 1950 at 4.0 p.m., registered 25 June 1951 7 Roods 17 Perches part of the within land has been dedicated for road purposes vide Plan Cat. No 7006

REGISTRAR OF TITLES

No A773387 REQUEST to issue Certificate of Title for Area 1a. 17p. Sub 1

Produced 17.6.51 1950 at 4.0 p.m., registered 25 June 1951

Cancelled as above vide Vol. 3610 Fol. 125

REGISTRAR OF TITLES

Plan 7006 51. Rel. Red A773386 made of Reg A773387 61

Published on DES Disclosure Log RTI Act 2009

FULLY CANCELLED
Published on DES Disclosure Log
RTI Act 2009

(C)

A 351222

Dealing No. F287111

Reference to previous

| Volume | Folio |
|---|---|
| 1633 | 125 |

QUEENSLAND.

# CERTIFICATE OF TITLE

REGISTER BOOK

FULLY CANCELLED

VOL. 5601 FOLIO 206

VOL: 5601 FOLIO:206

15601206

MOBIL OIL AUSTRALIA LIMITED

is now seised of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly City of Brisbane

Containing 746 square metres

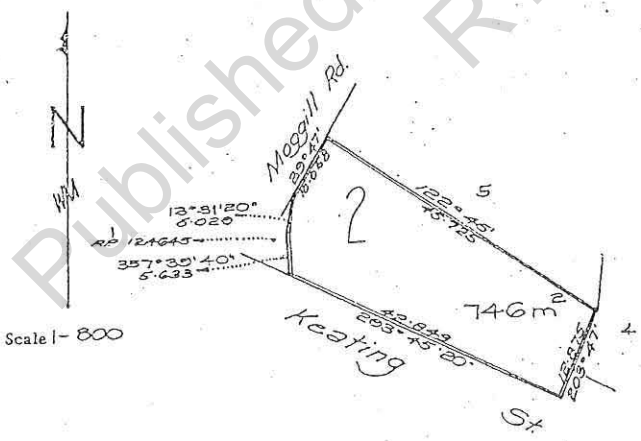
more or less, as shown on the Plan hereon, and therein edged red, Being Lot 2 on registered Plan No. 124645

SAVING ALWAYS to the Crown all the rights and interests reserved to it by original Deed of Grant No . 4105 for portion 47

IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this 12th day of January One thousand nine hundred and seventy seven

Signed, Sealed, and Delivered )
in presence of )
)
)

REGISTRAR OF TITLES.




BILL OF MORTGAGE to Esanda Limited

No. F287113 PRODUCED 15 Dec 1976.

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

BILL OF ENCUMBRANCE to Esanda Limited and Esanda (Wholesale) Proprietary Limited

No. F287114 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

Denmac Nominees Pty. Ltd.

is now seised of an Estate in fee-simple in the within land

TRANSFER No. F287112 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 12 JAN 1977

REGISTRAR OF TITLES

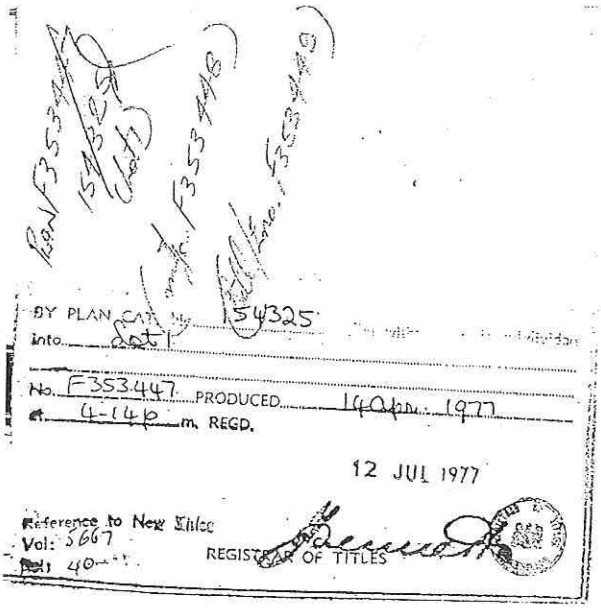
BILL OF MORTGAGE to Esanda Limited

No. F287113 PRODUCED 15 Dec 1976

at 3.56 p.m. REGD. 26 JAN 1977

REGISTRAR OF TITLES

Published on DES Disclosure Log
RTI Act 2009




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RTI Act 2009

FULLY CANCELLED

# Certificate of Title.

VOL: S 1633 FOL: 125

11633125

FULLY CANCELLED

(C) QUEENSLAND. No. 298635

REFERENCE TO PREVIOUS

VOL. 832 FOLIO. 60 REGISTER BOOK, VOL. 1633 FOLIO 125

a No. 950948

ROBERT MILLER DONALDSON and

FRANCES DONALDSON his wife

of pursuant to Memorandum of Conveyance No. 950948 produced the twentyeighth day of August 1925, registered the first day of September 1925, are now seized as joint tenants of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly containing thirty perches and two tenths of a perch more or less, as shown on the Plan hereon, and therein edged red, Being resubdivision 105 of subdivision B of resubdivision 1 of subdivision 8 of portion 47 on plan Cat. No. 41916 deposited in the Office of the Registrar of Titles Brisbane.

which said piece of Land is part of the portion marked 47 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted by Deed of Grant No. 4105 to Frederick Tarver Smith

Saving Always to the CROWN all the rights and interests reserved to it by the said Deed of Grant.

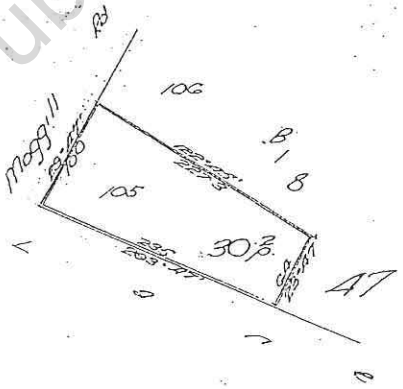
IN WITNESS whereof, I have hereunto signed my name and affixed my seal, this second day of September One thousand nine hundred and twentyfive

Signed, Sealed, and Delivered, the second day of Sept ember 1925, in presence of

REGISTRAR OF TITLES QUEENSLAND

REGISTRAR OF TITLES,

Parish of Indooroopilly




Scale, / chains per inch.

RELEASE No. 47773 BILL OF MORTGAGE produced 5 Feb 1926 at ... registered Feb 1926 Robert Miller ... and ... to ... endorsed on duplicate ... Mortgage. Bill produced ... registered ... 192 ... 2.26 pm

Published on DES Disclosure Log
RTI Act 2009

PURSUANT to Memo. of TRANSFER No. A14804 produced 22 Dec 1926 at 12.25 p.m., registered 30 Dec 1926

Joseph Leech and Lilian Leech this wife

of ____ are now SEISED of an Estate IN FEE SIMPLE in the WHOLE of the within Land. as joint tenants

REGISTRAR OF TITLES

No. A14805 Bill of Mortgage produced 22 Dec 1926 at 12.25 p.m., registered 30 Dec 1926

from Joseph Leech and Lilian Leech

to Annie Widow

RELEASE No. A14806 endorsed on duplicate Bill of Mortgage No. A14805 produced 7 Feb 1931 at 11.40 a.m., registered 11 Feb 1931

REGISTRAR OF TITLES

No. A14806 Bill of Mortgage produced 22 Dec 1926 at 12.25 p.m., registered 30 Dec 1926

from Joseph Leech and Lilian Leech

to Robert Milton Baldson and Florence Gordon Baldson this wife

to secure the payment of the moneys therein covenanted to be paid

RELEASE No. A14805 endorsed on duplicate Bill of Mortgage No. A14806 produced 7 Feb 1931 at 11.40 a.m., registered 11 Feb 1931

REGISTRAR OF TITLES

PURSUANT to Memo. of TRANSFER No. A141293 produced 7 Feb 1931 at 11.40 a.m., registered 11 Feb 1931

Margaret Frances Underhill

wife of Walter Robert Underhill

of Brisbane is now SEISED of an Estate IN FEE SIMPLE in the Whole of the within Land.

REGISTRAR OF TITLES

PURSUANT to Memo. of TRANSFER No. B584835 produced 19 Aug 1952 at 12.35 p.m., registered 25 Aug 1952

Vacuum Oil Company Proprietary Limited

is now SEISED of an Estate IN FEE SIMPLE In the WHOLE of the within Land.

REGISTRAR OF TITLES

No. B924034

evidence produced 5 June 62 3.50 p.

registered 12 July 62, the name of the proprietor is changed and shall henceforth be read and taken as Mobil Oil Australia Proprietary Limited

REGISTRAR OF TITLES

The name of the said proprietor changed to Mobil Oil Australia Limited

by documentary evidence. Produced 21 Nov 1963 at 3.45 p.m. Registered 20 Feb 1964 No. 265061

REGISTRAR OF TITLES

No. D917322 By Plan Cat. No. 124645

the within land is subdivided into Lots 1 and 2

Produced 17 Aug 1970 at 11.37 A.m.

Registered 19 Apr 1971

REGISTRAR OF TITLES

By Proclamation dated the 20 April 1970, under the provisions of "The Public Works Land Resumption Act 1906 to 1969," and the "Acquisition of Land Act 1967 to 1969"

Lot 1 on R.P. 124645 of the within land is resumed and is vested in Brisbane City Council for road purposes. Produced 17 Aug 1970 at 11.37 A.m. Registered 19 Apr 1971 No. D917323

Reference to New Titles Vol. 4583 Fol. 166

REGISTRAR OF TITLES

REQUEST to issue Certificate of Title for Lot 2 on R.P. 124645

No. F 287111 PRODUCED 15 Dec 1976 at 3.56 p.m. REGD 30 DEC 1976

Vol. 5601 Fol. 206

REGISTRAR OF TITLES

Change of Name (B.C.C. re Lot No. 558 notice dated 9-12-69)

FULLY CANCELLED

Published by DES Disclosure Log under RTI Act 2009

No. 10035

(C)

QUEENSLAND.

No. 133220

No. of Previous Certificates of Title 38043. 38045. 45769 80582. Register Book, Vol. 832 Folio 60

VOL: S 832 FOL: 60

10832060

# CERTIFICATE OF TITLE.

Harry Clifford Love

of

pursuant to Memorandum of Request No. 254483 received the sixteenth day of March A.D. 1892, is now seized of an Estate in Fee-simple, subject nevertheless to such encumbrances, liens, and interests, as are by memorandum notified hereon, in All that piece of Land situated in the County of Stanley Parish of Indooroopilly — Being subdivisions B of resubdivision 1 of subdivisions 168 of portion 42 of subdivision 1 of portion 48 and of resubdivision 1 of subdivision B of portion 46. containing by admeasurement Twenty four acres one rood eleven perches and two tenths of a perch more or less, commencing at a point bearing 69° 40' and distant one chain eight and one tenth links from the northeast corner of subdivision A and bounded thence on the northwest by a road bearing 67° 40' twenty five links and nine tenths of a link 29° 68' eight chains seventy one links 28° 29' five chains eighty five links 27° twelve chains seventy five links on the northeast by a road bearing 116° 14' five chains seventy four links and seven tenths of a link on the southeast and east by lines bearing 223° 21' one chain eighty six links and seven tenths of a link 214° 29' one chain eighty three links and five tenths of a link 209° 24' two chains three links and five tenths of a link 207° 16' two chains twelve links and five tenths of a link 199° 17' one chain seventy four links 192° 39' two chains six links 184° 14' three chains thirty three links 191° 12' three chains eighty two links 172° 53' four chains three links and three tenths of a link 170° 36' two chains sixty three links and four tenths of a link 165° 56' two chains seventy nine links 168° 58' eight chains eighteen links and three tenths of a link on the southeast by a road bearing 268° 18' two chains two links on the southwest by a road bearing 348° 18' one chain forty ten links 270° ten chains eighty six links and one tenth of a link and on the west by a road bearing 266° twelve chains twenty one links to the point of commencement which said piece of Land is part of the portions marked 47, 48, 46 delineated in the Public Map of the said parish deposited in the Office of the Surveyor-General, originally granted the Sections 47 the seventh day of July 1862 48 the twenty first day of January 1861 and 46 the day of twenty second day of August 1860 by three Deeds of Grant No. 1165, 1711, 222 under the Seal of the Colony of Queensland and the Hand of Sir George Ferguson Bowen K.C.M.G. then Governor of the said Colony, to Frederick Xavier Smith, 186 Ellen Anderson 186 & James Henderson

Saving Always to the Crown all the rights and interests reserved to it by the said Deed of Grant.

In Witness whereof, I have hereunto signed my name and affixed my seal this Seventh day of April One thousand eight hundred and ninety five

Signed, Sealed, and Delivered, the 7 day of April 1892, in presence of

R. Mills

J. O. Browne

Registrar of Titles.

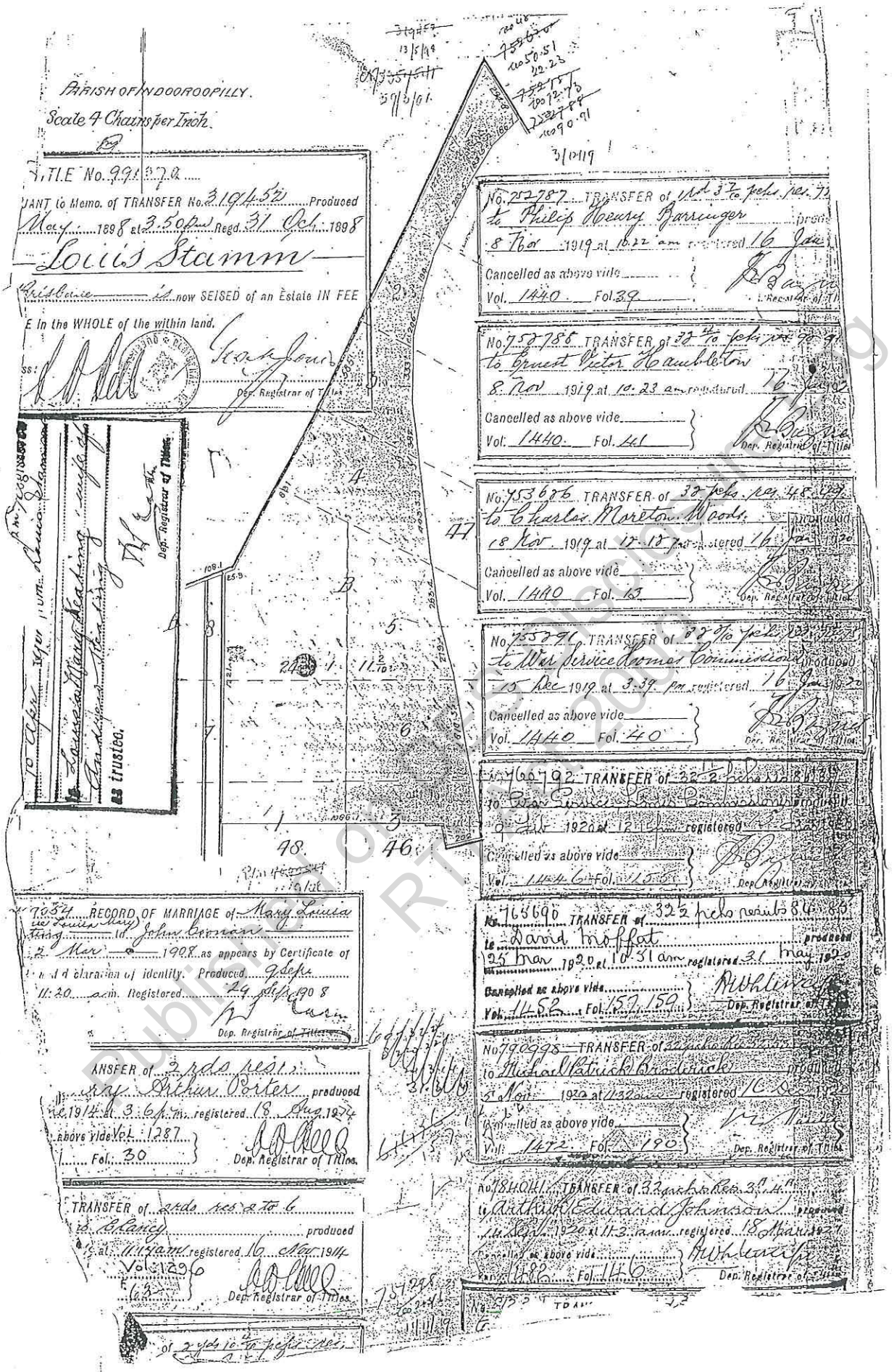
No. 184450 Bill of Mortgage (Land B) produced 18 July 1888 at 11.20 a.m. registered 25 July 1888 from Harry Clifford Love to Louis Stamm

Principal sum secured Five thousand

on 20 December 1889

[illegible] per annum

Published on DNRT Access Disclosure Log


PARISH OF INDOOROOPILLY.
Scale 4 Chains per Inch.
TITLE No. 991[illegible]
GRANT to Memo. of TRANSFER No. 319452 Produced
May 1898 at 3.50 pm Regd. 31 Oct. 1898
Louis Stamm
Brisbane is now SEISED of an Estate IN FEE
IN the WHOLE of the within land.
Dep. Registrar of Titles
No. 22787 TRANSFER of Lot 37 to Jeks. res. 7
to Philip Henry Barringer produced
8 Nov 1919 at 10.22 am registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 39
No. 753786 TRANSFER of 32 1/2 to Jeks res. 9
to Ernest Victor Hambleton
8 Nov 1919 at 10.23 am registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 41
Dep. Registrar of Titles
No. 753686 TRANSFER of 32 Jeks. res. 48
to Charles Moreton Woods
18 Nov 1919 at 12.18 pm registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 63
No. 755796 TRANSFER of 32 1/2 to Jeks
to West Service Homes Commission
15 Dec 1919 at 3.39 pm registered 16 Jan
Cancelled as above vide
Vol. 1440 Fol. 40
No. 760792 TRANSFER of 32 2 Jeks
to Evan Lewis Evans Bo
9 Feb 1920 at 12 registered
Cancelled as above vide
Vol. 1446 Fol. 156
No. 765690 TRANSFER of 32 1/2 Jeks res
to David Moffat
25 Mar 1920 at 10.31 am registered 31 Mar
Cancelled as above vide
Vol. 1452 Fol. 157, 159
No. 790998 TRANSFER of
to Michael Patrick Broderick
5 Nov 1920 at 11.32 am registered
Cancelled as above vide
Vol. 1472 Fol. 190
No. 784041 TRANSFER of 32
to Arthur Edward Johnson
registered 18 March
Cancelled as above vide
Vol. 1480 Fol. 116
Dep. Registrar of Titles
RECORD OF MARRIAGE of Mary Louisa
to John Brennan
1908 as appears by Certificate of
Produced
Registered
Dep. Registrar of Titles
TRANSFER of 2 rds res
produced
registered 18 Aug 1914
Vol. 1287
Fol. 30
Dep. Registrar of Titles
TRANSFER of 2 rds res 2 to 6
to B Lancy
produced
registered 16 Nov 1914
Vol. 1296
Fol. 63
Dep. Registrar of Titles
of 2 rds 10 to Jeks res
Trustees
Lawrence Henry Keating
Arthur Porter
Louisa Stamm
Mary Louisa Brennan
Evan Lewis Evans
David Moffat
Michael Patrick Broderick
Arthur Edward Johnson
Dep. Registrar of Titles
Dep. Registrar of Titles
Dep. Registrar of Titles

Annexed to Certificate of Title No 13337 Vol 832 Fol 60 this 3 day of Jan 1922 for the purpose of recording memorials

S Bayliss
Dep Registrar of Titles

No. 823277 Title issued for 34½ perches results 64-55
to Walter Thompson
1 Dec 21 at 3.45 pm registered 3 Jan 1922 Produced
Cancelled as above vide Vol. 1507 Fol. 181
E. Bayliss
Dep. Registrar of Titles

No. 828515 TRANSFER of 1 rd 19¾ perches numbers 6869 and 43
to Herbert Warren Hoey
1 Feb 22 at 3.24 pm registered 2 Feb 1922 produced
Cancelled as above vide Vol. 1373 Fol. 241
Alex Brown
Dep. Registrar of Titles

No. 851602 TRANSFER of 1rd 22½ perches results 20-21
to Violet Teresa Ward
30 Oct 1922 at 11.11 am registered 1 Dec 1922
Cancelled as above vide Vol. 1536 Fol. 173
S Bayliss
Dep. Registrar of Titles.

No. 876467 TRANSFER of 1rd 4¾ perches results 62 and 63
to Ruby Emily Rookwood Produced
20 July 1923 at 10.30 am registered 2 Aug 1923
Cancelled as above vide Vol. 1561 Fol. 37
Dep. Registrar of Titles.

No. 879601 TRANSFER of 32½ perches, res 80-81.
to Fannie Taylor
Produced
25 Aug 1923 at 2.24 pm registered 3 Sept 1923
Cancelled as above vide Vol. 1563 Fol. 164
Dep. Registrar of Titles.

No. 878212 TRANSFER of 1rd 6¾ perches res 60-61
to James Celtic Arkell
Produced
6 Aug 1923 at 2.45 pm registered 1 Oct 1923
Cancelled as above vide Vol. 1566 Fol. 39
Dep. Registrar of Titles.

No. 883540 TRANSFER of 1rd 3¾ perches Res 64-66
to Harry Reginald Dorsett Fuller
Produced
29 Sep 1923 at 10.20 am registered 6 Oct 1923
Cancelled as above vide Vol. 1566 Fol. 13
Dep. Registrar of Titles.

No. 884849 TRANSFER of 32½ perches Res 1-21
Thomas Clancy
Produced
13 Oct 1923 at 11.24 am registered 1 Nov 1923
Cancelled as above vide Vol. 1572 Fol.
REGISTRAR OF TITLES. QUEENSLAND
REGISTRAR OF TITLES.

No. 885281 TRANSFER of 2 rd 27 perches Portn 887-88
to Ellen Frances Gadsden
17 Nov 1923 at 10.40 am registered 3 Dec 1923 Produced
Cancelled as above vide Vol. 1587 Fol. 121
REGISTRAR OF TITLES.

No. 911512 TRANSFER of 32½ perches res 71 & 79
to Otto John Mullen
19 Aug 1924 at 11.40 am registered 11 Sep 1924
Cancelled as above vide Vol. 1600 Fol. 187
REGISTRAR OF TITLES.

No. 941128 TRANSFER of 32½ perches Res 76 & 77
to William Rodney Drancy
10 June 1925 at 10.30 am registered 12 June 1925 Produced
Cancelled as above vide Vol. 1627 Fol. 161
REGISTRAR OF TITLES.

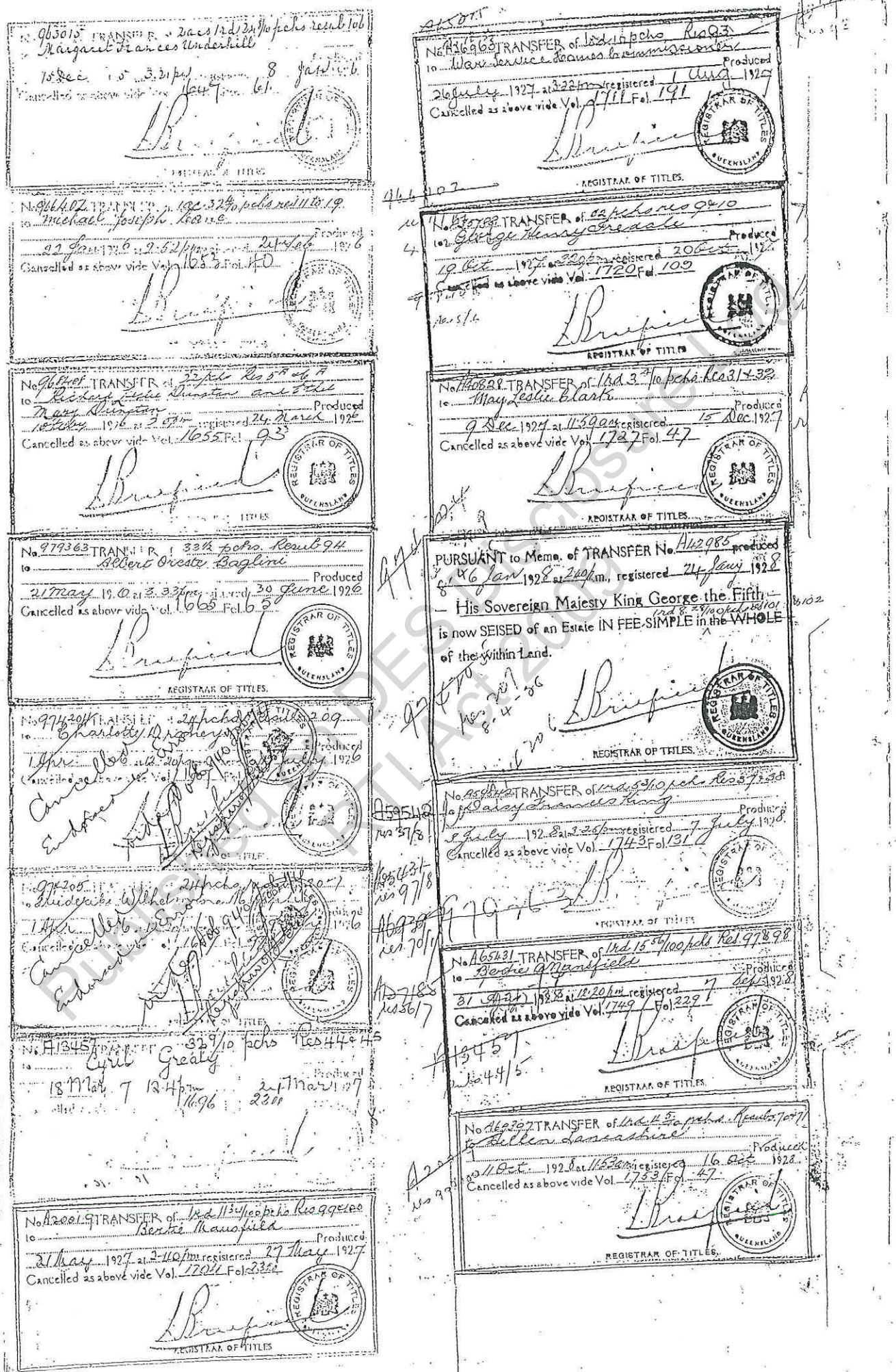
No. 950947 TRANSFER of 1rd 22½ perches res 95 & 96
to Verdy Ernest Probert
25 Aug 1925 at 2.20 pm registered 1 Sept 1925
Cancelled as above vide Vol. 1634 Fol. 57
REGISTRAR OF TITLES.

No. 950948 TRANSFER of 32½ perches, results 105
to Robert Keller Donaldson and Frances Donaldson
28 Aug 1925 at 2.30 pm registered 1 Sept 1925
Cancelled as above vide Vol. 1633 Fol. 124
REGISTRAR OF TITLES.

No. 951990. Part of the within land is now dedicated for road purposes vide Res Cat No. 41916. Produced 8 Sept 1925 at 12.16 pm. Registered 8 Oct 1925
Registrar of Titles

No. 952227 TRANSFER of 32½ perches res 82 & 83
to Roland Colquhoun Purdon
Produced
10 Sep 1925 at 2.37 pm registered 8 Oct 1925
Cancelled as above vide Vol. 1638 Fol. 233
REGISTRAR OF TITLES.

PUBLISHED UNDER FOI DISCLOSURE LOG



No. 963015 TRANSFER of 2 acres 1 rd 24 10 perches resub 106
to Margaret Frances Underhill
15 Dec 1926 at 3.21 pm registered 8 Jan 1927
Cancelled as above vide Vol. 1644 Fol. 61
REGISTRAR OF TITLES

No. 964402 TRANSFER of 19c 32½ perches resub 11 to 19
to Michael Joseph Keane
22 Jan 1926 at 2.52 pm registered 24 Feb 1926
Cancelled as above vide Vol. 1653 Fol. 140
REGISTRAR OF TITLES

No. 966101 TRANSFER of 22 perches Res 5A 0R 6P
to Richard Arthur Dunstan and Ethel Mary Dunstan
Produced 16 Feby 1926 at 3.03 pm registered 24 March 1926
Cancelled as above vide Vol. 1655 Fol. 93
REGISTRAR OF TITLES

No. 979363 TRANSFER of 33½ perches Resub 94
to Albert Oreste Baglini
Produced 21 May 1926 at 3.33 pm registered 30 June 1926
Cancelled as above vide Vol. 1665 Fol. 65
REGISTRAR OF TITLES.

No. 977209 TRANSFER of 24 perches Resub 209
to Charlotte Agnes Hayes
Produced 1 April 1926 at 2.40 pm registered 7 July 1926
Cancelled as above vide Vol. 1667 Fol. 94
Embrace with 977205
REGISTRAR OF TITLES

No. 977205 TRANSFER of 21 perches Resub 207
to Friederike Wilhelmine Hayes
Produced 1 April 1926 at 2.40 pm registered 7 July 1926
Cancelled as above vide Vol. 1667 Fol. 94
Embrace with 977209
REGISTRAR OF TITLES

No. A13457 TRANSFER of 32 9/10 perches Res 44 & 45
to Cyril Greaby
Produced 18 Mar 1927 at 12.4 pm registered 24 Mar 1927
Cancelled as above vide Vol. 1696 Fol. 230
REGISTRAR OF TITLES

No. A20019 TRANSFER of 1rd 11 3/4 10 perches Res 99 & 100
to Bertie Mansfield
Produced 21 May 1927 at 2.40 pm registered 27 May 1927
Cancelled as above vide Vol. 1701 Fol. 230
REGISTRAR OF TITLES

No. A16663 TRANSFER of 1rd 10 perches Res 93
to War Service Homes Commissioners
Produced 26 July 1927 at 3.22 pm registered 1 Aug 1927
Cancelled as above vide Vol. 1711 Fol. 191
REGISTRAR OF TITLES.

No. A17088 TRANSFER of 22 perches Res 9 & 10
to Elizabeth Mary Dreadon
Produced 19 Oct 1927 at 3.20 pm registered 20 Oct 1927
Cancelled as above vide Vol. 1720 Fol. 109
REGISTRAR OF TITLES

No. A18828 TRANSFER of 1rd 3¾ 10 perches Res 31 & 32
to Mary Leslie Blake
Produced 9 Dec 1927 at 11.59 am registered 15 Dec 1927
Cancelled as above vide Vol. 1727 Fol. 47
REGISTRAR OF TITLES.

PURSUANT to Memo. of TRANSFER No. A112985 produced
& 16 Jan 1928 at 2.40 p.m., registered 24 Jany 1928
— His Sovereign Majesty King George the Fifth —
is now SEISED of an Estate IN FEE-SIMPLE in the WHOLE
and 8 24/100 perches Res 101
of the within Land.
REGISTRAR OF TITLES.

No. A21211 TRANSFER of 1rd 6 3/10 perches Res 57 & 58
to Daisy Frances Hay
Produced 9 July 1928 at 3.26 pm registered 7 July 1928
Cancelled as above vide Vol. 1743 Fol. 131
REGISTRAR OF TITLES

No. A65431 TRANSFER of 1rd 15 56/100 perches Res 97 & 98
to Bertie Mansfield
Produced 31 Aug 1928 at 12.20 pm registered 7 Sept 1928
Cancelled as above vide Vol. 1749 Fol. 229
REGISTRAR OF TITLES

No. A69307 TRANSFER of 1rd 4 5/10 perches Resubs 7 & 7
to Helen Lancashire
Produced 11 Oct 1928 at 11.53 am registered 16 Oct 1928
Cancelled as above vide Vol. 1753 Fol. 47
REGISTRAR OF TITLES.

Published under RTI Act 2009

Annexed to C/T No 133320 Vol 832 Folio 60 this 12 day of July 1930 for the purpose of recording memorials

L. Bradfield
Registrar of Titles

No A127185 TRANSFER of 12d 6 9/10 pchs Res 56 and 57 to Andreas Louis Blair and Catherine O'Brien
Produced 11 July 1930 at noon registered 12 July 1930
Cancelled as above vide Vol. 181 Fol. 80
L. Bradfield
REGISTRAR OF TITLES

No A188186 TRANSFER of 3acs 21 3/10 pchs Resub 92A to Louis Joseph Keating and Margaret Frances Underhill
Produced 15 Dec 1932 at 12.35 pm registered 1 Feb 1933
Cancelled as above vide Vol 1878 Fol 188/189
L. Bradfield
REGISTRAR OF TITLES.

No A143305 TRANSFER of 1rd 7 3/10 pchs Res 39 and 40 to Orakaitai Rex Gargett and Thelma Gargett
Produced 11 Mar 1931 at 10.50 am registered 12 March 1931
Cancelled as above vide Vol. 1628 Fol. 131
L. Bradfield
REGISTRAR OF TITLES

No A216734 TRANSFER of 1rd 2 1/10 pchs Results 33+34 to Allan Joseph George Mason and Edna Beryl Johnston
Produced 31 Jan 1934 at 9.40 am registered 8 Feb 1934
Cancelled as above vide Vol. 1944 Fol. 190
L. Bradfield
REGISTRAR OF TITLES.

No A179315 TRANSFER of 1rd 7 pchs. Res 27 28 to Marcus Bertram Hobbs
Produced 25 Aug 1932 at 2.34 pm registered 21 Sept 1932
Cancelled as above vide Vol. 1694 Fol. 230
L. Bradfield
REGISTRAR OF TITLES.

Con A 19425

No A 204490 TRANSFER of 1rd 4 pchs Res 29 + 30 to William Holland Andrews
Produced 24th Aug 1936 at 1.15 pm registered 11 Sept 1936
Cancelled as above vide Vol. 1911 Fol. 192
L. Bradfield
REGISTRAR OF TITLES.

No A182525 TRANSFER of 1rd 5 7/10 pchs. Res 58-59 to Florence Marion Eden
Produced 30 Sep 1932 at 2.43 pm registered 14 Oct 1932
Cancelled as above vide Vol. 1566 Fol. 202
L. Bradfield
REGISTRAR OF TITLES.

Con A 182525

No A 227842 TRANSFER of 1rd 2 3/10 pchs Results 25 + 26 to Wilhelmina Catherine Bowcher and Matilda
Produced 7 July 1937 at 2.35 pm registered 27 July 1937
Cancelled as above vide Vol. 2002 Fol. 190
L. Bradfield
REGISTRAR OF TITLES.

No A182526 TRANSFER of 3/4 pchs Res 46 47 to Charles Ross Eden
Produced 30 Sep 1932 at 2.43 pm registered 14 Oct 1932
Cancelled as above vide Vol. 1869 Fol. 209
L. Bradfield
REGISTRAR OF TITLES.

Con A 182526

No A 463723 TRANSFER of 1rd 12 3/10 pchs Resubs 103 and 104 to Louis Keating
Produced 19 Oct 1940 at 3.6 pm registered 22 Oct 1940
Cancelled as above vide Vol. 2130 Fol. 275
John R. McWhirter
REGISTRAR OF TITLES.

No A185527 TRANSFER of 1rd 10 4/10 pchs Results 41 and 42 to Ina Doris Eden
Produced 30 Sep 1932 at 2.43 pm registered 16 Oct 1932
Cancelled as above vide Vol. 1877 Fol. 171
L. Bradfield
REGISTRAR OF TITLES.

Con A 185527

No A 949049 TRANSFER of 33 3/10 pchs Results 7 + 8 to Louis Keating and Margaret Frances Underhill
Produced 14 July 1950 at 12.35 pm., registered 15 July 1950
Cancelled as above vide Vol 2583 Fol. 105 + 106
REGISTRAR OF TITLES

Con A 377842

Con A 304490

PUBLISHED UNDER RTI Act 2009 Disclosure Log

Folding or Mutilating may Lead to Refusal

154325

154325

- DIAGRAM -

(NOT TO SCALE)

Area of New Road
1160 m²

LODGED DATE
REGD DATE

N

MOGGILL RD.

KEATING ST.

COONAN ST.

UNDERHILL AVE.

STAMFORD ROAD

(NEW ROAD)

7655 m²

R.P. 124645 "B"

R.P. 125713 "B"

R.P. 23485 "B"

27

28

29

30

5

6

CANCELLATIONS etc

154325 CC 116

Alterations and additions in red by me.
W Bilkstra Auth. Surveyor 3/5/77

Lots 1.

Lots X Lots Y

Cancelling Subs. 1 to 5 on R.P. 91806, Subs. 1 & 2 on R.P. 97852 and Lot 2 on R.P. 124645

Surveyed by William Bilkstra 29/7/1976 of Alan J. Fox Pty. Ltd.

Orig. Portion 47

Orig. Grant

County of Stanley Town of

Parish of INDOOROOPILLY

SCALE 1:600 REGISTERED PLAN 154325

DIMENSIONS IN METRES

CROWN COPYRIGHT RESERVED, REGISTRAR OF TITLES, QUEENSLAND

CISP

S.33

154325

Drawing of Plan must be restricted to the space inside the blue lines

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This plan MUST NOT BE FOLDED but may be rolled.

No 36425

I William Brikstra of Brisbane
Authorised Surveyor, do hereby solemnly and sincerely declare that I have faithfully and truly surveyed, measured and marked on the ground the parcel of land herein referred to, and that the measurements and boundaries given in this plan are correct, and do not to the best of my belief in any way interfere with the rights or property of any persons, owners or occupiers of the land adjoining the above land, and described in the said plan; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the "Oaths Acts, 1867-1960"

W Brikstra
Authorised Surveyor

Made and Signed at Brisbane this 5th day of August 19.76. before me.

Signature of Registrar of Titles or of a Magistrate

The Council of the Brisbane City Council of Brisbane certifies that the City of Brisbane Acts 1924-1960 to 1964 to 1967 and all ordinances thereunder have been complied with and approves this plan of subdivision subject to

Dated this 9.7.77 day of NOVEMBER 19.76

Mayor or Chairman

Town or Shire Clerk

I/We DENMAC NOMINEES PTY LTD (Names in full) as proprietor/s of this land, agree to this Plan of subdivision; and dedicate the new roads shown hereon to public use.

Signature of Proprietor/s

The Common Seal of Denmac Nominees Pty.Ltd. was hereunto affixed by authority of a resolution of the Board of Directors in the presence of:

DENIS MICHAEL McENIERY DIRECTOR

EILEEN MARY McENIERY DIRECTOR

WITNESS G. M. Covell

New C.T. Ref.

| (Re) Sub. | Vol. | Fol. |
|---|---|---|
| 1 | 5667 | 40 |

Calc. Bk. No. 303/180
Examined 28/6/77 dRB
Passed 1/1 28/6/77 dRB
Charted 15/7/77
Located CC116

CC116 SK 15/9/77

Particulars entered in Register Book Vol. 1348; 3656 Folio 220/1 4318; 5601 7980; 206

12 JUL 1977 at 11.07a

REGISTRAR OF TITLES

Reg'd 18.4.77

FOR TITLES OFFICE USE ONLY

Previous Title C.T. 4348 = 220 Subs 1-4 RP 91806 "B"
C.T. 3686 = 1 Sub 5 RP 91806 "B"
C.T. 4318 = 79 Sub 1 RP 97852 "B"
C.T. 4318 = 80 Sub 2 RP 97852 "B"
C.T. 5601 = 206 Lot 2 RP 124645 "B"

Note. New road is out of C.T. 4348 - 220.

N.I.R. 5552 so far as relates to Sub 1-4 on RP 91806 satisfied.

154325

For Additional Plan & Document Notings Refer to CISP

Lodged by HOPGOOD AND GANIM SOLICITORS ELIZABETH ST. BRISBANE.

| Fees Payable | | Received |
|---|---|---|
| Postal fee and Postage | | Registrar of Titles |
| 35.00 | Lodgt. & Exam. 35 | Journal No. F353447 |
| 9.50 | Entd. on Docs. 9 | |
| 11.50 | New Title 11.50 | Receipt No. 80635 |
| 22.50 | Entd. on Deeds 22.50 | |
| 3.00 | Photo Fee 3 | |
| 81.00 | Total 81 00 | |

$2.50 REQUISITION FEE 1 JUL 1977 Paid Vide No. DS 4227 for

SCRS REGISTRATION FEE 4.00 Paid Vide No. 054060

RECEIVED TO REGISTRAR OF TITLES 1 JUL 1977

P/N's 14.6.77

REGISTERED PLAN 154325

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RTI Act 2009

# APPENDIX B

## BORE REPORTS WITH EXPLANATORY NOTES

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 8

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, clayey gravel, phyllite, moist | | | E | | B8-1 | |
| | - gravelly clay, moist | | | | 0.5 | | |
| | | | | E | | B8-2 | |
| | | | | | 0.85 | | |
| | End of Bore at 0.85 m (due to refusal) | | | | | | |
| 1 | | -1.0 | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 9

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, clayey gravel, phyllite | | | E | | B9-1 | |
| | - gravelly clay | | | | 0.3 | | |
| | | | | E | | B9-2 | |
| | | | | | 0.6 | | |
| | End of Bore at 0.65 m (due to refusal) | | | | | | |
| 1 | | -1.0 | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 10

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, clayey gravel, phyllite | | | E | | B10-1 | |
| | - gravelly clay | | | E | 0.5 | B10-2 | |
| | End of Bore at 0.8 m (due to refusal) | | | | 0.8 | | |
| 1 | | -1.0 | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 11

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, gravelly clay, phyllite fill | | | E | | B11-1 | |
| | | | | | 0.3 | | |
| | | | | | 0.5 | | |
| | | | | E | | B11-2 | |
| 1 | | -1.0 | | | 1.0 | | |
| | - dark grey-brown, clayey sand with gravel, phyllite rockfill | | | E | | B11-3 | |
| | | | | | 1.5 | | |
| | ***PHYLLITE (XW)*** - light brown, with clay | | | | 1.7 | | |
| | | | | E | | B11-4 | |
| 2 | | -2.0 | | | 2.0 | | |
| | End of Bore at 2.35 m (due to refusal) | | | | | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)
E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery
C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

## BORE 12

***Client:*** Property Solutions Group Australia Pty Ltd
***Project:*** Retail/Commercial Development
***Location:*** Moggill Road and Keating Street, Indooroopilly
***Project No:*** 06253A

***Page No:*** 1 of 1
***Date:*** 6 December 2006
***Ground Surface Level:*** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, clayey gravel, phyllite fill | | | E | | B12-1 | |
| | | | | | 0.5 | | |
| | - gravelly clay, possible trace of ash | | | E | | B12-2 | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | E | | B12-3 | |
| | | | | | 1.5 | | |
| | ***PHYLLITE (XW)*** - light brown, with clay | | | | 1.6 | | |
| | | | | E | | B12-4 | |
| | | | | | 1.8 | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |
| | End of Bore at 3 m | | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from


Release

# BORE REPORT

BUTLER PARTNERS

## BORE 13

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, clayey gravel, phyllite/greywacke fill | | | E | | B13-1 | |
| | | | | | 0.5 | | |
| | | | | E | | B13-2 | |
| | - gravelly clay | | | | | | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | E | | B13-3 | |
| | | | | | 1.4 | | |
| | | | | | 1.7 | | |
| | | | | E | | B13-4 | |
| 2 | | -2.0 | | | 2.0 | | |
| | ***PHYLLITE (XW)*** - brown-grey, with clay | | | | 2.1 | | |
| | | | | E | | B13-5 | |
| | | | | | 2.3 | | |
| 3 | | -3.0 | | | | | |
| | End of Bore at 3 m | | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

## BORE 14

***Client:*** Property Solutions Group Australia Pty Ltd
***Project:*** Retail/Commercial Development
***Location:*** Moggill Road and Keating Street, Indooroopilly
***Project No:*** 06253A

***Page No:*** 1 of 1
***Date:*** 6 December 2006
***Ground Surface Level:*** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, clayey gravel, phyllite fill | | | E | | B14-1 | |
| | | | | | 0.5 | | |
| | | | | E | | B14-2 | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | E | | B14-3 | |
| | | | | | 1.5 | | |
| | | | | E | | B14-4 | |
| | End of Bore at 1.7 m (due to refusal) | | | | 1.7 | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 15

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | **CONCRETE**<br>- 100mm thick | | | | 0.1 | | |
| | **FILL**<br>- brown, gravelly clay, phyllite fill | | | E | | B15-1 | |
| | - medium to coarse grained sand | | | | 0.4<br>0.5 | | |
| | | | | E | | B15-2<br>DUP01 | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | E | | B15-3 | |
| | **PHYLLITE (XW)**<br>- light grey | | | E | 1.2<br>1.3 | B15-4 | |
| | End of Bore at 1.3 m<br>(due to refusal) | | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 16

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | **CONCRETE**<br>- 100mm thick | | | | 0.1 | | |
| | **FILL**<br>- brown, medium to coarse grained sand | | | E | | B16-1 | |
| | | | | | 0.4 | | |
| | - gravelly clay, phyllite fill, moist | | | | 0.5 | | |
| | | | | E | | B16-2<br>DUP02 | |
| | | | | | 0.8 | | |
| | **PHYLLITE (XW)**<br>- light grey | | | | 0.9 | | |
| 1 | | -1.0 | | E | | B16-3 | |
| | | | | | 1.2 | | |
| | End of Bore at 1.2 m<br>(due to refusal) | | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 17

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | **CONCRETE**<br>- 100mm thick | | | | 0.15 | | |
| | **FILL**<br>- brown, clayey gravel, phyllite fill | | | E | | B17-1 | |
| | | | | E | 0.5 | B17-2 | |
| | **PHYLLITE (XW)**<br>- white-brown | | | | 0.8 | | |
| 1 | | -1.0 | | E | 1.0 | B17-3 | |
| | | | | | 1.2 | | |
| | End of Bore at 1.5 m<br>(due to refusal) | | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from


Release

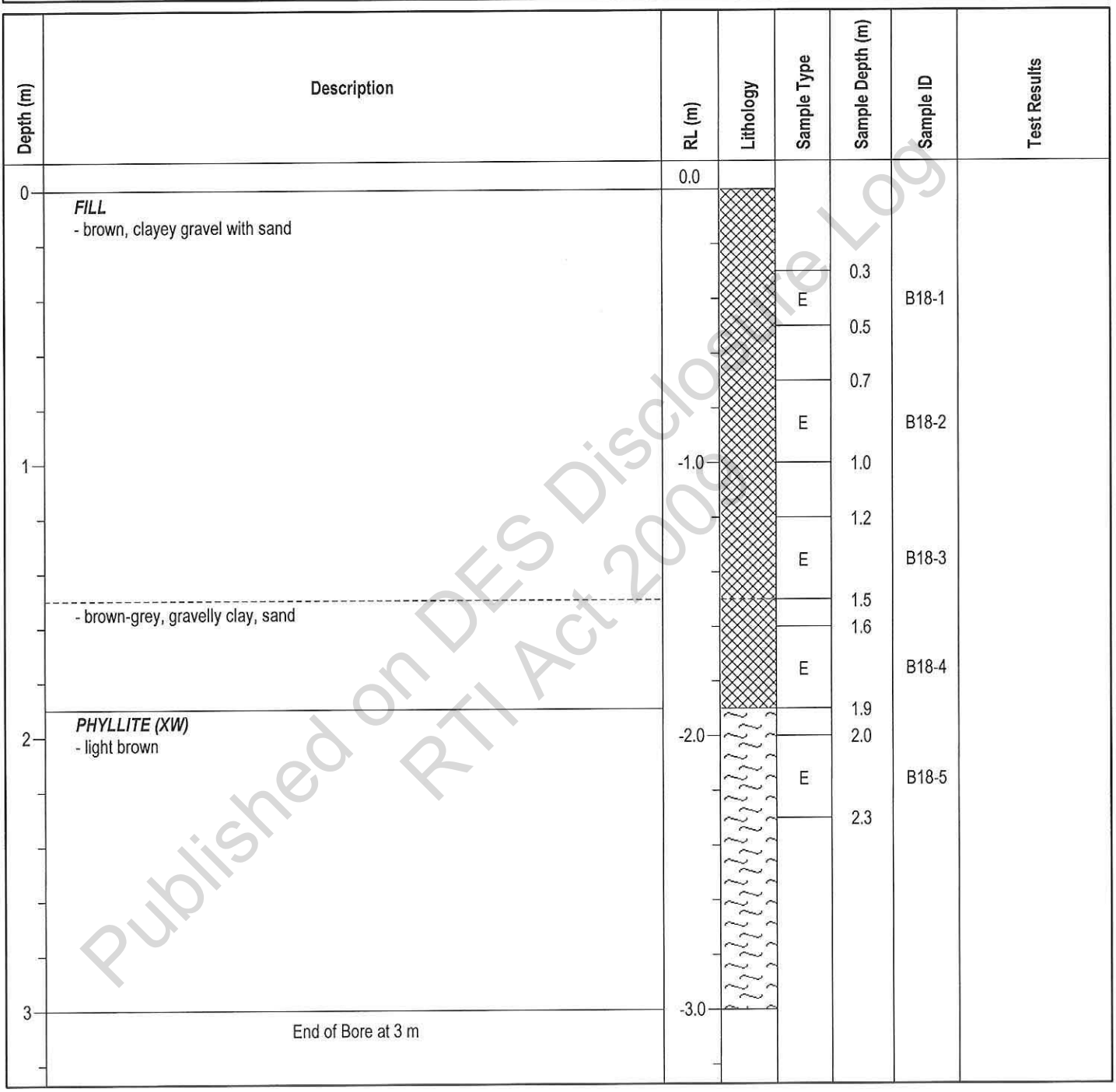
# BORE REPORT

BUTLER PARTNERS

***Client:*** Property Solutions Group Australia Pty Ltd
***Project:*** Retail/Commercial Development
***Location:*** Moggill Road and Keating Street, Indooroopilly
***Project No:*** 06253A

## *BORE 18*

***Page No:*** 1 of 1
***Date:*** 6 December 2006
***Ground Surface Level:*** RL




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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 19

**Page No:** 1 of 1
**Date:** 6 December 2006
**Ground Surface Level:** RL

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, gravelly clay, phyllite fill | | | E | | B19-1 | |
| | | | | | 0.4 | | |
| | - clayey gravel, phyllite | | | | 0.5 | | |
| | | | | E | | B19-2 | |
| | | | | | 0.8 | | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | E | | B19-3 DUP03 | |
| | | | | | 1.3 | | |
| | ***PHYLLITE (XW)*** - light brown | | | E | 1.5 | B19-4 | |
| | | | | | 1.6 | | |
| | End of Bore at 1.6 m (due to refusal) | | | | | | |
| 2 | | -2.0 | | | | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

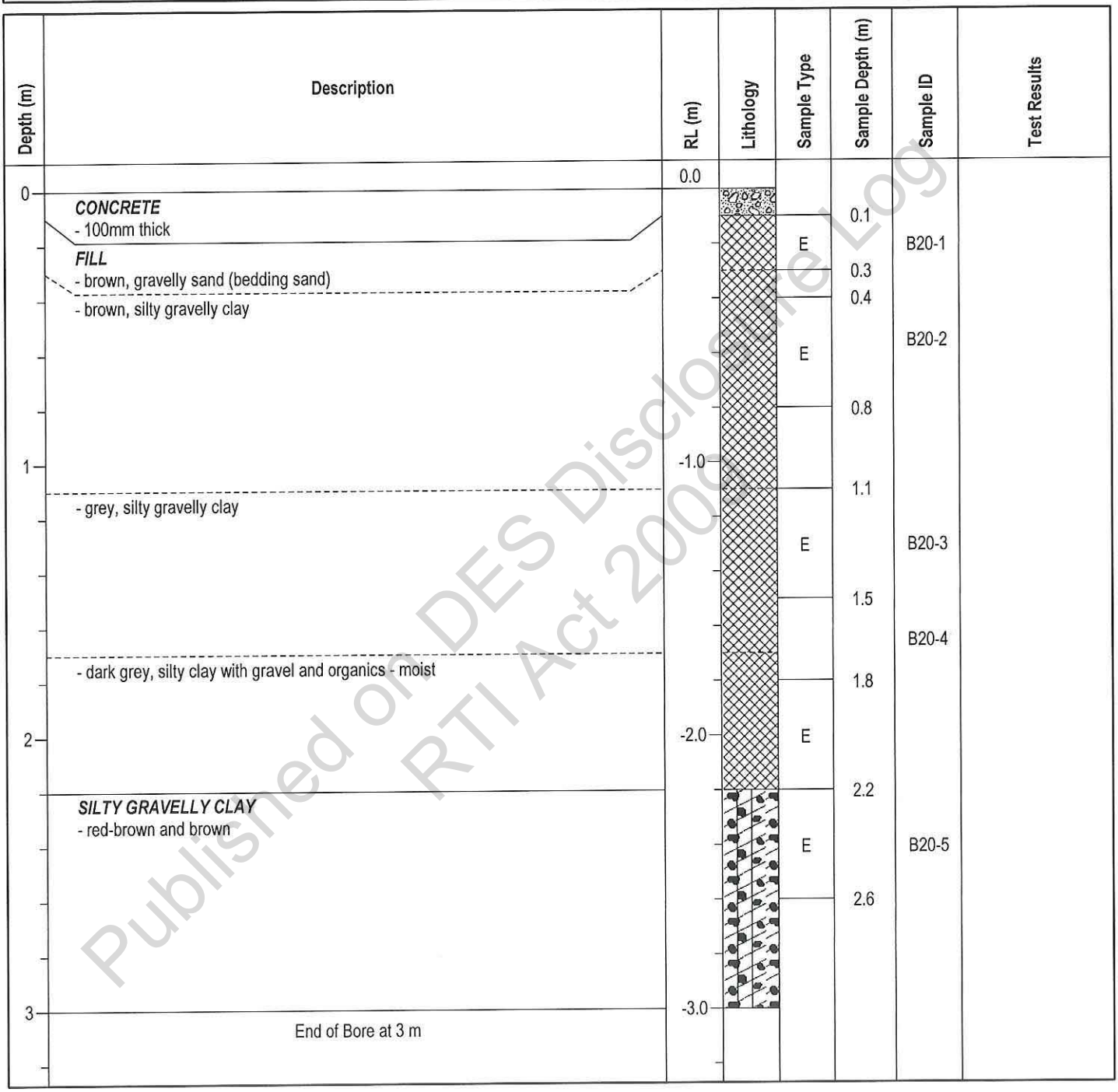
# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 20

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 28.5m*




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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 21

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 28.7m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | 0.1 | | |
| | ***FILL*** - brown, gravelly sand (bedding sand) | | | E | | B21-1 | |
| | | | | | 0.3 | | |
| | - grey, silty gravelly clay | | | | 0.4 | | |
| | | | | E | | B21-2 | |
| | - burgundy and dark grey, silty gravelly clay with organics | | | | 0.6 | | |
| | | | | E | | B21-3 | |
| 1 | | -1.0 | | | 1.0 | | |
| | - grey and brown, silty gravelly clay | | | | 1.2 | | |
| | | | | E | | B21-4 | |
| | | | | | 1.6 | | |
| | ***PHYLLITE*** - grey and brown | | | | 1.8 | | |
| 2 | | -2.0 | | E | | B21-5 | |
| | End of Bore at 2.2 m | | | | 2.2 | | |
| 3 | | -3.0 | | | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 22

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.2m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID |
|---|---|---|---|---|---|
| 0 | | 0.0 | | | |
| | ***CONCRETE*** - 100mm thick | | E | 0.1 / 0.2 | B22-1 |
| | ***FILL*** - brown, gravelly sand (bedding sand) | | E | 0.3 | B22-2 |
| | - red-brown, silty clay, moist | | | 0.5 / 0.6 | |
| | - grey and brown, silty gravelly clay (over phyllite fill) | | E | | B22-3 |
| 1 | | -1.0 | | 1.0 / 1.1 | |
| | ***PHYLLITE (XW)*** - grey and light brown | | E | | B22-4 |
| | | | | 1.4 / 1.5 | |
| | | | | | B22-5 |
| 2 | | -2.0 | | 2.0 | |
| | | | E | | B22-6 |
| | | | | 2.5 | |
| | End of Bore at 2.7 m (refusal) | | | | |
| 3 | | -3.0 | | | |

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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

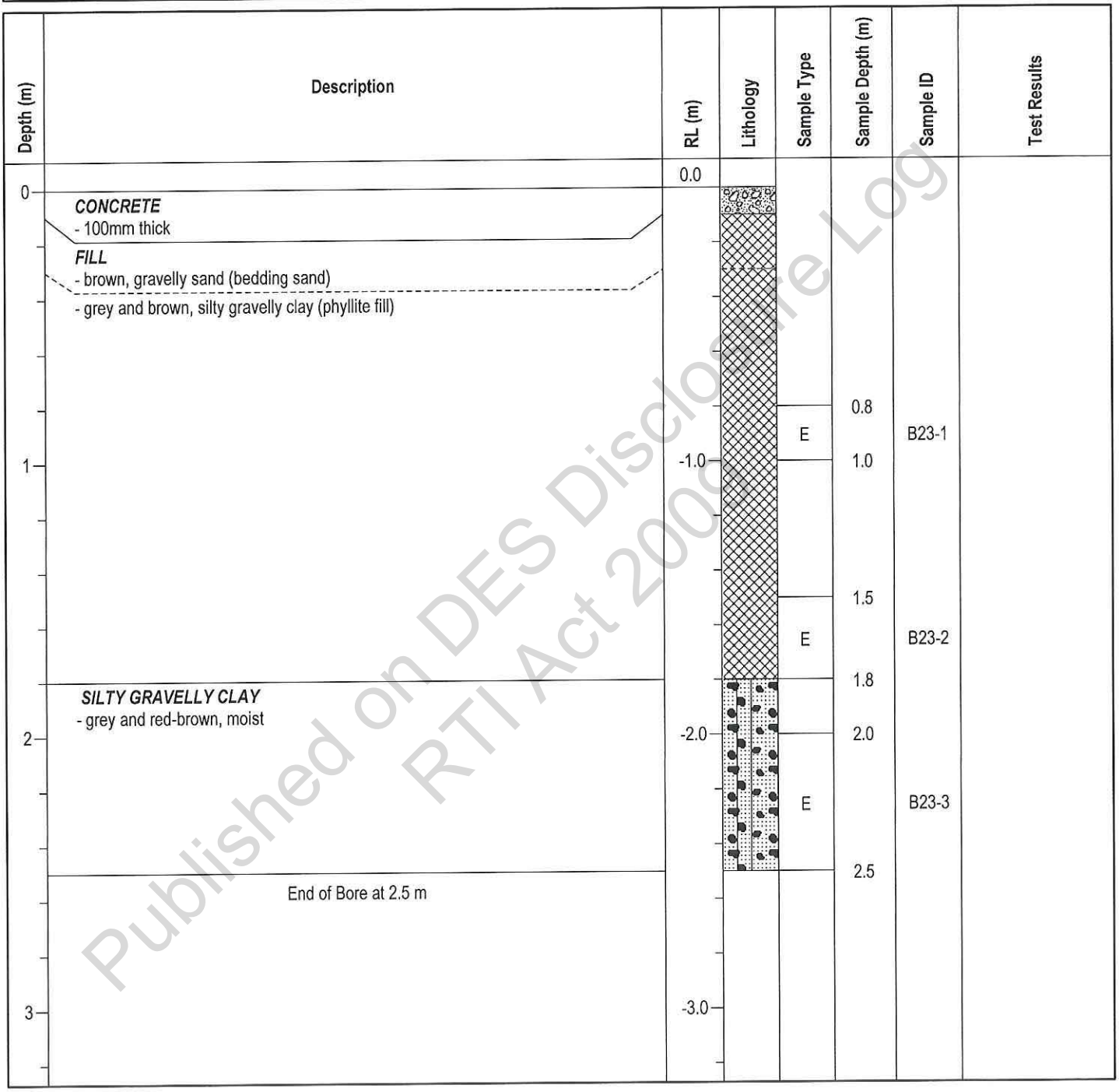
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**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 23

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.4m*




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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

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**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 24

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.4m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID |
|---|---|---|---|---|---|
| 0 | | 0.0 | | | |
| | ***CONCRETE*** - 100mm thick | | | | |
| | ***FILL*** - brown, gravelly sand (bedding sand) | | | | |
| | - grey and brown, silty gravelly clay (phyllite fill) | | E | 0.8 | B24-1 |
| 1 | | -1.0 | | 1.0 | |
| | | | E | 1.5 | B24-2 |
| | | | | 1.8 | |
| 2 | | -2.0 | | 2.0 | |
| | | | E | | B24-3 |
| | End of Bore at 2.5 m | | | 2.5 | |
| 3 | | -3.0 | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 25

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.0m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | **CONCRETE** - 100mm thick | | | | | | |
| | **FILL** - brown, gravelly sand (bedding sand) | | | | | | |
| | - grey and brown silty gravelly clay (phyllite fill) | | | | 0.8 | | |
| | | | | E | | B25-1 | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | | 1.5 | | |
| | | | | E | | B25-2 | |
| | **SILTY GRAVELLY CLAY** - grey, red-brown, moist | | | | 1.8 | | |
| 2 | | -2.0 | | | 2.0 | | |
| | | | | E | | B25-3 | |
| | End of Bore at 2.5 m | | | | 2.5 | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

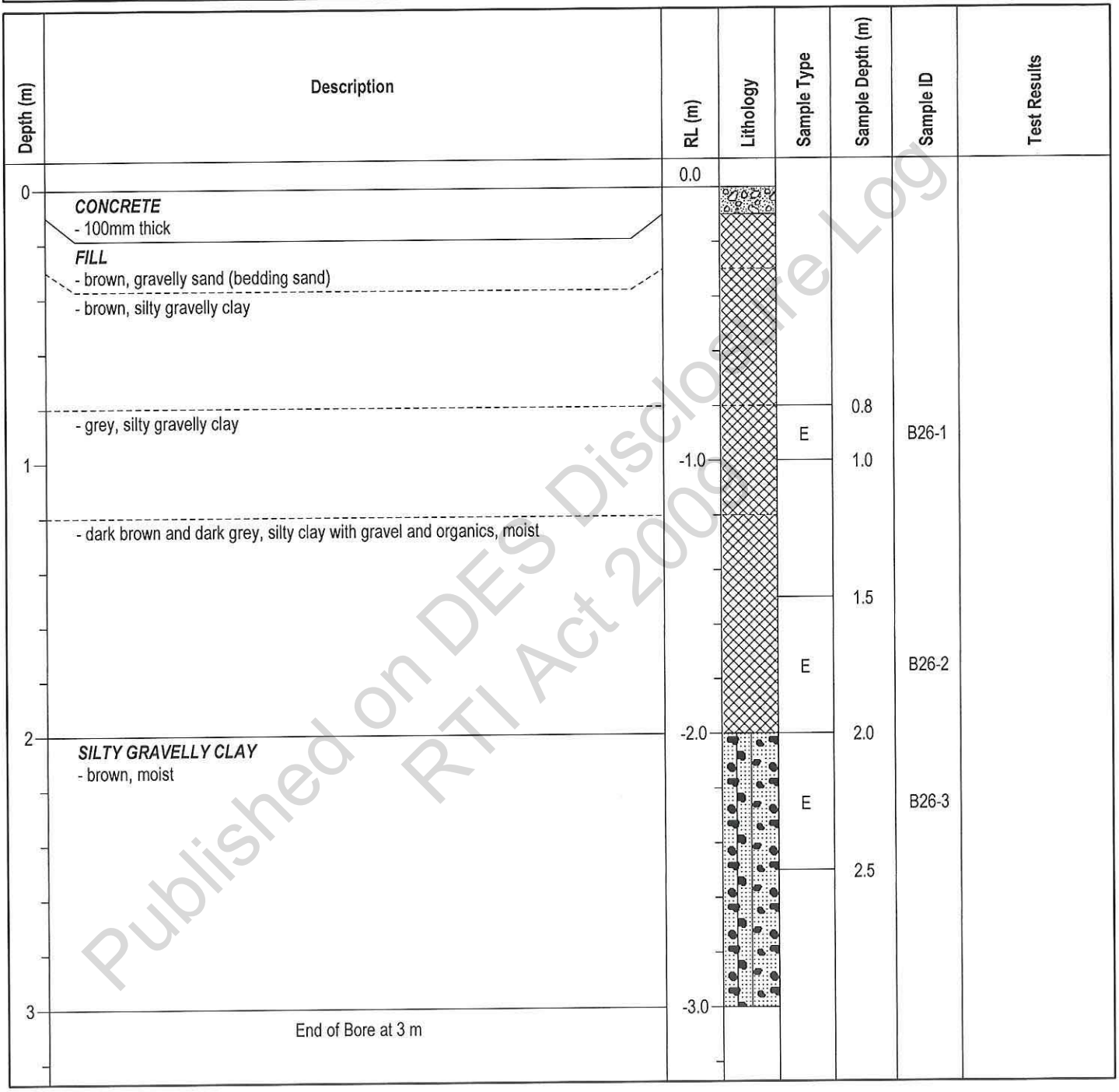
**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 26

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.2m*




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| | | | | | |
|---|---|---|---|---|---|
| D | Disturbed Sample | E | Environmental Sample | C | NMLC Coring |
| B | Bulk Sample | S | Standard Penetrometer Test (SPT) | Is(50) | Point Load Test Result (MPa) |
| U | Undisturbed Tube (50mm diameter) | SPT | Hammer Bouncing | (d) | Diametral Point Load Strength Test |
| pp | Pocket Penetrometer Test (kPa) | ( ) | No Sample Recovery | (a) | Axial Point Load Strength Test |

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from


Release

# BORE REPORT

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**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 27

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.7m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | |
| | ***CONCRETE*** - 100mm thick | | | | | |
| | ***FILL*** - brown, gravelly sand (bedding sand) | | | | | |
| | - grey and brown, silty gravelly clay (phyllite fill) | | | 0.8 | | |
| | | | E | | B27-1 | |
| 1 | | -1.0 | | 1.0 | | |
| | | | | 1.5 | | |
| | | | E | | B27-2 | |
| | ***SILTY GRAVELLY CLAY*** - grey and red-brown, moist | | | 1.8 | | |
| 2 | | -2.0 | | 2.0 | | |
| | | | E | | B27-3 | |
| | End of Bore at 2.5 m | | | 2.5 | | |
| 3 | | -3.0 | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 28

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 27.6m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | **CONCRETE** - 100mm thick | | | | | | |
| | **FILL** - brown, gravelly sand (bedding sand) | | | | | | |
| | - grey and brown, silty gravelly clay (phyllite fill) | | | | 0.8 | | |
| | | | | E | | B28-1 | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | | 1.5 | | |
| | | | | E | | B28-2 | |
| | **SILTY GRAVELLY CLAY** - grey and red-borwn, moist | | | | 1.8 | | |
| 2 | | -2.0 | | | 2.0 | | |
| | | | | E | | B28-3 | |
| | End of Bore at 2.5 m | | | | 2.5 | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

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**Client:** Property Solutions Group Australia Pty Ltd
**Project:** Retail/Commercial Development
**Location:** Moggill Road and Keating Street, Indooroopilly
**Project No:** 06253A

## BORE 29

**Page No:** 1 of 1
**Date:** 15 March 2007
**Ground Surface Level:** RL 26.8m*

| Depth (m) | Description | RL (m) | Lithology | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|---|
| 0 | | 0.0 | | | | | |
| | ***CONCRETE*** - 100mm thick | | | | | | |
| | ***FILL*** - brown, gravelly sand (bedding sand) | | | | | | |
| | - grey and brown, silty gravelly clay (phyllite fill) | | | | 0.8 | | |
| | | | | E | | B29-1 | |
| 1 | | -1.0 | | | 1.0 | | |
| | | | | | 1.5 | | |
| | | | | E | | B29-2 | |
| | ***SILTY GRAVELLY CLAY*** - grey and red-brown, moist | | | | 1.8 | | |
| 2 | | -2.0 | | | 2.0 | | |
| | | | | E | | B29-3 | |
| | End of Bore at 2.5 m | | | | 2.5 | | |
| 3 | | -3.0 | | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# BORE REPORT

BUTLER PARTNERS

## BORE 30

***Client:*** Property Solutions Group Australia Pty Ltd
***Project:*** Retail/Commercial Development
***Location:*** Moggill Road and Keating Street, Indooroopilly
***Project No:*** 06253A

***Page No:*** 1 of 1
***Date:*** 15 March 2007
***Ground Surface Level:*** RL 27.2m*

| Depth (m) | Description | RL (m) | Sample Type | Sample Depth (m) | Sample ID | Test Results |
|---|---|---|---|---|---|---|
| 0 | ***CONCRETE*** - 100mm thick | 0.0 | | | | |
| | ***FILL*** - brown, gravelly sand (bedding sand) | | | | | |
| | - brown, silty gravelly clay | | | | | |
| | - grey, silty gravelly clay | | E | 0.8 | B30-1 | |
| 1 | | -1.0 | | 1.0 | | |
| | - dark brown and dark grey silty clay with gravel and organics, moist | | | | | |
| | | | E | 1.5 | B30-2 | |
| 2 | ***SILTY GRAVELLY CLAY*** - brown, moist | -2.0 | E | 2.0 | B30-3 | |
| | | | | 2.5 | | |
| 3 | End of Bore at 3 m | -3.0 | | | | |

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D Disturbed Sample
B Bulk Sample
U Undisturbed Tube (50mm diameter)
pp Pocket Penetrometer Test (kPa)

E Environmental Sample
S Standard Penetrometer Test (SPT)
SPT Hammer Bouncing
( ) No Sample Recovery

C NMLC Coring
Is(50) Point Load Test Result (MPa)
(d) Diametral Point Load Strength Test
(a) Axial Point Load Strength Test

**Rig:** Geoprobe 6620DT
**Drilling Method:** Pushtube
**Groundwater:** No free groundwater encountered during drilling
**Remarks:** * Approximate ground surface level interpolated from

# Notes on Description and Classification of Soil

The methods of description and classification of soils used in this report are generally based on Australian Standard AS1726-1993 "Geotechnical Site Investigations".

Soil description is based on an assessment of disturbed samples, as recovered from bores and excavations, or from undisturbed materials as seen in excavations and exposures or in undisturbed samples. Descriptions given on report sheets are an interpretation of the conditions encountered at the time of investigation.

In the case of cone or piezocone penetrometer tests, actual soil samples are not recovered and soil description is inferred based on published correlations, past experience and comparison with bore and/or test pit data (if available).

Soil classification is based on the particle size distribution of the soil and the plasticity of the portion of the material finer than 0.425mm. The description of particle size distribution and plasticity is based on the results of visual field estimation, laboratory testing or both. When assessed in the field, the properties of the soil are estimated; precise description will always require laboratory testing to define soil properties.

Where soil can be clearly identified as FILL this will be noted as the main soil type followed by a description of the composition of the fill (eg. FILL – yellow-brown, fine to coarse grained gravelly clay fill with concrete rubble). If the soil is assessed as possibly being fill this will be noted as an additional observation.

Soils are generally described using the following sequence of terms. In certain instances, not all of the terms will be included in the soil description.

MAIN SOIL TYPE (CLASSIFICATION GROUP SYMBOL)
- strength/density, colour, structure/grain size, secondary and minor components, additional observations

Information on the definition of descriptive and classification terms follows.

**SOIL TYPE and CLASSIFICATION GROUP SYMBOLS**

| | Major Divisions | Particle Size | Classification Group Symbol | Typical Names |
|---|---|---|---|---|
| **COARSE GRAINED SOILS** (more than half of material is larger than 0.075 mm) | BOULDERS | > 200mm | | |
| | COBBLES | 63 – 200mm | | |
| | GRAVELS (more than half of coarse fraction is larger than 2.36 mm) | Coarse: 20 – 63 mm<br>Medium: 6 – 20 mm<br>Fine: 2.36 – 6 mm | GW | Well graded gravels, gravel-sand mixtures, little or no fines. |
| | | | GP | Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels. |
| | | | GM | Silty gravels, gravel-sand-silt mixtures. |
| | | | GC | Clayey gravels, gravel-sand-clay mixtures. |
| | SANDS (more than half of coarse fraction is smaller than 2.36mm) | Coarse: 0.6 – 2.36 mm<br>Medium: 0.2 – 0.6 mm<br>Fine: 0.075 – 0.2 mm | SW | Well graded sands, gravelly sands, little or no fines. |
| | | | SP | Poorly graded sands and gravelly sands; little or no fines, uniform sands. |
| | | | SM | Silty sands, sand-silt mixtures. |
| | | | SC | Clayey sands, sand-clay mixtures. |
| **FINE GRAINED SOILS** (more than half of material is smaller than 0.075 mm) | SILTS & CLAYS (liquid limit <50 %) | | ML | Inorganic silts and very fine sands, silty/clayey fine sands or clayey silts with low plasticity. |
| | | | CL and CI | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays. |
| | | | OL | Organic silts and organic silty clays of low plasticity. |
| | SILTS & CLAYS (liquid limit >50 %) | | MH | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils. |
| | | | CH | Inorganic clays of high plasticity. |
| | | | OH | Organic clays of medium to high plasticity, organic silts. |
| | HIGHLY ORGANIC SOILS | | Pt | Peat and other highly organic soils. |

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# Notes on Description and Classification of Rock

The methods of description and classification of rock used in this report are generally based on Australian Standard AS1726-1993 "Geotechnical Site Investigations".

Rock description is based on an assessment of disturbed samples, as recovered from bores and excavations, or from undisturbed materials as seen in excavations and exposures, or in core samples. Descriptions given on report sheets are an interpretation of the conditions encountered at the time of investigation.

Notes outlining the method and terminology adopted for the description of rock defects are given below, however, detailed information on defects can generally only be determined where rock core is taken, or excavations or exposures allow detailed observation and measurement.

Rocks are generally described using the following sequence of terms. In certain instances not all of the terms will be included in the rock description.

ROCK TYPE (WEATHERING SYMBOL), strength, colour, grain size, defect frequency

Information on the definition of descriptive and classification terms follows.

## ROCK TYPE

In general, simple rock names are used rather than precise geological classifications.

## ROCK MATERIALS WEATHERING CLASSIFICATION

| Term | Weathering Symbol | Definition |
|---|---|---|
| Residual soil | RS | Soil developed from extremely weathered rock; the mass structure and substance fabrics are no longer evident; there is a large change in volume but the soil has not been significantly transported. |
| Extremely weathered | XW | Rock is weathered to such an extent that it has 'soil' properties, ie. it either disintegrates or can be remoulded in water. |
| Distinctly weathered * | DW | Rock strength usually changed by weathering. The rock may be highly discoloured, usually by ironstaining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores. |
| Highly weathered | HW | Rock substance affected by weathering to the extent that limonite staining or bleaching affects the whole of the rock substance and other signs of chemical or physical decomposition are evident. Porosity and strength may be increased or decreased compared to the fresh rock, usually as a result of iron leaching or deposition. The colour and strength of the original fresh rock substance is no longer recognisable. |
| Moderately weathered | MW | Rock substance affected by weathering to the extent that staining extends throughout the whole of the rock substance and the original colour of the fresh rock may be no longer recognisable. |
| Slightly weathered | SW | Rock is slightly discoloured but shows little or no change of strength from fresh rock. |
| Fresh | FR | Rock shows no sign of decomposition or staining. |

** Subdivision of this weathering grade into highly and moderately may be used where applicable.*

## STRENGTH OF ROCK MATERIAL

| Term | Symbol | Point Load Index $I_s$ (50) | Field guide to strength |
|---|---|---|---|
| Extremely low | EL | < 0.03 MPa | Easily remoulded by hand to a material with soil properties. |
| Very low | VL | 0.03 – 0.1 MPa | Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30mm thick can be broken by finger pressure. |
| Low | L | 0.1 – 0.3 MPa | Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150mm long 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling. |
| Medium | M | 0.3 – 1.0 MPa | Readily scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty. |
| High | H | 1.0 – 3.0 MPa | A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer. |
| Very high | VH | 3.0 – 10.0 MPa | Hand specimen breaks with pick after more than one blow; rock rings under hammer. |
| Extremely high | EH | > 10 MPa | Specimen requires many blows with geological pick to break through intact material; rock rings under hammer. |

*Notes:*

1. These terms refer to the strength of the rock material and not to the strength of the rock mass which may be considerably weaker due to the effect of rock defects.
2. The field guide visual assessment for rock strength may be used for preliminary assessment or when point load testing is not available.
3. Anisotropy of rock may affect the field assessment of strength.



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# APPENDIX C

## LABORATORY TEST RESULT SHEETS FOR ADDITIONAL ESA

Australian Government

National Measurement Institute

# REPORT OF ANALYSIS



Report No. RN609828

| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/070405/1 |
| | | Quote No. | : QT-00782 |
| | | Order No. | : LA24 |
| | | Date Sampled | : 4-APR-2007 |
| | | Date Received | : 5-APR-2007 |
| Attention | : sch4p4( 6) Personal inform | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : sch4p4( 6) Personal informa | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013376 | B23-1 | SOIL 04/04/07 JOB 06253A |
| N07/013377 | B23-2 | SOIL 04/04/07 JOB 06253A |
| N07/013378 | B23-3 | SOIL 04/04/07 JOB 06253A |
| N07/013379 | B24-1 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N07/013376 B23-1 | N07/013377 B23-2 | N07/013378 B23-3 | N07/013379 B24-1 | Method |
|---|---|---|---|---|---|---|
| Trace Elements | | | | | | |
| Lead | mg/kg | 120 | 95 | 15 | 38 | NT2_49 |
| Total Solids | % | 87 | 88.8 | 80.8 | 91.3 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/070405/1 |
| | | Quote No. | : QT-00782 |
| | | Order No. | : LA24 |
| | | Date Sampled | : 4-APR-2007 |
| | | Date Received | : 5-APR-2007 |
| Attention | : sch4p4( 6) Personal information | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : sch4p4( 6) Personal information | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013380 | B24-2 | SOIL 04/04/07 JOB 06253A |
| N07/013381 | B24-3 | SOIL 04/04/07 JOB 06253A |
| N07/013382 | B25-1 | SOIL 04/04/07 JOB 06253A |
| N07/013383 | B25-2 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N07/013380 B24-2 | N07/013381 B24-3 | N07/013382 B25-1 | N07/013383 B25-2 | Method |
|---|---|---|---|---|---|---|
| **Trace Elements** | | | | | | |
| Lead | mg/kg | 86 | 16 | 39 | 20 | NT2_49 |
| Total Solids | % | 88.9 | 80.9 | 92.4 | 87.1 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

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# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| **Client** | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | **Job No.** | : BUTL01/070405/1 |
| | | **Quote No.** | : QT-00782 |
| | | **Order No.** | : LA24 |
| | | **Date Sampled** | : 4-APR-2007 |
| | | **Date Received** | : 5-APR-2007 |
| **Attention** | : sch4p4( 6) Personal informat | **Sampled By** | : CLIENT |
| **Project Name** | : | | |
| **Your Client Services Manager** | : sch4p4( 6) Personal informa | **Phone** | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013384 | B25-3 | SOIL 04/04/07 JOB 06253A |
| N07/013385 | B26-1 | SOIL 04/04/07 JOB 06253A |
| N07/013386 | B26-2 | SOIL 04/04/07 JOB 06253A |
| N07/013387 | B26-3 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. | | N07/013384 | N07/013385 | N07/013386 | N07/013387 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B25-3 | B26-1 | B26-2 | B26-3 | Method |
| **Trace Elements** | | | | | | |
| Lead | mg/kg | 13 | 350 | 180 | 14 | NT2_49 |
| Total Solids | % | 84.2 | 88.9 | 89.4 | 81 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

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|---|---|---|---|
| **Client** | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | **Job No.** | : BUTL01/070405/1 |
| | | **Quote No.** | : QT-00782 |
| | | **Order No.** | : LA24 |
| | | **Date Sampled** | : 4-APR-2007 |
| | | **Date Received** | : 5-APR-2007 |
| **Attention** | : sch4p4( 6) Personal information | **Sampled By** | : CLIENT |
| **Project Name** | : | | |
| **Your Client Services Manager** | : sch4p4( 6) Personal informatio | **Phone** | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013388 | B27-1 | SOIL 04/04/07 JOB 06253A |
| N07/013389 | B27-2 | SOIL 04/04/07 JOB 06253A |
| N07/013390 | B27-3 | SOIL 04/04/07 JOB 06253A |
| N07/013391 | B28-1 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. | | N07/013388 | N07/013389 | N07/013390 | N07/013391 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B27-1 | B27-2 | B27-3 | B28-1 | Method |
| **Trace Elements** | | | | | | |
| Lead | mg/kg | 19 | 39 | 12 | 1310 | NT2_49 |
| Total Solids | % | 90.8 | 88.7 | 87 | 87 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

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| | | | |
|---|---|---|---|
| **Client** | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | **Job No.** | : BUTL01/070405/1 |
| | | **Quote No.** | : QT-00782 |
| | | **Order No.** | : LA24 |
| | | **Date Sampled** | : 4-APR-2007 |
| | | **Date Received** | : 5-APR-2007 |
| **Attention** | : sch4p4( 6) Personal information | **Sampled By** | : CLIENT |
| **Project Name** | : | | |
| **Your Client Services Manager** | : sch4p4( 6) Personal information | **Phone** | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013392 | B28-2 | SOIL 04/04/07 JOB 06253A |
| N07/013393 | B28-3 | SOIL 04/04/07 JOB 06253A |
| N07/013394 | B29-1 | SOIL 04/04/07 JOB 06253A |
| N07/013395 | B29-2 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. | | N07/013392 | N07/013393 | N07/013394 | N07/013395 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B28-2 | B28-3 | B29-1 | B29-2 | Method |
| **Trace Elements** | | | | | | |
| Lead | mg/kg | 180 | 13 | 1310 | 32 | NT2_49 |
| Total Solids | % | 86.1 | 87 | 89.1 | 86.8 | NT2_49 |

sch4p4( 6) Personal information
Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

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| | | | |
|---|---|---|---|
| **Client** | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | **Job No.** | : BUTL01/070405/1 |
| | | **Quote No.** | : QT-00782 |
| | | **Order No.** | : LA24 |
| | | **Date Sampled** | : 4-APR-2007 |
| | | **Date Received** | : 5-APR-2007 |
| **Attention** | : sch4p4( 6) Personal information | **Sampled By** | : CLIENT |
| **Project Name** | : | | |
| **Your Client Services Manager** | : sch4p4( 6) Personal informati | **Phone** | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013396 | B29-3 | SOIL 04/04/07 JOB 06253A |
| N07/013397 | B30-1 | SOIL 04/04/07 JOB 06253A |
| N07/013398 | B30-2 | SOIL 04/04/07 JOB 06253A |
| N07/013399 | B30-3 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. | | N07/013396 | N07/013397 | N07/013398 | N07/013399 | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B29-3 | B30-1 | B30-2 | B30-3 | Method |
| **Trace Elements** | | | | | | |
| Lead | mg/kg | 11 | 38 | 38 | 8.7 | NT2_49 |
| Total Solids | % | 84.1 | 88.2 | 85.4 | 86.3 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

All results are expressed on a dry weight basis.

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| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/070405/1 |
| | | Quote No. | : QT-00782 |
| | | Order No. | : LA24 |
| | | Date Sampled | : 4-APR-2007 |
| | | Date Received | : 5-APR-2007 |
| Attention | : sch4p4( 6) Personal information | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : sch4p4( 6) Personal information | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013361 | B20-2 | SOIL 04/04/07 JOB 06253A |
| N07/013365 | B21-1 | SOIL 04/04/07 JOB 06253A |
| N07/013367 | B21-3 | SOIL 04/04/07 JOB 06253A |
| N07/013371 | B22-2 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No. / Sample Reference | Units | N07/013361 B20-2 | N07/013365 B21-1 | N07/013367 B21-3 | N07/013371 B22-2 | Method |
|---|---|---|---|---|---|---|
| **Trace Elements** | | | | | | |
| Arsenic | mg/kg | 15 | 2.3 | 18 | 7.2 | NT2_49 |
| Cadmium | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | NT2_49 |
| Chromium | mg/kg | 9.1 | 7.7 | 20 | 12 | NT2_49 |
| Copper | mg/kg | 35 | 4.1 | 24 | 19 | NT2_49 |
| Lead | mg/kg | 23 | 2.4 | 18 | 21 | NT2_49 |
| Mercury | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | NT2_49 |
| Nickel | mg/kg | 21 | 7.7 | 7.3 | 14 | NT2_49 |
| Zinc | mg/kg | 97 | 16 | 51 | 77 | NT2_49 |
| Total Solids | % | 89.9 | 97.2 | 81.3 | 87.8 | NT2_49 |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

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(renamed File B for Disclosure Log)
19-146 Ext File A Page 203 of 212

# REPORT OF ANALYSIS



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1 Suakin Street, Pymble NSW 2073 Tel: +61 2 9449 0111 Fax: +61 2 9449 1653 www.measurement.gov.au

National Measurement Institute

# REPORT OF ANALYSIS



| | | | |
|---|---|---|---|
| Client | : BUTLER PARTNERS P/L<br>79 DOGGETT STREET<br>FORTITUDE VALLEY QLD 4006 | Job No. | : BUTL01/070405/1 |
| | | Quote No. | : QT-00782 |
| | | Order No. | : LA24 |
| | | Date Sampled | : 4-APR-2007 |
| | | Date Received | : 5-APR-2007 |
| Attention | : sch4p4( 6) Personal information | Sampled By | : CLIENT |
| Project Name | : | | |
| Your Client Services Manager | : sch4p4( 6) Personal information | Phone | : (02) 94490151 |

| Lab Reg No. | Sample Ref | Sample Description |
|---|---|---|
| N07/013363 | B20-4 | SOIL 04/04/07 JOB 06253A |
| N07/013372 | B22-3 | SOIL 04/04/07 JOB 06253A |

| Lab Reg No.<br>Sample Reference | Units | N07/013363<br>B20-4 | N07/013372<br>B22-3 | | | Method |
|---|---|---|---|---|---|---|
| **Organochlorine (OC) Pesticides** | | | | | | |
| HCB | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Heptachlor | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Heptachlor epoxide | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Aldrin | mg/kg | <0.01 | <0.01 | | | NR_19 |
| gamma-BHC (Lindane) | mg/kg | <0.01 | <0.01 | | | NR_19 |
| alpha-BHC | mg/kg | <0.01 | <0.01 | | | NR_19 |
| beta-BHC | mg/kg | <0.01 | <0.01 | | | NR_19 |
| delta-BHC | mg/kg | <0.01 | <0.01 | | | NR_19 |
| trans-Chlordane | mg/kg | <0.01 | <0.01 | | | NR_19 |
| cis-Chlordane | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Oxychlordane | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Dieldrin | mg/kg | <0.01 | <0.01 | | | NR_19 |
| pp-DDE | mg/kg | <0.01 | <0.01 | | | NR_19 |
| pp-DDD | mg/kg | <0.01 | <0.01 | | | NR_19 |
| pp-DDT | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Endrin | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Endrin Aldehyde | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Endrin Ketone | mg/kg | <0.01 | <0.01 | | | NR_19 |
| alpha-Endosulfan | mg/kg | <0.01 | <0.01 | | | NR_19 |
| beta-Endosulfan | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Endosulfan Sulfate | mg/kg | <0.01 | <0.01 | | | NR_19 |
| Methoxychlor | mg/kg | <0.01 | <0.01 | | | NR_19 |
| **Organophosphate (OP) Pesticides** | | | | | | |
| Dichlorvos | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Demeton-S-Methyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Diazinon | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Dimethoate | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Chlorpyrifos | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Chlorpyrifos Methyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Malathion | mg/kg | <0.1 | <0.1 | | | NR_19 |

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# REPORT OF ANALYSIS


Report No. RN609830

| Lab Reg No. | Units | N07/013363 | N07/013372 | | | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B20-4 | B22-3 | | | |
| **Organophosphate (OP) Pesticides** | | | | | | |
| Fenthion | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Ethion | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Chlorfenvinphos (E) | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Chlorfenvinphos (Z) | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Parathion (Ethyl) | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Parathion Methyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Pirimiphos Methyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Pirimiphos Ethyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Azinphos Methyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| Azinphos Ethyl | mg/kg | <0.1 | <0.1 | | | NR_19 |
| **Surrogate** | | | | | | |
| Surrogate OC Rec. | % | 68 | 78 | | | NR_19 |
| Surrogate OP Rec. | % | 66 | 72 | | | NR_19 |
| **Dates** | | | | | | |
| Date extracted | | 11-APR-2007 | 11-APR-2007 | | | |
| Date analysed | | 13-APR-2007 | 13-APR-2007 | | | |

sch4p4( 6) Personal informat

Danny Slee, Section Manager
Organics - NSW (Accreditation No. 198)

13-APR-2007

| Lab Reg No. | Units | N07/013363 | N07/013372 | | | Method |
|---|---|---|---|---|---|---|
| Sample Reference | | B20-4 | B22-3 | | | |
| **Trace Elements** | | | | | | |
| Arsenic | mg/kg | 20 | 16 | | | NT2_49 |
| Cadmium | mg/kg | 12 | <0.5 | | | NT2_49 |
| Chromium | mg/kg | 9.7 | 14 | | | NT2_49 |
| Copper | mg/kg | 75 | 32 | | | NT2_49 |
| Lead | mg/kg | 1780 | 19 | | | NT2_49 |
| Mercury | mg/kg | <0.2 | <0.2 | | | NT2_49 |
| Nickel | mg/kg | 8.5 | 13 | | | NT2_49 |
| Zinc | mg/kg | 2650 | 61 | | | NT2_49 |
| Total Solids | % | 85.8 | 86.9 | | | NT2_49 |

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# REPORT OF ANALYSIS



| Lab Reg No. | | N07/013363 | N07/013372 | | | |
|---|---|---|---|---|---|---|
| Sample Reference | Units | B20-4 | B22-3 | | | Method |

sch4p4( 6) Personal information

Dr. Honway Louie, Section Manager
Inorganics - NSW (Accreditation No. 198)

13-APR-2007

All results are expressed on a dry weight basis.

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This Report supersedes reports: *RN609140* *RN609760*

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National Measurement Institute

# QUALITY ASSURANCE REPORT

**Client:** BUTLER PARTNERS P/L

**NMI QA Report No:** BUTL01/070405/1 **Sample Matrix:** Soil

| Analyte | Method | LOR | Blank | Sample Duplicates | | | Recoveries | |
|---|---|---|---|---|---|---|---|---|
| | | | | Sample | Duplicate | RPD | LCS | Matrix Spike |
| | | mg/kg | mg/kg | mg/kg | mg/kg | % | % | % |
| **Organics Section** | | | | | | | | |
| **OC Pesticides** | | | | | | | | |
| HCB | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Heptachlor | NR19 | 0.01 | <0.01 | NA | NA | NA | 114 | NA |
| Heptachlor epoxide | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Aldrin | NR19 | 0.01 | <0.01 | NA | NA | NA | 118 | NA |
| gamma-BHC (Lindane) | NR19 | 0.01 | <0.01 | NA | NA | NA | 108 | NA |
| alpha-BHC | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| beta-BHC | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| delta-BHC | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| trans-Chlordane | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| cis-Chlordane | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Oxychlordane | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Dieldrin | NR19 | 0.01 | <0.01 | NA | NA | NA | 116 | NA |
| pp-DDE | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| pp-DDD | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| pp-DDT | NR19 | 0.01 | <0.01 | NA | NA | NA | 114 | NA |
| Endrin | NR19 | 0.01 | <0.01 | NA | NA | NA | 118 | NA |
| Endrin Aldehyde | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Endrin Ketone | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| alpha-Endosulfan | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| beta-Endosulfan | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Endosulfan Sulfate | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Methoxychlor | NR19 | 0.01 | <0.01 | NA | NA | NA | - | NA |
| Surrogate OC Rec. | NR19 | - | - | NA | NA | NA | 108 | NA |
| **OP Pesticides** | | | | | | | | |
| Dichlorvos | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Demeton-S-Methyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Diazinon | NR19 | 0.1 | <0.1 | NA | NA | NA | 100 | NA |
| Dimethoate | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Chlorpyrifos | NR19 | 0.1 | <0.1 | NA | NA | NA | 96 | NA |
| Chlorpyrifos Methyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Malathion (Maldison) | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Fenthion | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Ethion | NR19 | 0.1 | <0.1 | NA | NA | NA | 92 | NA |
| Fenitrothion | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Chlorfenvinphos (E) | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Chlorfenvinphos (Z) | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Parathion (Ethyl) | NR19 | 0.1 | <0.1 | NA | NA | NA | 92 | NA |
| Parathion Methyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Pirimiphos Ethyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Pirimiphos Methyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Azinphos Methyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Azinphos Ethyl | NR19 | 0.1 | <0.1 | NA | NA | NA | - | NA |
| Surrogate OP Rec. | | - | - | NA | NA | NA | 84 | NA |

Results expressed in percentage (%) or mg/kg wherever appropriate.
Acceptable Spike recovery is 50-150%
Acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.
This report shall not be reproduced except in full.

**Signed:** sch4p4( 6) Perso

Danny Slee
Organics Manager, NMI-Pymble

**Date:** 13/04/2007

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Australian Government

National Measurement Institute

# QUALITY ASSURANCE REPORT

**Client:** BUTLER PARTNERS P/L

**NMI QA Report No:** BUTL01/070405, 05_1T1 **Sample Matrix:** Soil

| Analyte | Method | LOR | Blank | Duplicates | | | Recoveries | |
|---|---|---|---|---|---|---|---|---|
| | | | | Sample | Duplicate | RPD | LCS | Matrix Spike |
| | | mg/kg | mg/kg | mg/kg | mg/kg | % | % | % |
| **Inorganics Section** | | | | N07/013395 | | | AGAL10 | N07/013395 |
| Arsenic | NT2.49 | 0.5 | <0.5 | 5.9 | 6 | 4 | 111 | 114 |
| Cadmium | NT2.49 | 0.5 | <0.5 | <0.5 | <0.5 | ND | 101 | 108 |
| Chromium | NT2.49 | 0.5 | <0.5 | 12 | 10 | 2 | 101 | 110 |
| Copper | NT2.49 | 0.5 | <0.5 | 15 | 14 | 0 | 103 | 113 |
| Lead | NT2.49 | 0.5 | <0.5 | 32 | 32 | 0 | 102 | 83 |
| Mercury | NT2.49 | 0.1 | <0.1 | <0.2 | <0.2 | ND | 94 | 81 |
| Nickel | NT2.49 | 0.5 | <0.5 | 6.7 | 5.9 | 2 | 112 | 116 |
| Zinc | NT2.49 | 0.5 | <0.5 | 67 | 62 | 3 | 89 | 117 |

Filename = K:\ICPMS\Trace\QAR2007\Soil\

Legend:
Acceptable recovery is 75-120%.
Acceptable RPDs on duplicates is 44% at concentrations >5 times LOR. Greater RPD may be expected at <5 times LOR.
LOR = Limit Of Reporting
RPD = Relative Percent Difference
LCS = Laboratory Control Sample.
ND = Not Determined
NA = Not Applicable
#: Spike level is less than 50% of the sample's concentration, hence the recovery data is not reliable.
**: reference value not available
* sample was not spiked for this element
Comments:
Results greater than ten times LOR have been rounded to two significant figures.
This report shall not be reproduced except in full.

**Signed:** sch4p4( 6) Personal information

Dr Honway Louie
Inorganics Manager, NMI-Pymble

**Date:** 11/04/2007

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# Butler Partners Pty Ltd

PO Box 2267 (79 Doggett Street), Fortitude Valley BC Qld 4006
Ph: 3852 3800 Fax: 3852 3808

Job No: 06253A Order No: LA24

**NMI**

Australian Government National Measurement Institute
1 Suakin St, PYMBLE NSW 2073
Ph: (02) 9449 0111
Fax: (02) 9449 1653

Project Manager: Suzanne Walker
Sampled By:
Results To: sch4p4( 6) Person @butlerpartners.com.au)
Relinquished by:
Due Date: 13-Apr-07

| Lab Sample No. | Sample Reference | Sample Depths | Sample Type | No. of Jars/Vials | Date Sampled | TPH | BTEX | PAH | OC / OP | TOTAL PHENOLS | TOTAL CYANIDE | As, Cd, Cr, Cu ,Hg, Ni, Pb, Zn | | Cr Suite | | PCB | Lead (Pb) | | TCLP (As, Cd, Cr, Cu ,Hg, Ni, Pb, Zn) | | Vinyl Chloride (1ug/L) | Halogenated Aliphatic Hydrocarbons | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO7/013360 | B20-1 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013361 | B20-2 | | Soil | 1 | 4-Apr-07 | | | | | | | X | | | | | | | | | | | |
| NO7/013362 | B20-3 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013363 | B20-4 | | Soil | 1 | 4-Apr-07 | | | | X | | | X | | | | | | | | | | | |
| NO7/013364 | B20-5 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013365 | B21-1 | | Soil | 1 | 4-Apr-07 | | | | | | | X | | | | | | | | | | | |
| NO7/013366 | B21-2 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013367 | B21-3 | | Soil | 1 | 4-Apr-07 | | | | | | | X | | | | | | | | | | | |
| NO7/013368 | B21-4 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013369 | B21-5 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013370 | B22-1 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013371 | B22-2 | | Soil | 1 | 4-Apr-07 | | | | | | | X | | | | | | | | | | | |
| NO7/013372 | B22-3 | | Soil | 1 | 4-Apr-07 | | | | X | | | X | | | | | | | | | | | |
| NO7/013373 | B22-4 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013374 | B22-5 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013375 | B22-6 | | Soil | 1 | 4-Apr-07 | | | | | | | HOLD | | | | | | | | | | | |
| NO7/013376 | B23-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | | | | X | | | | | |
| NO7/013377 | B23-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | | | | X | | | | | |
| NO7/013378 | B23-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | | | | X | | | | | |
| NO7/013379 | B24-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | | | | X | | | | | |
| TOTALS: | | | | | | | | | 2 | | | 16 | | | | | | 4 | | | | | |

Relinquished by:..... Luke Amies
Organisation:.... Butler Partners
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**Butler Partners Pty Ltd**
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Job No: 06253A Order No: LA24

**NMI**
Australian Government National Measurement Institute
1 Suakin St, PYMBLE NSW 2073
Ph: (02) 9449 0111
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Project Manager: Suzanne Walker
Sampled By: sch4p4( 6) Person
Results To: @butlerpartners.com.au)
Relinquished by:
Due Date: 13-Apr-07

| Lab Sample No. | Sample Reference | Sample Depths | Sample Type | No. of Jars/Vials | Date Sampled | TPH | BTEX | PAH | OC / OP | TOTAL PHENOLS | TOTAL CYANIDE | As, Cd, Cr, Cu, Hg, Ni, Pb, Zn | Cr SuiTe | PCB | Lead (Pb) | | TCLP (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) | | Vinyl Chloride (1ug/L) | Halogenated Aliphatic Hydrocarbons | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N07/013380 | B24-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013381 | B24-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013382 | B25-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013383 | B25-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013384 | B25-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013385 | B26-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013386 | B26-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013387 | B26-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013388 | B27-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013389 | B27-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013390 | B27-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013391 | B28-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013392 | B28-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013393 | B28-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013394 | B29-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013395 | B29-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013396 | B29-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013397 | B30-1 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013398 | B30-2 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| N07/013399 | B30-3 | | Soil | 1 | 4-Apr-07 | | | | | | | | | | X | | | | | | |
| TOTALS: | | | | | | | | | | | | | | | 20 | | | | | | |

Relinquished by:..... Luke Amies
Organisation:... Butler Partners

Received by:..... Date:.....
Organisation:..... Time:.....

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| Date | 5 April 2007 | Number of Pages | 3 (inc.) |
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Regards

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