

## STAGE 1 ENVIRONMENTAL SITE ASSESSMENT

Lismore Base Hospital, Lismore NSW

Health Infrastructure NSW

GEOTALST01618AO-AD

22 February 2013



22 February 2013

Health Infrastructure NSW  
c/- Taylor Thomson Whitting (NSW) Pty Ltd  
Level 3, 48 Chandos Street  
ST LEONARDS, NSW, 2065

**Attention: Robert Mackellar**

Dear Robert,

**RE: Stage 1 Environmental Site Assessment with preliminary sampling for the proposed redevelopment of the Lismore Base Hospital, Lismore NSW**

Coffey Geotechnics Pty Ltd is pleased to present our report on the Stage 1 Environmental Site Assessment (ESA) with preliminary sampling for the proposed redevelopment of the Lismore Base Hospital (LBH), Lismore NSW.

I draw your attention to the attached sheets entitled "Important Information about Your Coffey Environmental Site Assessment" which should be read in conjunction with this report.

I trust that this report meets with your requirements. If you require further information please contact the undersigned in our Coffs Harbour office on 1300 513 213.

For and on behalf of Coffey Geotechnics Pty Ltd



**Andrew Ballard**

Associate Environmental Scientist  
Environmental Team Leader – Coffs Harbour

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## ABBREVIATIONS

Abbreviation	Description
AEC	Areas of Environmental Concern
ACM	Asbestos containing material
bgs	below ground surface
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
HIL	Health Based Soil Investigation Level
LOR	Limit of Reporting
LBH	Lismore Base Hospital
mg/kg	milligrams per kilogram
NATA	National Association of Testing Authorities
NEHF	National Environmental Health Forum
NSW EPA	Environment Protection Authority of New South Wales
NSW DEC	Department of Environment and Conservation of New South Wales
NSW DECC	Department of Environment and Climate Change of New South Wales
NSW DECCW	Department of Environment, Climate Change and Water of New South Wales (former NSW DEC, NSW DECC, and NSW EPA)
NSW OEH	Office of Environment and Heritage of New South Wales (former NSW DECCW, NSW DEC, NSW DECC, and NSW EPA)
OCP	Organochlorine Pesticide
OPP	Organophosphorous Pesticide
PCOC	Potential Contaminants of Concern
QA	Quality Assurance

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Abbreviation	Description
QC	Quality Control
TRH	Total Recoverable Hydrocarbon
UST	Underground Storage Tank

## EXECUTIVE SUMMARY

Coffey Geotechnics Pty Ltd (Coffey) was engaged by Health Infrastructure NSW to undertake a Stage 1 Environmental Site Assessment (ESA) with preliminary sampling for the proposed redevelopment within the Lismore Base Hospital (LBH) located at 60 Uralba Street, Lismore NSW.

The Stage 1 ESA objective was to identify any past or present potentially contaminating activities on the site, provide a preliminary assessment of site contamination and, if necessary, to provide a basis for a more detailed investigation.

Within the LBH grounds two areas were investigated for this ESA, they include the existing Pathology and Mortuary Buildings (Area A) adjacent to Uralba Street, and the proposed new location for the Pathology Unit (Area B) adjacent to Hunter Street, see Figure 1.

The ESA included the preparation of a site history review for each area and the collection of soil samples from Area A for screening purposes nearby to the existing Pathology and Mortuary Units.

In summary, the site history prepared for Area A and Area B within the LBH precinct showed that the hospital has developed since the early 1930's on this site. Interviews with LBH engineer Mr Bob Walkington reported that the present day pathology building was constructed in the late 1950's to early 1960's. A review of the historical aerial photograph from 1967 shows the pathology building to be present at this time. The 1979 photograph shows that an extension has been added to the northwest of the pathology building. The extension is understood to be the present day mortuary building.

To assess for potential contaminants of concern, including; metals, petroleum hydrocarbons (TRH & BTEX), organochlorine and organophosphate pesticides, and asbestos soil samples were collected from areas of exposed soil and from boreholes drilled by Coffey within Area A for screening purposes. Selected samples were submitted to a NATA accredited laboratory for analysis. The test results showed concentrations of contaminants were below the adopted investigation levels or below the laboratories limit of reporting.

The site history prepared for Area B, the proposed new Pathology Unit, found that this part of the hospital precinct was extensively redeveloped in 2007 with the construction of the Mental Health Services building and a bitumen sealed car park.

Based on the findings of the site history review and soil sample test results no areas of environmental concern (AECs) were identified in Areas A or B of the LBH site. It is considered that the soils within Area A and B of the LBH site are suitable for the proposed ongoing commercial use. Site preparation and development works proposed for this hospital redevelopment can proceed. It is concluded that additional Phase 2 Environmental Site Assessment is not required.

## 1 INTRODUCTION

Coffey Geotechnics Pty Ltd (Coffey) was engaged by Health Infrastructure NSW to undertake a Stage 1 Environmental Site Assessment (ESA) with preliminary sampling for proposed redevelopment of part of the Lismore Base Hospital (LBH) located at 60 Uralba Street, Lismore NSW, see Figure 1.

Based on provided information and discussions with Mr Gavin Thompson, Project Manager from Aurora Projects, we understand that the ESA investigation is required to inform the planning process underway for minor works at the LBH. A preliminary contamination assessment is required to assist risk management of the redevelopment prior to demolition of the existing Pathology, Maternity, and Mortuary Units and foundation excavations of the site.

For the purpose of this ESA the site has been divided into Area A and Area B and included the following land parcels within the LBH precinct:

Area A – Pathology, Maternity, and Mortuary Units fronting Uralba Street	Lot 1 DP 511444, Lot 22 DP 589890, & Lot 21 DP 589890
Area B – Proposed location for new Pathology Unit fronting Hunter Street	Lot 5 DP 17510, Lot 6 DP 17510, Lot 7 DP 17510, Lot 15 DP 17964, Lot 1 DP 350716, Lot 1 DP 350717, & Lot C DP 347500

A geotechnical investigation of Area A of the site has been carried out concurrently with this ESA. The results of the geotechnical investigation are provided under a separate cover, reference GEOTALST01618AN-AD, dated the 22 February 2013.

## 2 BACKGROUND AND STAGE 1 ESA OBJECTIVES

### 2.1 Stage 1 ESA Objectives and Scope of Work

The Stage 1 ESA objective was to identify any past or present potentially contaminating activities on the site, provide a preliminary assessment of site contamination and, if necessary, to provide a basis for a more detailed investigation.

The Stage 1 ESA considers the potential past and present potentially contaminating activities at the site as well as determining the suitability of a continued commercial site use (Hospital) and included the following tasks.

- The ESA included a Site History study of the site which comprised:
  - A review of historical aerial photographs to assess changes in landuse or activities in each area over time.
  - A title search for past site owners and review of Lismore City Council records to determine previous approved development and site uses.
  - An interview with a Mr Bob Walkington, Site Engineer at the Lismore Base Hospital, to assist in the location of past buildings, areas of excavation or filling and historical uses of the land that may be potential areas of environmental concern on the site.
  - A search of groundwater bores and a search of NSW EPA website for listed properties.

- A site walkover with photographs was undertaken by a Coffey Environmental Scientist on the 17 January 2013 to help confirm site history details and gain a better understanding of the past activities, inspect any areas of interest identified from the search of air photographs, to assess features which may indicate potential contamination and to assist in identifying areas of environmental concern (AEC) that may warrant further investigation.
- ESA included a preliminary assessment of soil contamination in Area A, which included:
  - To assess for potential contaminants of concern preliminary soil sampling was undertaken. This included judgemental sampling of surface soils around the existing buildings and sampling from varying depths within the boreholes drilled as part of the Geotechnical Investigation.
  - A limited number of soil samples (12 primary samples and 4 quality control samples) were collected using hand tools or directly from the drill rig auger.
  - Soil samples were analysed by a NATA accredited chemical laboratory for contaminants of concern including metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc), total recoverable hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene and Xylene compounds (BTEX), Organochlorine and Organophosphorus Pesticides (OCP/OCPs) and asbestos.
  - The submission of quality control samples allowed for an external assessment of the accuracy of laboratory results and field procedures.
  - The soil laboratory results were compared with the guidelines and investigation criteria adopted for this ESA. The soil investigation levels (SILs) were based on NEHF-E parks, recreational, open space, playing fields including secondary schools (DEC 2006) and the service station guidelines (EPA 1994). Results which exceed the nominated investigation criteria have been highlighted and discussed in Section 6 and 7 of this report.

## 2.2 Site Description and Site Walkover Observations

The Lismore Base Hospital comprises of an area of approximately 3.7 ha. This current investigation included two areas within the hospital grounds the existing Pathology and Mortuary Units (Area A) in the southeast and the proposed new locations for the Pathology and Mortuary Units (Area B) in the northeast of the hospital grounds, both areas are highlighted in the attached Figure 1.

Regionally the site is located near the crest of a Basalt ridgeline following the alignment of Uralba Street. The ground slopes down to the north from about RL 36m at Uralba Street to about RL27m at the top of the soil nail wall, with an average slope of about 1V:7H.

Area A included the existing Pathology and Mortuary Units (Photograph 1) located in the southeast of the hospital grounds with frontage to Little Uralba Street to the east and Uralba Street to the south. The building was a single storey brick structure with a colourbond roof (Photograph 1). Landscape buildings predominantly surrounded the building. Two the north of the building was a sealed car park area and a small colourbond maintenance shed in the far north of Area A.

Area B included the proposed new location for the Pathology and Mortuary Units in the northeast of the hospital grounds, with frontage to Hunter Street to the west (Photograph 2). The areas had no structures present and at the time of the site walkover was a sealed pavement car parking area (Photograph 2).

## 2.3 Geology and Hydrology

### 2.3.1 Geology

The Tweed Heads 1:250,000 geological map shows that the site is underlain by the Lismore Basalt Formation. The basalt comprises a series of flows derived from the Tweed shield volcano deposited over a significant period of time.

A more detailed geological description of the subsurface conditions as interpreted from the boreholes is provided in Coffey's Geotechnical Investigation Report, ref GEOTALST01618AN-AD.

### 2.3.2 Hydrology

Based on the topography of the site and surrounding area it appears that the site drains by a combination of overland flow to Stormwater drains or follows the drainage lines established within the hospital grounds to the north.

A search of the NSW Office of Water (NOW) groundwater bore information in January 2013 indicated that there were two bores within a 500m radius of the site and available information on these bores is summarised in Table 2 below.

**Table 2: Summary of Groundwater Bore Information**

Bore Number	Authorised Use	Total Depth of Bore (m)	Distance*, Direction & Gradient* from Site	Standing Water Level (m)	Water Bearing Zones (m)
GW306262	Monitoring Bore	3.90	120m, NW, DG	0.4	0.3 – 3.9
GW306263	Monitoring Bore	3.9	120m, NW, DG	2.0	1.0 – 3.9

Notes: N = north, S = south, W = west, E = east, DG = down-gradient, UG = up-gradient, ND = No Details. Distances are approximate and gradients are inferred.

## 3 SITE HISTORY

### 3.1 Historical Information

#### 3.1.1 NSW WorkCover Dangerous Goods Records

A search of the Stored Chemical Information Database and microfiche records held by NSW WorkCover was carried out for the ten (10) lots within the site. The following issues were noted from the supplied information:

- The WorkCover records reviewed were for the entire hospital grounds. A review of these documents indicate that within the areas assessed for this current investigation:
  - An application for Licence to Keep Dangerous Goods, dated 1 November 1995 indicated various stored products within the Pathology Laboratory.

- A review of the supplied information for the lots indicated that there were no records held by NSW WorkCover of underground storage tanks (USTs) within the hospital grounds.

It was reported that a 5,000L diesel UST is located within the LBH precinct and provides fuel to operate two emergency generators at the hospital. This UST is located outside the site of this investigation and downslope of Area A.

### 3.1.2 Lismore City Council Records

Records held by the Lismore City Council were viewed on the 17 January 2013. The available records viewed generally contained information on applications for alterations, as well as several development applications regarding new structures at the hospital.

The following DA approvals were related to this investigation this included:

#### Area A

- DA95/467, dated 19 February 1996 and was for the earthworks and construction of the existing car park area to the north of the Pathology building with the southern section of Area A.
- DA2008/334, dated 28 April 2008 was for minor alterations to the pathology building for a new dispatch room.

#### Area B

- DA2006/239, dated 31 May 2006. The DA application was for the bulk earthworks for redevelopment of the northern area of the hospital grounds, including the construction of the car park area within Area B.

### 3.1.3 NSW EPA Notices

A review of the NSW EPA website database in January 2013 revealed that no notices have been issued for the site under the *Environmentally Hazardous Chemicals Act (1985)* or the *Contaminated Land Management Act (1997)*.

### 3.1.4 Land Titles Search

A title search was carried out by Advance Legal Search in January 2013 for Lot 5 DP 17510, Lot 6 DP 17510, Lot 7 DP 17510, Lot 15 DP 17964, Lot 1 DP 350716, Lot 1 DP 350717, & Lot C DP 347500 Lot 1 DP 511444, Lot 22 DP 589890 and Lot 21 DP 589890, see Appendix A. The following issues were noted from the title search:

#### Lot 5 DP 17510

- The title search stated that the Lismore Base Hospital has owned Lot 5 since 1989.
- Prior to 1989 Lot 5 was owned by various individuals between 1939 and 1989. Prior to 1939 Lot 5 was part of Part Portion 280 and was owned by the Lismore Base Hospital. Prior to 1937 Part Portion 280 was part of the larger parcel of land Portion 280 and was still owned by the Lismore Base Hospital from 1930.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1927 and 1887.

- Prior to 1887 Portion 280 was crown land.

#### **Lot 6 DP17510**

- The title search stated that the Lismore Base Hospital has owned Lot 6 since 1989.
- Prior to 1989 Lot 6 was owned by various individuals between 1936 and 1989. Prior to 1936 Lot 6 was part of the larger parcel of land Portion 280 and was owned by the Lismore Base Hospital between 1930 and 1936.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot 7 DP17510**

- The title search stated that the Lismore Base Hospital has owned Lot 7 since 1990.
- Prior to 1990 Lot 7 was owned by the Public Trustee during 1990. Prior to 1990 Lot 7 was owned by Olive Hammick between and 1936 and 1990 and by George Gaggin in 1936.
- Prior to 1936 Lot 7 was part of the larger parcel of land Portion 280 and was owned by the Lismore District Hospital between 1930 and 1936.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot 15 DP17964**

- The title search stated that the Lismore Base Hospital has owned Lot 15 since 1986.
- Prior to 1986 Lot 15 was owned by various individuals between 1938 and 1986. Prior to 1986 Lot 15 was part of Part Portion 280 between 1937 and 1938. Prior to 1937 Part Portion 280 was part of the larger parcel of land Portion 280 and was owned by the Lismore Base Hospital between 1930 and 1938.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot 1 DP350716**

- The title search stated that the Lismore Base Hospital has owned Lot 1 since 1986. The Lot was leased to Danatess Pty Limited between 1988 and 1990. Prior to 1986 Lot 1 was owned by various people between 1937 and 1986.
- Prior to 1989 Lot 1 was known as Lots A & Part Lot B DP247500 and prior to 1946 was known as Lots 11, 10 & 16 DP17964. Prior to 1937 Lots 11, 10 & 16 DP17964 was part of the larger

parcel of land Portion 280 and was owned by the Lismore Base Hospital between 1930 and 1937.

- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot 1 DP350717**

- The title search stated that the Lismore Base Hospital has owned Lot 1 since 1986. Prior to 1986 Lot 1 was owned by various people between 1937 and 1986.
- Prior to 1989 Lot 1 was known as Part Lot B DP247500 and prior to 1946 was known as Lots 11, 10 & 16 DP17964. Prior to 1937 Lots 11, 10 & 16 DP17964 was part of the larger parcel of land Portion 280 and was owned by the Lismore Base Hospital between 1930 and 1937.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot C DP347500**

- The title search stated that the Lismore Base Hospital has owned Lot C since 1986. Prior to 1986 Lot C was owned by various people between 1937 and 1986.
- Prior to 1943 Lot C was known as Lots 10, 11 & 16 DP17964. Prior to 1937 Lot 10, 11 & 16 was part of the larger parcel of land Portion 280 and was owned by the Lismore Base Hospital between 1930 and 1937.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot 22 DP589890**

- The title search stated that the Lismore Base Hospital has owned Lot 22 since 1930.
- Prior to 1977 Lot 22 was known as Lot 2 DP511444 and prior to 1964 was known as Part Portion 280. Prior to 1937 Part Portion 280 was part of the larger parcel of land Portion 280.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

#### **Lot 21 DP589890**

- The title search stated that the Lismore Base Hospital has owned Lot 21 since 1930.

- Prior to 1977 Lot 21 was known as Lot 2 DP511444 and prior to 1964 was known as Part Portion 280. Prior to 1937 was part of the larger parcel of land Portion 280.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/ grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

**Lot 1 DP511444**

- The title search stated that the Lismore Base Hospital has owned Lot 1 since 1930.
- Prior to 1964 Lot 1 was known as Part Portion 280 and prior to 1937 was part of the larger parcel of land Portion 280.
- Prior to 1930 Portion 280 was owned by the Public Hospital and managed by trustees William Lockett, Norman Sidney and William Riley between 1927 and 1930. Prior to 1927 the trustees/ grantees were James Baillie, Archibald Currie and James Barrie between 1887 and 1927.
- Prior to 1887 Portion 280 was crown land.

**3.1.5 Aerial Photography Review**

A review of historical aerial photographs of the site dating from 1958 to 2004 was carried out. The current 2011 Google Earth Image was also reviewed. A summary of the site in each photograph from 1958 onwards is provided in Table 3 below.

Coffey has identified the Pathology, Maternity and Mortuary Units in the southeast of the hospital grounds as Area A and the proposed location for the new Pathology Unit as Area B, these areas are highlighted in the attached Figure 1.

**Table 3: Summary of Aerial Photographs**

Year	Site	Surrounding Land
1958	<p>Photograph is black and white.</p> <p>The hospital is present and covers the southern portion of the current hospital grounds. The aerial photograph was relatively poor quality.</p> <p><b>Area A</b></p> <p>There appears to be two buildings in the southern portion of this area, image resolution is low.</p> <p><b>Area B</b></p> <p>There appears to be five residential houses within this area.</p>	<p>The remaining areas of the hospital buildings to the west of Area A and the south of Area B. Residential housing surrounds the remaining areas of the site.</p>

Year	Site	Surrounding Land
1967	<p>Photograph is black and white.</p> <p><b>Area A</b></p> <p>The two structures observed in the 1958 aerial photograph appear to have been removed and a large building constructed in the southern portion of this area parallel to Uralba Street. There appears to be four small structures to the north of this building.</p> <p>There is a large building in the central portion of the hospital grounds that extends into the northwest portion of this area. There is also a second building to the north of this area which extended into this area.</p> <p>The southwest of this area appears to be car parking.</p> <p><b>Area B</b></p> <p>No significant changes from the 1958 aerial photograph.</p>	<p>There appears to have been upgrades to the hospital grounds to the west of Area A. Appears to have been four additional buildings constructed within this area.</p> <p>No other significant changes from the 1958 aerial photograph to the remaining surrounding landuses.</p>
1979	<p>Photograph is black and white.</p> <p><b>Area A</b></p> <p>The large building along the southern boundary of this area has been extended on the western end of the building in a northern direction.</p> <p>The four small buildings to the north of the large building observed in the 1969 aerial photograph appear to have been removed.</p> <p><b>Area B</b></p> <p>No significant changes from the 1967 aerial photograph.</p>	<p>No significant changes to surrounding landuses from the 1967 aerial photograph.</p>
1987	<p>Photograph is black and white.</p> <p>No significant changes to Area A and Area B from the 1979 aerial photograph.</p>	<p>No significant changes to surrounding landuses from the 1979 aerial photograph.</p>

Year	Site	Surrounding Land
2004	<p>Photograph is in colour.</p> <p><b>Area A</b></p> <p>Two buildings constructed to the west of Area A which extends into the southwest portion of Area A. This area was previously observed as car parking in the 1967 aerial photograph.</p> <p>There has also been a small structure constructed in the northwest corner of this area. Potentially the small shed observed in the site walkover. There are also some established trees within this area.</p> <p><b>Area B</b></p> <p>Four of the five house observed in the 1958 aerial photograph have been demolished and removed. A large car park has been constructed within this area.</p>	<p>Extensive upgrades and redevelopment within the hospital grounds to the west of Area A. Including upgrades to existing buildings and construction of new buildings within the hospital grounds.</p> <p>The sealed car park constructed within Area B in the 2004 aerial photograph extends to the north of Area B.</p> <p>No significant changes from the 1987 aerial photograph.</p>
Google Earth 2011	<p>Photograph is in colour. No significant changes from the 1997 aerial photograph.</p> <p>There has been a large building constructed in the northeast corner of the hospital grounds, which extends into the north portion of Area A and the southeast portion of Area B.</p> <p><b>Area A</b></p> <p>The building observed in the 1979 aerial photograph which extended into the northern portion of this area has been demolished and the above stated building constructed.</p> <p><b>Area B</b></p> <p>Two buildings have been constructed within Area B these include a large building constructed in the central portion of this area and the second in the northeast of this area extend north out of Area B.</p> <p>The last house remaining within this section has also been removed and additional sealed parking has been extended north.</p>	<p>There has been a large building constructed in the northeast corner of the hospital grounds, which extends into the north portion of Area A and the southeast portion of Area B.</p> <p>A large building has also been constructed to the north of Area B, which extends into Area B. The car park has also been extended north.</p>

### 3.1.6 Interviews

A discussion with the Mr Bob Walkington, Hospital Site Engineer, was undertaken during the site walkover of the hospital grounds on the 17 January 2013. Mr Walkington identified the following issues with regards to current and previous buildings within Area A and B:

- Mr Walkington has been employed at the Lismore Base Hospital for the last 40 years.

- Mr Walkington indicated that the existing car park within Area B was constructed by REED Construction in 2007.
- Mr Walkington indicated that prior to the existing Pathology and Mortuary building being constructed in Area A an old timber building was present. The pathology and mortuary building was constructed in the late 1950's to early 1960's. It was also indicated that the car park area in the north of Area A, was constructed in 1974 with imported fill used during construction.

#### 4 SOIL INVESTIGATION LEVELS

The threshold concentrations presented in the following references are generally the primary guidelines used in NSW when setting investigation levels for chemical concentrations in soil:

- NSW DEC (2006) Guidelines for the NSW Auditor Scheme (2<sup>nd</sup> ed);
- NSW EPA (1994) Guidelines for Assessing Service Station Sites.

Table 4 shows the adopted investigation levels for the potential chemicals of concern (PCOC) in soils for this investigation.

**Table 4: Summary of Soil Investigation Levels (SILs)**

Contaminant	NSW DEC (2006) HIL Column 3	NSW EPA (1994) Service Station Guidelines	Soil Investigation Levels (SILs)
<b>Metals</b>			
Arsenic	200	-	200
Cadmium	40	-	40
Chromium (VI)	200	-	200
Copper	2,000	-	2,000
Lead	600	300	600
Mercury (inorganic)	30	-	30
Nickel	600	-	600
Zinc	14,000	-	14,000
<b>Total Recoverable Hydrocarbon</b>			
TRH(C <sub>6</sub> -C <sub>9</sub> )	-	65	65
TRH(C <sub>10</sub> -C <sub>36</sub> )	-	1,000	1,000
<b>BTEX</b>			
Benzene	-	1	1

Contaminant	NSW DEC (2006) HIL Column 3	NSW EPA (1994) Service Station Guidelines	Soil Investigation Levels (SILs)
Toluene	-	1.4	1.4
Ethylbenzene	-	3.1	3.1
Xylenes	-	14	14
<b>Organochlorine and Organophosphorus Pesticides</b>			
Aldrin + dieldrin	20	-	20
Chlordane	100	-	100
DDT + DDD + DDE	400	-	400
Heptachlor	20	-	20
<b>Asbestos Containing Material</b>			
Asbestos	-	-	ND

- = Guidelines not specified  
 ND = Not Detected  
 All units in mg/kg unless otherwise stated

For assessing contamination levels in soil in urban settings the, *Guidelines for the NSW Site Auditor Scheme* (NSW DEC, 2006) and the NEPC (1999) present health based investigation levels (HILs) for different land uses (e.g. industrial/commercial, residential, recreational etc).

As the subject site is currently zoned Infrastructure (SP2 Health Service Facility) under the draft Lismore LEP 2010 and will remain as part of the Lismore Base Hospital, the investigation levels for parks, recreational open space, playing fields including secondary schools have been adopted as SIL as a conservative approach.

NSW DEC (2006) does not provide guideline levels for volatile petroleum hydrocarbon compounds. The *Guidelines for Assessing Service Station Sites* (NSW EPA, 1994) provide threshold levels for sensitive land use for petroleum hydrocarbon compounds. The NSW OEH has advised that these guidelines should also be used without multiplication for less sensitive land uses. For semi-volatile petroleum hydrocarbons (C<sub>16</sub>–C<sub>35</sub> and >C<sub>35</sub>) investigation levels are provided in the NSW DEC (2006) Guidelines, however, these are based on the NEPC (1999) health-based investigation levels, which require the laboratory analysis to unequivocally differentiate between aromatic and aliphatic compounds. The relevant values in NSW EPA (1994) Service Station Guidelines will be applied in the first instance as broad criteria to assess TRH concentrations. If TRH impacts are identified in soil, then aromatic/aliphatic investigation levels from NSW DEC (2006) may be considered to assess the aromatic/aliphatic speciation of TRH.

NSW DEC (2006) states that there are currently no national or NSW OEH endorsed guidelines relating to human health or environmental investigation of soils containing asbestos on sites. For this site,

Coffey has adopted a conservative criterion for asbestos of 'no detectable asbestos' present for initial screening purposes.

## 5 FIELD INVESTIGATION

### 5.1 Soil Sampling

Fieldwork for the ESA was carried out in January 2013. The soil sampling for this investigation included surface sampling (0-0.15m) and sampling from the three (3) boreholes drilled around the existing building in Area A. The approximate investigation locations are shown in Figure 2.

Soil samples were placed into laboratory prepared 250ml glass jars and zip lock bags for asbestos analyse. Collected samples were placed immediately into a chilled insulated container for temporary storage and transport to the laboratory. Chain of custody documentation was completed at the time of sample collection and the documentation accompanied the samples to the laboratory.

Duplicate samples were collected at a rate of one per ten samples and triplicate samples were collected at a rate of one per twenty samples for quality assurance purposes.

### 5.2 Quality Assurance/ Quality Control

Samples were transported under chain of custody and in chilled insulated containers to mgt LabMark Environmental Consulting Pty Ltd (mgt LabMark) laboratory which is NATA accredited for the analysis performed. A copy of the chain of custodies is included with the laboratory test results in Appendix B.

The laboratory conducted internal quality control using laboratory duplicates, spikes and method blanks. The results are shown with laboratory report sheets in Appendix B. Analytical methods used for the laboratory testing are also indicated on the laboratory report sheets. The results of laboratory quality control testing are considered to be within acceptable limits.

For QA/QC purposes two (2) duplicate and one (1) triplicate soil samples were collected during field investigation, and samples were tested for some or all of the following analytes; metals, TRH, BTEX and OCP/OPP. The results of duplicate and triplicate testing for soil samples are summarised in Table LR1.

Reported exceedances of the relative percentage difference (RPD) 50% control limits were found in soil duplicate sample SS02 / QC1 recording an RPD of 136% copper, 124% lead and 121% zinc; triplicate sample SS02 / QC02 of 140% copper, 124% lead and 124% zinc; and duplicate sample SS06 / QC03 of 181% nickel.

The elevated RPDs recorded in the samples are considered by Coffey to be attributable to either the heterogeneous nature of the soils or due to the low analyte concentrations, close to the laboratory LOR, exaggerating relative percentage differences. Acceptance targets for RPDs in the case where analyte concentrations are close to the LOR are difficult to apply as the uncertainty of the concentration can approach, and even equal, the reported concentration. Furthermore, the recorded concentrations are well below the investigation criteria for the site and the elevated RPDs are not considered to affect the accuracy or usability of the data. A wash blank sample was also analysed and the results of this analyse was within acceptable limits.

Based on the above assessment it is considered that the field and laboratory methods are appropriate and that the data obtained is usable and considered to reasonably represent the concentrations at the sampling points at the time of sampling.

## **6 RESULTS**

The laboratory test results for soil samples analysed for the investigation are summarised in Table LR2. The sample locations are shown on Figure 2. Comparison of soil concentrations to the SILs discussed in Section 4.1 is as follows:

- Concentrations of metals were reported below the adopted SIL's or below the laboratory's LOR in each sample analysed;
- Concentrations of TRH, BTEX and OCP/OPP were reported below the laboratory's LOR in all samples analysed; and
- Asbestos was not detected in any of the soil samples analysed.

## **7 AREAS OF ENVIRONMENTAL CONCERN (AEC)**

No Areas of Environmental Concern (AECs) were identified based on the site history and the reported results from the analysis of samples collected from this site.

## 8 CONCLUSIONS

Coffey Geotechnics Pty Ltd (Coffey) was engaged by Health Infrastructure NSW to undertake a Stage 1 Environmental Site Assessment (ESA) with preliminary sampling for the proposed redevelopment within the Lismore Base Hospital (LBH) located at 60 Uralba Street, Lismore NSW.

Within the LBH grounds two areas were investigated for this ESA, they include the existing Pathology and Mortuary Buildings (Area A) adjacent to Uralba Street, and the proposed new location for the Pathology Unit (Area B) adjacent to Hunter Street, see Figure 1.

The site history prepared for Area A and Area B within the LBH precinct showed that the hospital has developed since the early 1930's on this site. Interviews with LBH engineer Mr Bob Walkington reported that the present day pathology building was constructed in the late 1950's to early 1960's. A review of the historical aerial photograph from 1967 shows the pathology building to be present at this time. The 1979 photograph shows that an extension has been added to the northwest of the pathology building. The extension is understood to be the present day mortuary building.

To assess for potential contaminants of concern soil samples were collected from areas of exposed soil and from boreholes drilled by Coffey within Area A for screening purposes. Selected samples were submitted to a NATA accredited laboratory for analysis. The test results showed concentrations of contaminants were below the adopted investigation levels or below the laboratories limit of reporting.

The site history prepared for Area B, the proposed new Pathology Unit, found that this part of the hospital precinct was extensively redeveloped in 2007 with the construction of the Mental Health Services building and a bitumen sealed car park.

Based on the findings of the site history review and soil sample test results no areas of environmental concern (AECs) were identified in Areas A or B of the LBH site. It is considered that the soils within Area A and B of the LBH site are suitable for the proposed ongoing commercial use. Site preparation and development works proposed for this hospital redevelopment can proceed. It is concluded that additional Phase 2 Environmental Site Assessment is not required.

## 9 REFERENCES

- Coffey (2013). *Geotechnical Investigation: New 11-Floor Building at Lismore Base Hospital. Report prepared for Health Infrastructure NSW*. Report ref; GEOTALST01618AN-AD, dated 22 February 2013.
- DUAP EPA. (1998). *Managing Land Contamination Planning Guidelines, SEPP 55 – Remediation of Land*. Department of Urban Affairs and Planning & Environmental Protection Authority NSW, Sydney
- NEPC. (1999). *National Environmental Protection (Assessment of Site Contamination) Measure*. NEPC, Canberra
- NSW DEC (2007). *Contaminated Sites: Guidelines for Assessment and Management of Groundwater Contamination*. Department of Environment and Conservation NSW, Sydney
- NSW DEC (2006). *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition)*. Department of Environment and Conservation NSW, Sydney
- NSW EPA. (2011). *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*. Environmental Protection Authority NSW, Sydney
- NSW EPA. (1995). *Sampling Design Guidelines*. Environmental Protection Authority NSW, Sydney
- NSW EPA. (1994). *Contaminated Sites: Guidelines for Assessing Service Station Sites*. Environmental Protection Authority NSW, Sydney

## 10 LIMITATIONS

The findings contained in this report are the result of discrete/specific methodologies used in accordance with normal practices and standards. To the best of our knowledge, they represent a reasonable interpretation of the past and present uses of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points. If material is observed during construction that does not conform to that described in this report, or is suspicious in nature, then an environmental consultant should be contacted and further assessments undertaken.

In preparing this report, current guidelines for assessment and management of contaminated land were followed. This work has been conducted in good faith in accordance with Coffey Geotechnics understanding of the client's brief and general accepted practice for environmental consulting.

This report was prepared for Health Infrastructure NSW with the objective to identify any past or present potentially contaminating activities on the site, provide a preliminary assessment of site contamination and, if necessary, to provide a basis for a more detailed investigation.

No warranty, expressed or implied, is made as to the information and professional advice included in this report. The report is not intended for other parties or other uses. Anyone using this document does so at their own risk and should satisfy themselves concerning its applicability and, where necessary, should seek expert advice in relation to the particular situation.

We draw your attention to the attached sheet "*Important Information About Your Coffey Environmental Site Assessment*" which outlines or discusses limitations associated with interpreting contamination site assessment and validation data and drawing conclusions based on the data.

For and on behalf of Coffey Geotechnics Pty Ltd



**Andrew Ballard**

Associate Environmental Scientist  
Environmental Team Leader – Coffs Harbour

## Important information about your **Coffey** Environmental Site Assessment

Uncertainties as to what lies below the ground on potentially contaminated sites can lead to remediation costs blow outs, reduction in the value of the land and to delays in the redevelopment of land. These uncertainties are an inherent part of dealing with land contamination. The following notes have been prepared by Coffey to help you interpret and understand the limitations of your environmental site assessment report.

### **Your report has been written for a specific purpose**

---

Your report has been developed on the basis of a specific purpose as understood by Coffey and applies only to the site or area investigated. For example, the purpose of your report may be:

- To assess the environmental effects of an on-going operation.
- To provide due diligence on behalf of a property vendor.
- To provide due diligence on behalf of a property purchaser.
- To provide information related to redevelopment of the site due to a proposed change in use, for example, industrial use to a residential use.
- To assess the existing baseline environmental, and sometimes geological and hydrological conditions or constraints of a site prior to an activity which may alter the sites environmental, geological or hydrological condition.

For each purpose, a specific approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible, quantify risks that both recognised and unrecognised contamination pose to the proposed activity. Such risks may be both financial (for example, clean up costs or limitations to the site use) and physical (for example, potential health risks to users of the site or the general public).

### **Subsurface conditions can change**

---

Subsurface conditions are created by natural processes and the activity of man and may change with time. For example, groundwater levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project and/or on the property.

### **Interpretation of factual data**

---

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from indirect field measurements and sometimes other reports on the site are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how well qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of Coffey through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other problems encountered on site.

### **Your report will only give preliminary recommendations**

---

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered with redevelopment or on-going use of the site. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

## Important information about your **Coffey** Environmental Site Assessment

### **Your report is prepared for specific purposes and persons**

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. In particular, a due diligence report for a property vendor may not be suitable for satisfying the needs of a purchaser. Your report should not be applied for any purpose other than that originally specified at the time the report was issued.

### **Interpretation by other professionals**

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other professionals who are affected by the report. Have Coffey explain the report implications to professionals affected by them and then review plans and specifications produced to see how they have incorporated the report findings.

### **Data should not be separated from the report**

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs (assembled by field personnel), field testing and laboratory evaluation of field samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

### **Contact Coffey for additional assistance**

Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to land development and land use. It is common that not all approaches will be necessarily dealt with in your environmental site assessment report due to concepts proposed at that time. As a project progresses through planning and design toward construction and/or maintenance, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

### **Responsibility**

Environmental reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.

# Tables

Table LR1: Results of Quality Control Soil Samples

	Primary Sample	Duplicate Sample	RPD (%)	Primary Sample	Triplicate Sample	RPD (%)	Primary Sample	Duplicate Sample	RPD (%)	Wash Blank	
<b>Sample ID</b>	SS02	QC01	<b>%RPD between SS02 and QC01</b>	SS02	QC02	<b>%RPD between SS02 and QC02</b>	SS06	QC03	<b>%RPD between SS06 and QC03</b>	WB1	
<b>Material</b>	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Water
<b>Date of Sampling</b>	17-Jan-13	17-Jan-13		17-Jan-13	17-Jan-13		17-Jan-13	17-Jan-13		17-Jan-13	17-Jan-13
<b>Depth (m)</b>	0-0.15	0-0.15		0-0.15	0-0.15		0-0.15	0-0.15		0-0.15	-
<b>Metals</b>											
Arsenic	< 2	< 2	NA	< 2	< 2	NA	2.3	< 2	Inconsistent	< 0.001	
Cadmium	< 0.4	< 0.4	NA	< 0.4	< 0.4	NA	< 0.4	< 0.4	NA	< 0.0001	
Chromium	< 5	< 5	NA	< 5	7	NA	< 5	< 5	NA	< 0.001	
Copper	21	110	136	21	120	140	20	18	11	< 0.001	
Lead	68	16	124	68	16	124	71	68	4	< 0.001	
Mercury	0.07	< 0.05	Inconsistent	0.07	< 0.1	Inconsistent	2.4	2.1	13	< 0.0001	
Nickel	12	< 5	Inconsistent	12	< 5	Inconsistent	7	140	181	< 0.001	
Zinc	150	37	121	150	35	124	170	200	16	< 0.005	
<b>Total Recoverable Hydrocarbons</b>											
TRH C <sub>6</sub> -C <sub>9</sub>	-	-	-	-	-	-	< 10	< 10	NA	-	
TRH C <sub>10</sub> -C <sub>14</sub>	-	-	-	-	-	-	< 50	< 50	NA	-	
TRH C <sub>15</sub> -C <sub>28</sub>	-	-	-	-	-	-	< 100	< 100	NA	-	
TRH C <sub>29</sub> -C <sub>36</sub>	-	-	-	-	-	-	< 100	< 100	NA	-	
TRH C <sub>10</sub> - <sub>36</sub> (Total)	-	-	-	-	-	-	< 100	< 100	NA	-	
<b>BTEX</b>											
Benzene	-	-	-	-	-	-	< 0.5	< 0.5	NA	-	
Toluene	-	-	-	-	-	-	< 0.5	< 0.5	NA	-	
Ethylbenzene	-	-	-	-	-	-	< 0.5	< 0.5	NA	-	
Total Xylenes	-	-	-	-	-	-	< 1.5	< 1.5	NA	-	
<b>Organochlorine Pesticides</b>											
OCP (Total)	-	-	-	-	-	-	< LOR	< LOR	NA	-	
<b>Organophosphorus Pesticides</b>											
OPP (Total)	-	-	-	-	-	-	< LOR	< LOR	NA	-	

**Notes:**

**Value** RPD exceeds control limit of 50%

NA Both samples have concentrations below laboratory's Limit of Reporting (LOR)

Inconsistent One sample has concentration below LOR, the second sample has concentrations above LOR

- Not Tested

Table LR2: Summary of Laboratory Results for Soil Samples (all results in mg/kg)

Investigation Area	Soil Investigation Levels	Borehole Locations						Surface Sample Locations					
		BH1 Soil	BH1 Soil	BH2 Soil	BH2 Soil	BH3 Soil	BH3 Soil	SS01 Soil	SS02 Soil	SS05 Soil	SS06 Soil	SS07 Soil	SS08 Soil
Sample ID													
Material													
Date of Sampling		24-Jan-13	24-Jan-13	17-Jan-13	17-Jan-13	15-Jan-13	15-Jan-13	17-Jan-13	17-Jan-13	17-Jan-13	17-Jan-13	17-Jan-13	17-Jan-13
Depth (m)		0.15-0.25	0.45-0.55	0.5	1	0.5	1	0-0.15	0-0.15	0-0.15	0-0.15	0-0.15	0-0.15
<b>Heavy Metals</b>													
Arsenic	200 <sup>1</sup>	2.7	< 2	< 2	< 2	8.7	< 2	< 2	< 2	< 2	2.3	< 2	4.8
Cadmium	40 <sup>1</sup>	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	0.5	< 0.4
Chromium	200 <sup>1</sup>	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	12	< 5	< 5	< 5
Copper	2,000 <sup>1</sup>	19	12	20	17	18	17	100	21	14	20	25	22
Lead	600 <sup>1</sup>	21	6.5	6.6	6.3	18	7.4	16	68	30	71	51	21
Mercury	30 <sup>1</sup>	0.06	< 0.05	0.06	< 0.05	0.07	< 0.05	< 0.05	0.07	0.17	2.4	0.24	0.07
Nickel	600 <sup>1</sup>	24	23	36	28	17	21	5.8	12	5.7	7	19	11
Zinc	14,000 <sup>1</sup>	110	82	130	110	120	100	51	150	57	170	180	160
<b>Total Recoverable Hydrocarbons</b>													
TRH C <sub>6</sub> -C <sub>9</sub>	65 <sup>2</sup>	< 10	-	< 10	-	< 10	-	< 10	< 10	< 10	< 10	< 10	< 10
TRH C <sub>10</sub> -C <sub>14</sub>		< 50	-	< 50	-	< 50	-	< 50	< 50	< 50	< 50	< 50	< 50
TRH C <sub>15</sub> -C <sub>28</sub>		< 100	-	< 100	-	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100
TRH C <sub>29</sub> -C <sub>36</sub>		< 100	-	< 100	-	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100
TRH C <sub>10</sub> - <sub>36</sub> (Total)	1000 <sup>2</sup>	< 100	-	< 100	-	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100
<b>BTEX</b>													
Benzene	1 <sup>2</sup>	< 0.5	-	< 0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	1 <sup>2</sup>	< 0.5	-	< 0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	3.1 <sup>2</sup>	< 0.5	-	< 0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	14.0 <sup>2</sup>	< 1.5	-	< 1.5	-	< 1.5	-	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
<b>Organochlorine Pesticides</b>													
DDD+DDE+DDT	400 <sup>1</sup>	-	-	-	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Chlordane	100 <sup>1</sup>	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin+Dieldrin	20 <sup>1</sup>	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Heptachlor	20 <sup>1</sup>	-	-	-	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
OCP (Total)								< LOR	< LOR	< LOR	< LOR	< LOR	0.11
<b>Organophosphorus Pesticides</b>													
OPP (Total)								< LOR	< LOR	< LOR	< LOR	< LOR	< LOR
Asbestos	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND

Notes:

**Bold** Concentration exceeds the adopted SIL

<sup>1</sup> Based on NSW DEC (2006), Guidelines for the NSW Site Auditor Scheme (2nd ed) and NEPM (1999) (Parks, recreational, open space, playing fields including secondary schools NEHF-E)

<sup>2</sup> Based on NSW EPA (1994), Guidelines for Assessing Service Station Sites

ND Not Detected

- Not Tested

# Figures

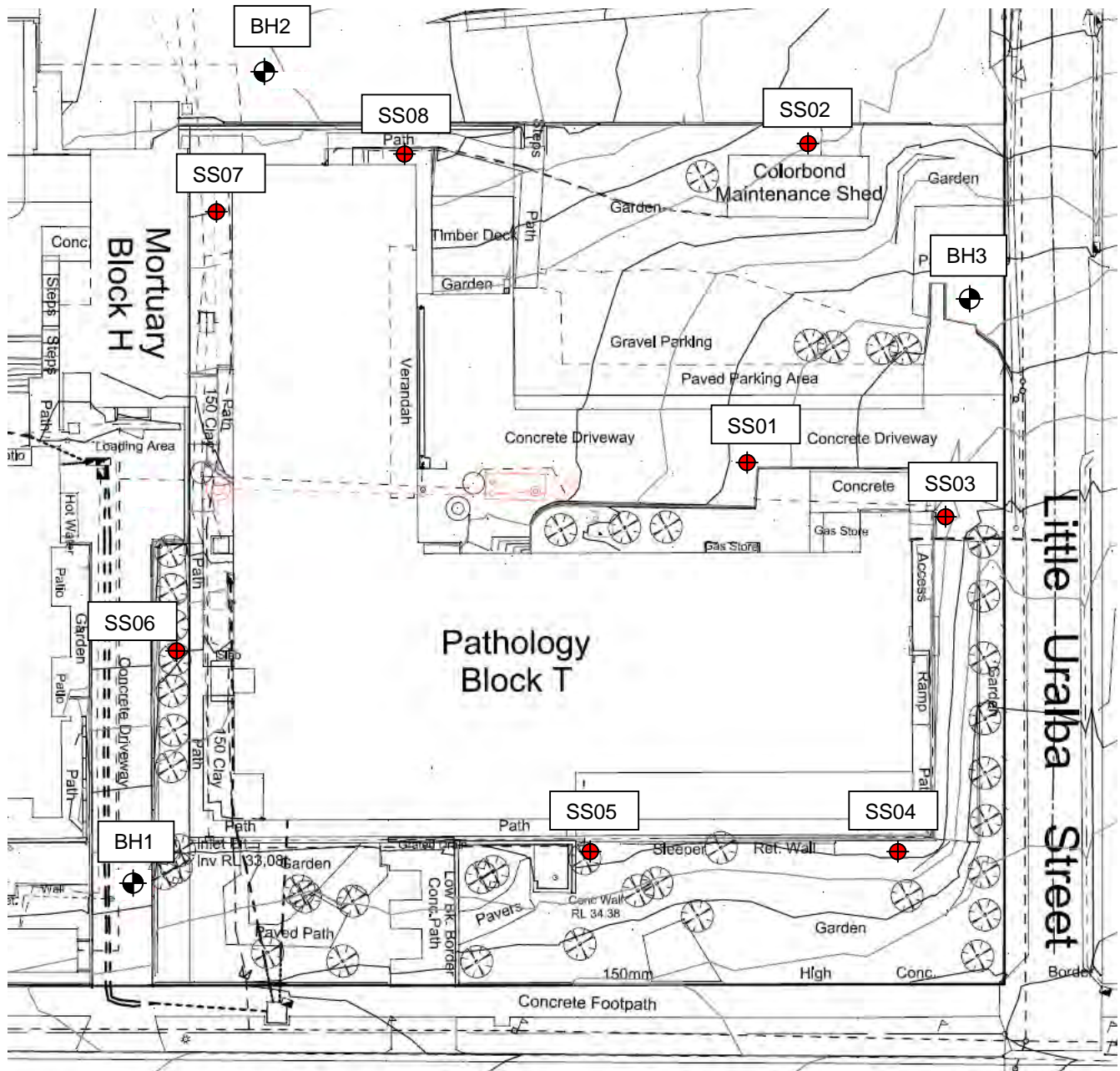


drawn	JP
approved	AB
date	22-Feb-13
scale	NTS
original size	A4



client:	Health Infrastructure NSW	
project:	Stage 1 Environmental Site Assessment with preliminary sampling for the proposed redevelopment of the Lismore Base Hospital, Lismore NSW	
title:	Site Locality Plan	
project no:	GEOTALST01618AO-AD	figure no: Figure 1

Image sourced from Google Earth 2012



Legend:	
	Surface Samples
	Boreholes

Plan sourced from NDC Consulting Surveyors & Planners, Lismore Base Hospital Borehole Locations; Ref No. 12100 Rev8

drawn:	JP		client:	Health Infrastructure NSW		
approved:	AB		project:	Stage 1 Environmental Site Assessment with preliminary sampling for the proposed redevelopment of the Lismore Base Hospital, Lismore NSW		
date:	22-Feb-13		title:	Sample Location Plan		
scale:	NTS		project no.:	GEOTALST01618AO-AD	drawing no:	Figure 2
original size:	A3					

# Photographs



Photograph 1, Shows the entrance to the existing Pathology Building (Area A).



Photograph 2, Shows the car park and proposed site of the new Pathology Building (Area B).

# Appendix A

## **Site History Information**

# Map from the NSW Natural Resource Atlas

Map created with NSW Natural Resource Atlas - <http://www.nratlas.nsw.gov.au>  
Thursday, January 17, 2013



0 2 Km

## Legend

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

# Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)

Document Generated on Thursday, January 17, 2013

[Print Report](#)

[Works Details](#) [Site Details](#) [Form A Licensed Construction](#) [Water Bearing Zones](#) [Drillers Log](#)

## Work Requested -- GW306262

### Works Details [\(top\)](#)

**GROUNDWATER NUMBER** GW 306262  
**LIC-NUM** 30BL184615  
**AUTHORISED-PURPOSES** MONITORING BORE  
**INTENDED-PURPOSES** MONITORING BORE  
**WORK-TYPE** Bore  
**WORK-STATUS** Supply Obtained  
**CONSTRUCTION-METHOD** Auger - Solid Flight  
**OWNER-TYPE** Private  
**COMMENCE-DATE**  
**COMPLETION-DATE** 2007-04-14  
**FINAL-DEPTH (metres)** 3.90  
**DRILLED-DEPTH (metres)** 3.90  
**CONTRACTOR-NAME**  
**DRILLER-NAME**  
**PROPERTY** TELSTRA  
**GWMA** -  
**GW-ZONE** -  
**STANDING-WATER-LEVEL** 0.40  
**SALINITY**  
**YIELD**

### Site Details [\(top\)](#)

**REGION** 30 - NORTH COAST  
**RIVER-BASIN** 203 - RICHMOND RIVER  
**AREA-DISTRICT**  
**CMA-MAP** 9540-2N  
**GRID-ZONE** 56/2  
**SCALE** 1:25,000  
**ELEVATION**  
**ELEVATION-SOURCE**  
**NORTHING** 6813510.00  
**EASTING** 528240.00  
**LATITUDE** 28 48' 20"

**LONGITUDE** 153 17' 22"  
**GS-MAP**  
**AMG-ZONE** 56  
**COORD-SOURCE** GIS - Geographic Information System  
**REMARK**

### Form-A [\(top\)](#)

**COUNTY** ROUS  
**PARISH** LISMORE  
**PORTION-LOT-DP** 2//570636

### Licensed [\(top\)](#)

**COUNTY** ROUS  
**PARISH** LISMORE  
**PORTION-LOT-DP** 2 570636

### Construction [\(top\)](#)

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

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	3.90	100			Auger
1	1	Casing	PVC Class 18	0.00	0.80	50	42		Screwed; Seated on Bottom; End cap
1	1	Opening	Slots - Vertical	0.80	3.90	50			PVC Class 18; Mechanically Slotted; SL: 50mm; A: 4mm; Screwed
1		Annulus	Bentonite	0.00	0.50	100	50		
1		Annulus	Waterworm/Rounded	0.50	3.90	100	50		Graded

### Water Bearing Zones [\(top\)](#)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK- CAT-DESC	S- W-L	D- D-L	YIELD	TEST-HOLE- DEPTH (metres)	DURATION	SALINITY
0.80	3.90	3.10				0.40			

### Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	0.80	0.80		Fill, Silty Clay, brown, fine to medium	

0.80	1.50	0.70	Silty Clay, grey
1.50	3.90	2.40	(Unknown) - no data provided

---

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

# Groundwater Works Summary

For information on the meaning of fields please see [Glossary](#)

Document Generated on Thursday, January 17, 2013

[Print Report](#)

[Works Details](#) [Site Details](#) [Form A Licensed Construction](#) [Water Bearing Zones](#) [Drillers Log](#)

## Work Requested -- GW306263

### Works Details [\(top\)](#)

**GROUNDWATER NUMBER** GW 306263  
**LIC-NUM** 30BL184615  
**AUTHORISED-PURPOSES** MONITORING BORE  
**INTENDED-PURPOSES** MONITORING BORE  
**WORK-TYPE** Bore  
**WORK-STATUS** Supply Obtained  
**CONSTRUCTION-METHOD** Auger - Solid Flight  
**OWNER-TYPE** Private  
**COMMENCE-DATE**  
**COMPLETION-DATE** 2007-12-14  
**FINAL-DEPTH (metres)** 3.90  
**DRILLED-DEPTH (metres)** 3.90  
**CONTRACTOR-NAME**  
**DRILLER-NAME**  
**PROPERTY** TELSTRA  
**GWMA** -  
**GW-ZONE** -  
**STANDING-WATER-LEVEL** 2.00  
**SALINITY**  
**YIELD**

### Site Details [\(top\)](#)

**REGION** 30 - NORTH COAST  
**RIVER-BASIN** 203 - RICHMOND RIVER  
**AREA-DISTRICT**  
**CMA-MAP** 9540-2N  
**GRID-ZONE** 56/2  
**SCALE** 1:25,000  
**ELEVATION**  
**ELEVATION-SOURCE**  
**NORTHING** 6813505.00  
**EASTING** 528256.00  
**LATITUDE** 28 48' 21"

**LONGITUDE** 153 17' 22"  
**GS-MAP**  
**AMG-ZONE** 56  
**COORD-SOURCE** GIS - Geographic Information System  
**REMARK**

### Form-A [\(top\)](#)

**COUNTY** ROUS  
**PARISH** LISMORE  
**PORTION-LOT-DP** 2//570636

### Licensed [\(top\)](#)

**COUNTY** ROUS  
**PARISH** LISMORE  
**PORTION-LOT-DP** 2 570636

### Construction [\(top\)](#)

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

HOLE- NO	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	DEPTH- FROM (metres)	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	3.90	100			Auger - Solid Flight
1	1	Casing	PVC Class 18	0.00	0.90	50	42		Screwed; Seated on Bottom; End cap
1	1	Opening	Slots - Vertical	0.80	3.90	50			PVC Class 18; Mechanically Slotted; SL: 50mm; A: 4mm; Screwed
1		Annulus	Bentonite	0.00	0.50	100	50		
1		Annulus	Waterworm/Rounded	0.50	3.90	100	50		Graded

### Water Bearing Zones [\(top\)](#)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK-CAT-DESC	S-W-L	D-D-L	YIELD	TEST-HOLE-DEPTH (metres)	DURATION	SALINITY
1.00	3.90	2.90				2.00			

### Drillers Log [\(top\)](#)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	0.80	0.80	Fill, Clayey sandy Gravel, brown, fine to medium, medium sand		

0.80	1.00	0.20	Fill, Silty Clay, grey, with some gravel
1.00	3.90	2.90	Silty Clay, grey

---

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



You are here: [Home](#) > [Contaminated land](#) > [Record of notices](#)

## Search results

Your search for: LGA: Lismore City Council

Matched 12 notices  
relating to 6 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
Goonellabah	Invercauld Road	<a href="#">Dip 4679 Invercauld</a>	1 current and 1 former
Goonellabah	Bruxner Highway	<a href="#">Dip 4885 McDermott's</a>	1 current
Lismore	John Street	<a href="#">Lismore Gasworks</a>	2 current and 2 former
South Lismore	Caniaba Street	<a href="#">Lismore Airport</a>	3 former
The Channon	Wallace	<a href="#">Dip 4687 Izzards</a>	1 current
Tuncester	13 Rifle Range Road	<a href="#">Asbestos Waste Burial Site</a>	1 current

Page 1 of 1

17 January 2013

**Note 1:**

**Current Search**

Folio Identifier 5/17510 (attached)  
DP 17510 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

**Title Tree  
Lot 5 DP 17510**

Folio Identifier 5/17510

Certificate of Title Volume 6665 Folio 28 & 29

Certificate of Title Volume 5043 Folio 115

Certificate of Title Volume 4872 Folio 109

Certificate of Title Volume 831 Folio 37

\*\*\*\*\*



**Note 2:**

## **Current Search**

Folio Identifier 6/17510 (attached)  
DP 17510 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

## **Title Tree Lot 6 DP 17510**

Folio Identifier 6/17510

Certificate of Title Volume 4862 Folio 66

Certificate of Title Volume 4763 Folio 107

Certificate of Title Volume 831 Folio 37

\*\*\*\*\*

**Summary of Proprietor(s)  
Lot 6 DP 17510**

Year	Proprietor
	<b>(Lot 6 DP 17510)</b>
1989 – todate	The Lismore Base Hospital
	<b>(Lot 6 DP 17510 - CT Vol 4862 Fol 66)</b>
1989 – 1989	The Lismore Base Hospital
1971 – 1989	Doris Edith Daley, widow
1937 – 1971	Vincent James Daley, plasterer
	<b>(Lot 1 &amp; 6 DP 17510 - CT Vol 4763 Fol 107)</b>
1936 – 1937	George Rainey Gaggin, veterinary surgeon
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1936	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46)
Prior -1887	CROWN LAND

\*\*\*\*\*

**Note 3:**

**Current Search**

Folio Identifier 7/17510 (attached)  
DP 17510 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

**Title Tree**  
**Lot 7 DP 17510**

Folio Identifier 7/17510

Certificate of Title Volume 4763 Folio 108

Certificate of Title Volume 831 Folio 37

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## Summary of Proprietor(s) Lot 7 DP 17510

Year	Proprietor
	<b>(Lot 7 DP 17510)</b>
1990 – todate	The Lismore Base Hospital
1990 – 1990	Public Trustee
	<b>(Lot 7 DP 17510 - CT Vol 4763 Fol 108)</b>
1990 – 1990	Public Trustee
1936 – 1990	Olive Dorcas Hammick, wife of municipal council employee
1936 – 1936	George Rainey Gaggin, veterinary surgeon
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1936	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

**Note 4:**

**Current Search**

Folio Identifier 15/17964 (attached)  
DP 17964 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

**Title Tree**  
**Lot 15 DP 17964**

Folio Identifier 15/17964

Certificate of Title Volume 4962 Folio 5

Certificate of Title Volume 4872 Folio 109

Certificate of Title Volume 831 Folio 37

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**Summary of Proprietor(s)  
Lot 15 DP 17964**

<b>Year</b>	<b>Proprietor</b>
	<b>(Lot 15 DP17964)</b>
1989 – todate	The Lismore Base Hospital
	<b>(Lot 15 DP 17964 - CT Vol 4962 Fol 5)</b>
1986 – 1989	The Lismore Base Hospital
1970 – 1986	Anthony Robert Smith, supervisor Una Agnes Smith
1947 – 1970	Clarence Sidney Flaherty
1938 – 1947	Harold Thomas Mudge, clerk
	<b>(Part Portion 280 parish Lismore - Area 4 Acres 1 Rood 24 ½ Perches - CT Vol 4872 Fol 109)</b>
1937 – 1938	The Lismore Base Hospital
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

**Note 5:**

**Current Search**

Folio Identifier 1/350716 (attached)  
DP 350716 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

**Title Tree**  
**Lot 1 DP 350716**

Folio Identifier 1/350716

Certificate of Title Volume 5555 Folio 127

Certificate of Title Volume 4843 Folio 31

Certificate of Title Volume 831 Folio 37

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**Summary of Proprietor(s)  
Lot 1 DP 350716**

Year	Proprietor
	<b>(Lot 1 DP 350716)</b>
1989 – todate	The Lismore Base Hospital
	<b>(Lots A &amp; Part Lot B DP 247500 - Area 39 ¼ Perches - CT Vol 5555 Fol 127)</b>
1986 – 1989	The Lismore Base Hospital
<i>(1988 – 1990)</i>	<i>(Lease to Danatess Pty Limited)</i>
1983 – 1986	Christopher Emanuel Tockuss Julie Maree Tockuss
1983 – 1983	Marilyn Michelle Streek Gladys Davis, widow
1970 – 1983	Janice Theresa Gooley, married woman
1949 – 1970	Patrick Thomas Davis, farmer
1946 – 1949	Harry Alexander Saunders, optometrist
	<b>(Lots 11, 10 &amp; 16 DP 17964 - Area 1 Rood 37 ½ Perches - CT Vol 4843 Fol 31)</b>
1937 – 1946	Frederick Herbert Wicks, optician
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

Note 6:

## **Current Search**

Folio Identifier 1/350717 (attached)  
DP 350717 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

## **Title Tree Lot 1 DP 350717**

Folio Identifier 1/350717

Certificate of Title Volume 5555 Folio 128

Certificate of Title Volume 4843 Folio 31

Certificate of Title Volume 831 Folio 37

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**Summary of Proprietor(s)  
Lot 1 DP 350717**

Year	Proprietor
	<b>(Lot 1 DP 350717)</b>
1989 – todate	The Lismore Base Hospital
	<b>(Part Lot B DP 347500 - Area 4 ¾ Perches - CT Vol 5555 Fol 128)</b>
1986 – 1989	The Lismore Base Hospital
1974 – 1986	Malcolm Charles Bartholomaeus, grazier Dorothy Rose Bartholomaeus
1973 – 1974	Thomas Hector Gibson, marketing manager
1970 – 1973	Deanna Margaret Gibson, married woman
1969 – 1970	Deanna Margaret Farquhar, bar attendant
1964 – 1969	Ronald Douglas Farquhar, bus proprietor
1946 – 1964	Angelo Crethar, refreshment room proprietor
1946 – 1946	David Louis Diamond, auctioneer
	<b>(Lots 11, 10 &amp; 16 DP 17964 - Area 1 Rood 37 ½ Perches - CT Vol 4843 Fol 31)</b>
1937 – 1946	Frederick Herbert Wicks, optician
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

Note 7:

## **Current Search**

Folio Identifier C/347500 (attached)  
DP 347500 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

## **Title Tree Lot C DP 347500**

Folio Identifier C/347500

Certificate of Title Volume 5362 Folio 118

Certificate of Title Volume 4843 Folio 31

Certificate of Title Volume 831 Folio 37

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**Summary of Proprietor(s)  
Lot C DP 347500**

Year	Proprietor
	<b>(Lot C DP 347500)</b>
1989 – todote	The Lismore Base Hospital
	<b>(Lot C DP 347500 - CT Vol 5362 Fol 118)</b>
1986 – 1989	The Lismore Base Hospital
1974 – 1986	Malcolm Charles Bartholomaeus, grazier Dorothy Rose Bartholomaeus
1969 – 1974	Deanna Margaret Farquhar, bar attendant
1964 – 1969	Ronald Douglas Farquhar, bus proprietor
1946 – 1964	Angelo Crethar, refreshment room proprietor
1943 – 1946	David Louis Diamond, auctioneer
	<b>(Lots 10, 11 &amp; 16 DP 17964 - CT Vol 4843 Fol 31)</b>
1937 – 1943	Frederick Herbert Wicks, optician
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

Note 8:

## Current Search

Folio Identifier 22/589890 (attached)  
DP 589890 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

## Title Tree Lot 22 DP 589890

Folio Identifier 22/589890

Certificate of Title Volume 13467 Folio 168

Certificate of Title Volume 9864 Folio 230

Certificate of Title Volume 5551 Folio 91

Certificate of Title Volume 4872 Folio 109

Certificate of Title Volume 831 Folio 37

\*\*\*\*\*

**Summary of Proprietor(s)  
Lot 22 DP 589890**

Year	Proprietor
	<b>(Lot 22 DP 589890)</b>
1993 – todate (1993 – 1997)	The Lismore Base Hospital <i>(Lease to Peter Charles Meyer, Warwick William Herbert, Ranon Wayne Lun &amp; Ian Phillip Cappe, of rooms 4070 &amp; 4071, 4<sup>th</sup> Floor “Mahaffey Wing”)</i>
	<b>(Lot 22 DP 589890 - CT Vol 13467 Fol 168)</b>
1977 – 1993	The Lismore Base Hospital <b>(Lot 2 DP 511444 - CT Vol 9864 Fol 230)</b>
1964 – 1977	The Lismore Base Hospital <b>(Part Portion 280 Parish Lismore - Area 2 Acres 1 Roods 9 ¼ Perches - CT Vol 5551 Fol 91)</b>
1946 – 1964	The Lismore Base Hospital <b>(Part Portion 280 Parish Lismore - Area 4 Acres 1 Rood 24 ½ Perches - CT Vol 4872 Fol 109)</b>
1937 – 1946	The Lismore Base Hospital <b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

**Note 9:**

## **Current Search**

Folio Identifier 21/589890 (attached)  
DP 589890 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

## **Title Tree Lot 21 DP 589890**

Folio Identifier 21/589890

Certificate of Title Volume 13467 Folio 167

Certificate of Title Volume 9864 Folio 230

Certificate of Title Volume 5551 Folio 91

Certificate of Title Volume 4872 Folio 109

Certificate of Title Volume 831 Folio 37

\*\*\*\*\*

**Summary of Proprietor(s)  
Lot 21 DP 589890**

Year	Proprietor
	<b>(Lot 21 DP 589890)</b>
1988 – todate (1987 – 1987)	The Lismore Base Hospital <i>(Lease to Commonwealth of Australia, expiry date 31/12/1987, shown on folio identifier 21/589890)</i>
	<b>(Lot 21 DP 589890 - CT Vol 13467 Fol 167)</b>
1977 – 1988	The Lismore Base Hospital
	<b>(Lot 2 DP 511444 - CT Vol 9864 Fol 230)</b>
1964 – 1977	The Lismore Base Hospital
	<b>(Part Portion 280 Parish Lismore - Area 2 Acres 1 Roods 9 ¼ Perches - CT Vol 5551 Fol 91)</b>
1946 – 1964	The Lismore Base Hospital
	<b>(Part Portion 280 Parish Lismore - Area 4 Acres 1 Rood 24 ½ Perches - CT Vol 4872 Fol 109)</b>
1937 – 1946	The Lismore Base Hospital
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

**Note 10:**

**Current Search**

Folio Identifier 1/511444 (attached)  
DP 511444 (plan attached)  
Dated 2<sup>nd</sup> January, 2013  
Registered Proprietor:  
**THE LISMORE BASE HOSPITAL**

**Title Tree**  
**Lot 1 DP 511444**

Folio Identifier 1/511444

Certificate of Title Volume 9864 Folio 229

Certificate of Title Volume 5551 Folio 91

Certificate of Title Volume 4872 Folio 109

Certificate of Title Volume 831 Folio 37

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**Summary of Proprietor(s)  
Lot 1 DP 511444**

Year	Proprietor
	<b>(Lot 1 DP 511444)</b>
1988 – todate	The Lismore Base Hospital
	<b>(Lot 1 DP 511444 – Area 2 Roods 6 ½ Perches – CTVol 9864 Fol 229)</b>
1964 – 1988	The Lismore Base Hospital
<i>(1964 – todate)</i>	<i>(Lease to Commonwealth of Australia of part, shown on folio identifier 1/511444 and CTVol 9864 Fol 229)</i>
	<b>(Part Portion 280 Parish Lismore - Area 2 Acres 1 Roods 9 ¼ Perches - CT Vol 5551 Fol 91)</b>
1946 – 1964	The Lismore Base Hospital
	<b>(Part Portion 280 Parish Lismore - Area 4 Acres 1 Rood 24 ½ Perches - CT Vol 4872 Fol 109)</b>
1937 – 1946	The Lismore Base Hospital
	<b>(Portion 280 Parish Lismore - Area 7 Acres 1 Rood 16 Perches - CT Vol 831 Fol 37)</b>
1930 – 1937	The Lismore District Hospital
1927 – 1930	William Lockett, retired storekeeper ) Norman William Sidney, plumber ) trustees William Riley, wheelwright )
1887 – 1927	James Baillie ) Archibald Currie ) trustees, grantees for James Barrie ) Public Hospital, No. 1887/46
Prior -1887	CROWN LAND

\*\*\*\*\*

Locality : LISMORE

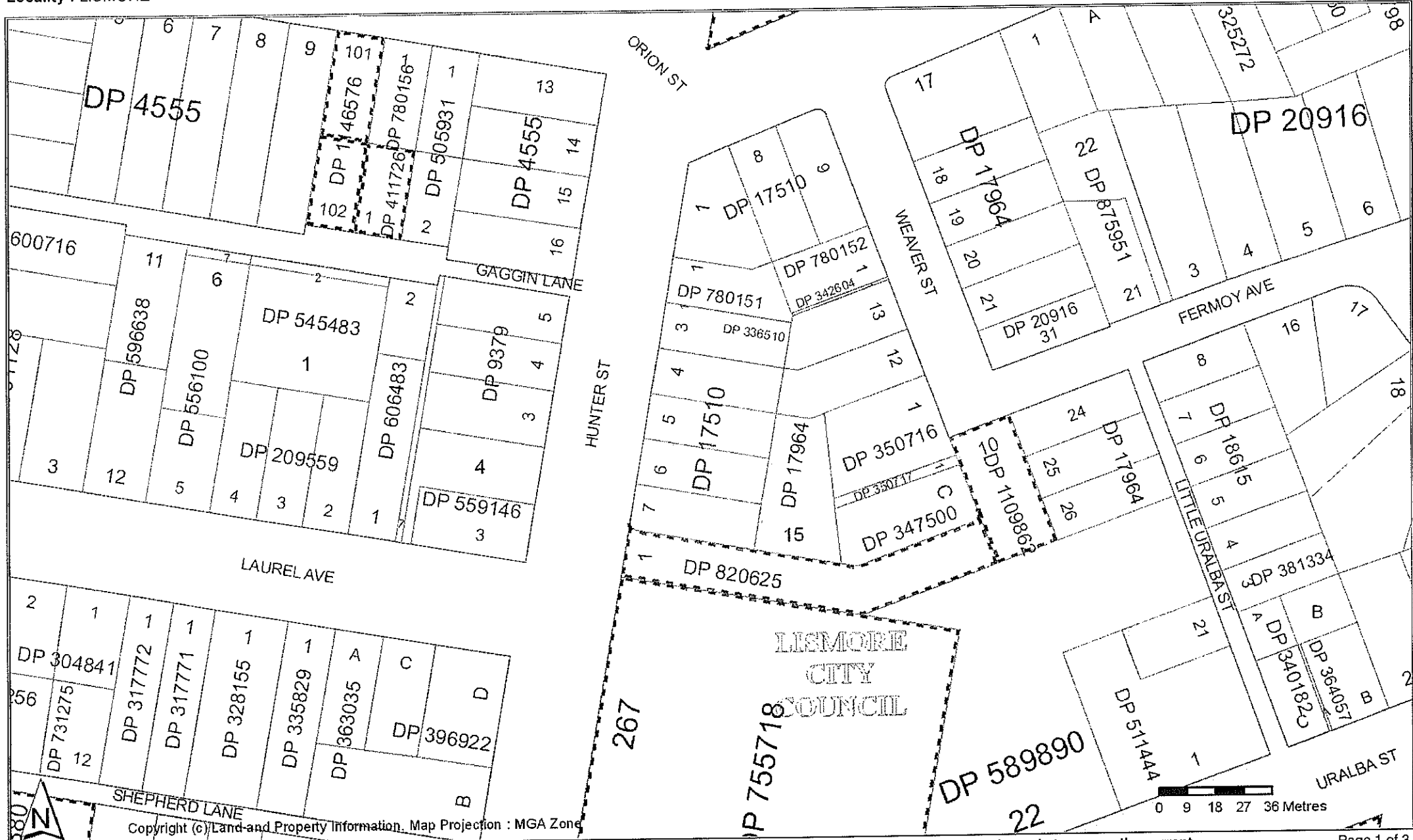
**Requested Parcel** : Lot 5 DP 17510

**Identified Parcel** : Lot 5 DP 17510

LGA : LISMORE

Parish : LISMORE

County : ROUS





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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 5/17510

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:50 PM	1	22/5/2001

LAND

LOT 5 IN DEPOSITED PLAN 17510  
AT LISMORE  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP17510

FIRST SCHEDULE

LISMORE BASE HOSPITAL

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

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

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

2/1/2013 12:55PM

FOLIO: 5/17510

First Title(s): VOL 831 FOL 37  
Prior Title(s): VOL 6665 FOLS 28-29

Recorded	Number	Type of Instrument	C.T. Issue
22/5/2001	7598986	REQUEST	FOLIO CREATED EDITION 1

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



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Information provided through Tri-Search an approved LPLNSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 6/17510

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:50 PM	-	-

VOL 4862 FOL 66 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 6 IN DEPOSITED PLAN 17510  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP17510

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL (T Y321785)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
 -----  
 2/1/2013 12:56PM

FOLIO: 6/17510  
 -----

First Title(s): SEE PRIOR TITLE(S)  
 Prior Title(s): VOL 4862 FOL 66

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
22/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
14/3/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



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

Information provided through Tri-Search an approved LPIA/SI/ Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 7/17510

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:51 PM	1	21/3/1990

LAND

LOT 7 IN DEPOSITED PLAN 17510  
AT LISMORE  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP17510

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL (T Y887267)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

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

NOTE: NO DEALINGS TO BE REGISTERED WITHOUT REFERENCE TO LEGAL SEE 89M82-LEG 14

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

2/1/2013 12:56PM

FOLIO: 7/17510

First Title(s): SEE PRIOR TITLE(S)  
 Prior Title(s): VOL 4763 FOL 108

Recorded	Number	Type of Instrument	C.T. Issue
22/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
19/3/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
21/3/1990	Y887267	TRANSFER	EDITION 1

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 15/17964

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:51 PM	-	-

VOL 4962 FOL 5 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 15 IN DEPOSITED PLAN 17964  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP17964

FIRST SCHEDULE

THE LISMORE BASE HOSPITALS (T W539035)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 W539035 ATTENTION IS DIRECTED TO SECTION 20 OF THE PUBLIC HOSPITALS ACT 1929

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
-----  
2/1/2013 12:57PM

FOLIO: 15/17964  
-----

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 4962 FOL 5

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
18/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
4/4/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/350716

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:52 PM	-	-

VOL 5555 FOL 127 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 1 IN DEPOSITED PLAN 350716  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP350716

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
 -----  
 2/1/2013 12:57PM

FOLIO: 1/350716  
 -----

First Title(s): VOL 831 FOL 37  
 Prior Title(s): VOL 5555 FOL 127

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
17/1/1997		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/350717

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:53 PM	-	-

VOL 5555 FOL 128 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 1 IN DEPOSITED PLAN 350717  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP350717

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL (T W564325)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
-----  
2/1/2013 12:58PM

FOLIO: 1/350717  
-----

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 5555 FOL 128

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
17/7/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



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Information provided through Tri-Search an approved LPINSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: C/347500

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:53 PM	-	-

VOL 5362 FOL 118 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT C IN DEPOSITED PLAN 347500  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP347500

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL (T W564325)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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Information provided through Tri-Search an approved LPIASIP Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
-----  
2/1/2013 12:58PM

FOLIO: C/347500  
-----

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 5362 FOL 118

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
3/5/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 22/589890

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:48 PM	1	13/7/1993

LAND

LOT 22 IN DEPOSITED PLAN 589890  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP589890

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 I480110 LEASE TO PETER CHARLES MEYER, WARWICK WILLIAM HERBERT, RAMON WAYNE LUN & IAN PHILLIP CAPPE OF ROOMS 4070 & 4071, 4TH LEVEL, "MAHAFFEY WING" EXPIRES 8-3-1997. OPTION OF RENEWAL 5 YRS

NOTATIONS

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

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
-----  
2/1/2013 12:54PM

FOLIO: 22/589890  
-----

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 13467 FOL 168

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
24/8/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
13/7/1993	I480110	LEASE	EDITION 1

\*\*\* END OF SEARCH \*\*\*

Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



**CERTIFICATE OF TITLE**  
 PROPERTY ACT, 1900



13467/168

NEW SOUTH WALES

13467 - 168

Vol. .... Fol. ....

Crown Grant Vol. 831 Fol. 37

Prior Title Vol. 9064 Fol. 230



EDITION ISSUED

24 10 1977

13467 Fol. 168

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

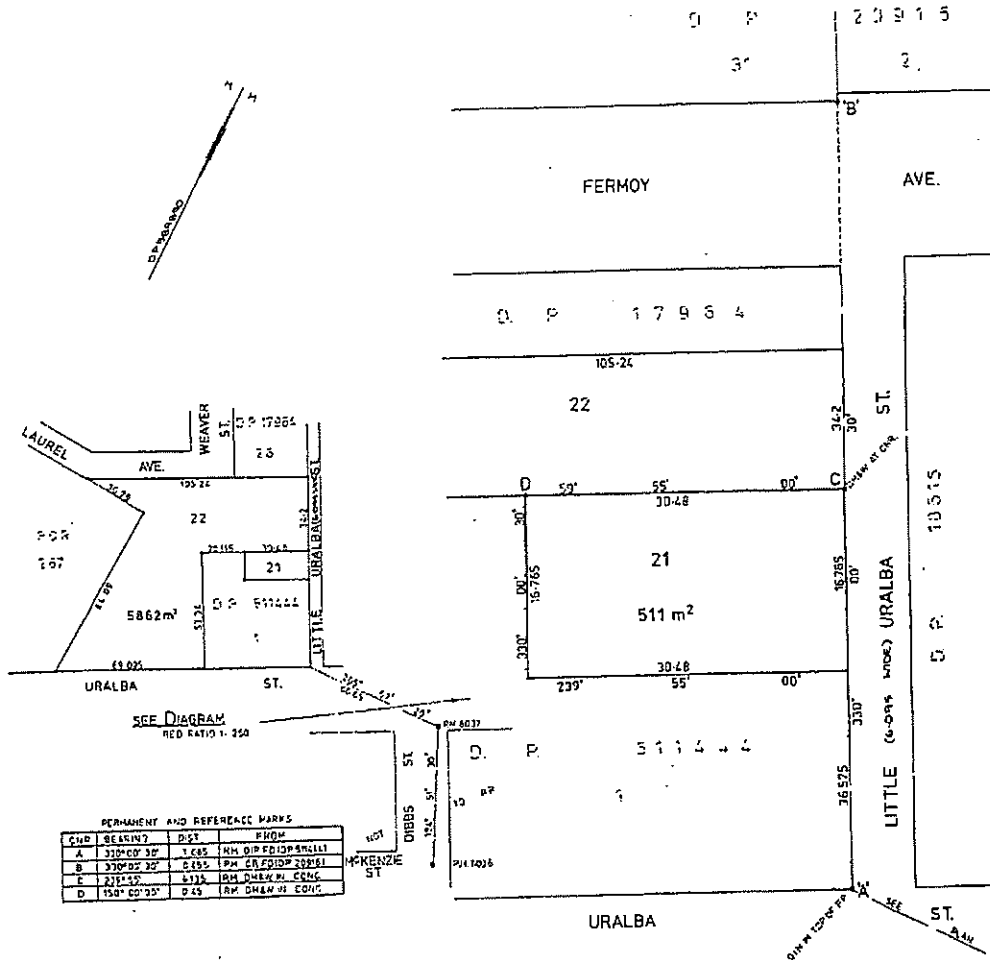
*[Signature]*

Registrar General.  
 NEW SOUTH WALES



**PLAN SHOWING LOCATION OF LAND**

LENGTHS ARE IN METRES



SEE DIAGRAM  
 RED RATIO 1: 250

CHD	BEARING	DIST	FROM
A	130° 00' 30"	1.435	RM DR EDWARDS
B	100° 00' 30"	0.255	RM DR EDWARDS
C	210° 00' 30"	0.115	RM DR EDWARDS
D	150° 00' 30"	0.45	RM DR EDWARDS

ESTATE AND LAND REFERRED TO

<sup>S</sup> Estate in Fee Simple in Lot 22 in Deposited Plan 589890 in the City of Lismore Parish of Lismore and County of Rous.

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL.

SECOND SCHEDULE

CRY 1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

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

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



**CERTIFICATE OF TITLE**  
PROPERTY ACT, 1900, as amended.



9864-230

NEW SOUTH WALES :  
Crown Grant Volume 831 Folio 37  
Prior Title Volume 5551 Folio 91

Vol. 9864 Fol. 230

1st Edition issued 18-11-1964

ID



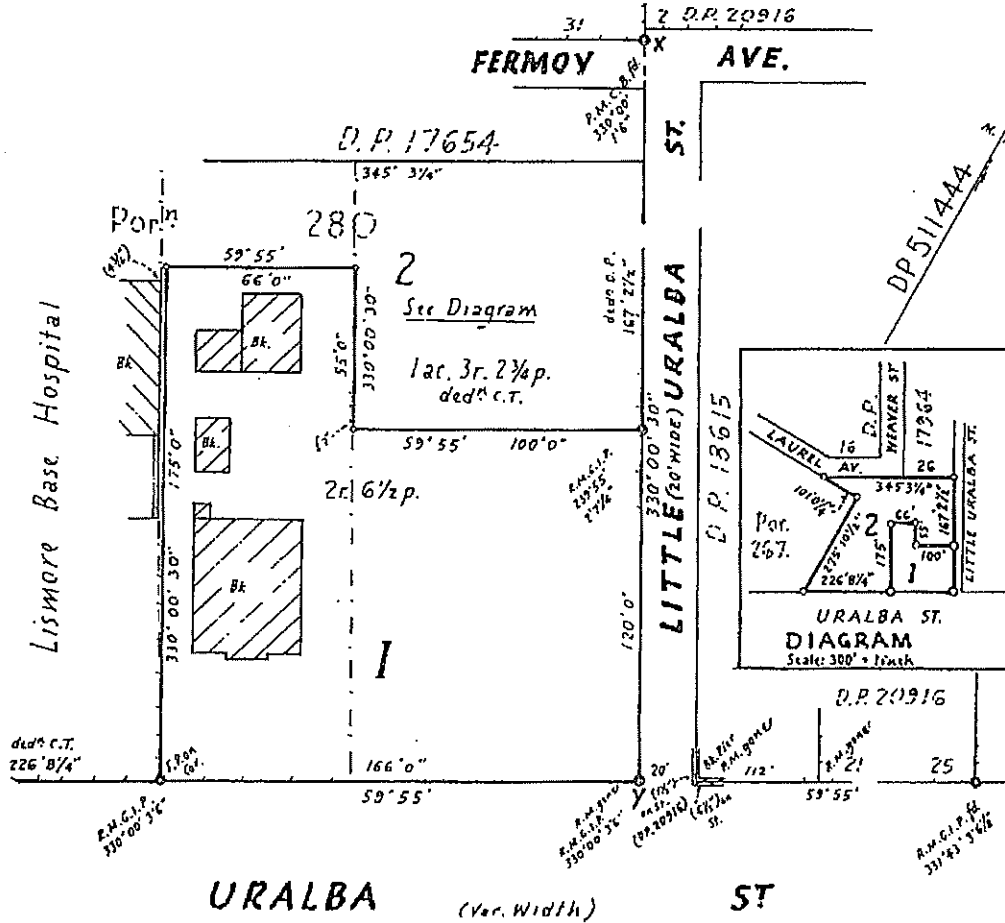
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness *A. Baker*

*Jawatson*  
Registrar General.



PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 511444, at Lisimore in the City of Lisimore Parish of Lisimore and County of Rous.

FIRST SCHEDULE (continued overleaf)

THE LISMORE BASE HOSPITAL.

*Jawatson*  
Registrar General

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

*Jawatson*  
Registrar General

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

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

(Page 1) Vol. 9864 Fol. 230





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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 21/589890

SEARCH DATE	TIME	EDITION NO	DATE
2/1/2013	12:49 PM	-	-

VOL 13467 FOL 167 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 21 IN DEPOSITED PLAN 589890  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP589890

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 Q460926 LEASE TO THE COMMONWEALTH OF AUSTRALIA. EXPIRY DATE 31-12-1987

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE  
-----  
2/1/2013 12.55PM

FOLIO: 21/589890  
-----

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 13467 FOL 167

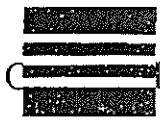
Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
24/8/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

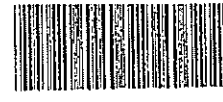
Coffey - Lismore

PRINTED ON 2/1/2013

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



**CERTIFICATE OF TITLE**



13467167

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. **13467** Fol. **167**

Crown Grant Vol. 831 Fol. 37

Prior Title Vol.9864 Fol.230

EDITION ISSUED

24 10 1977



13467 Fol. 167

(Page 1) Vol.

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

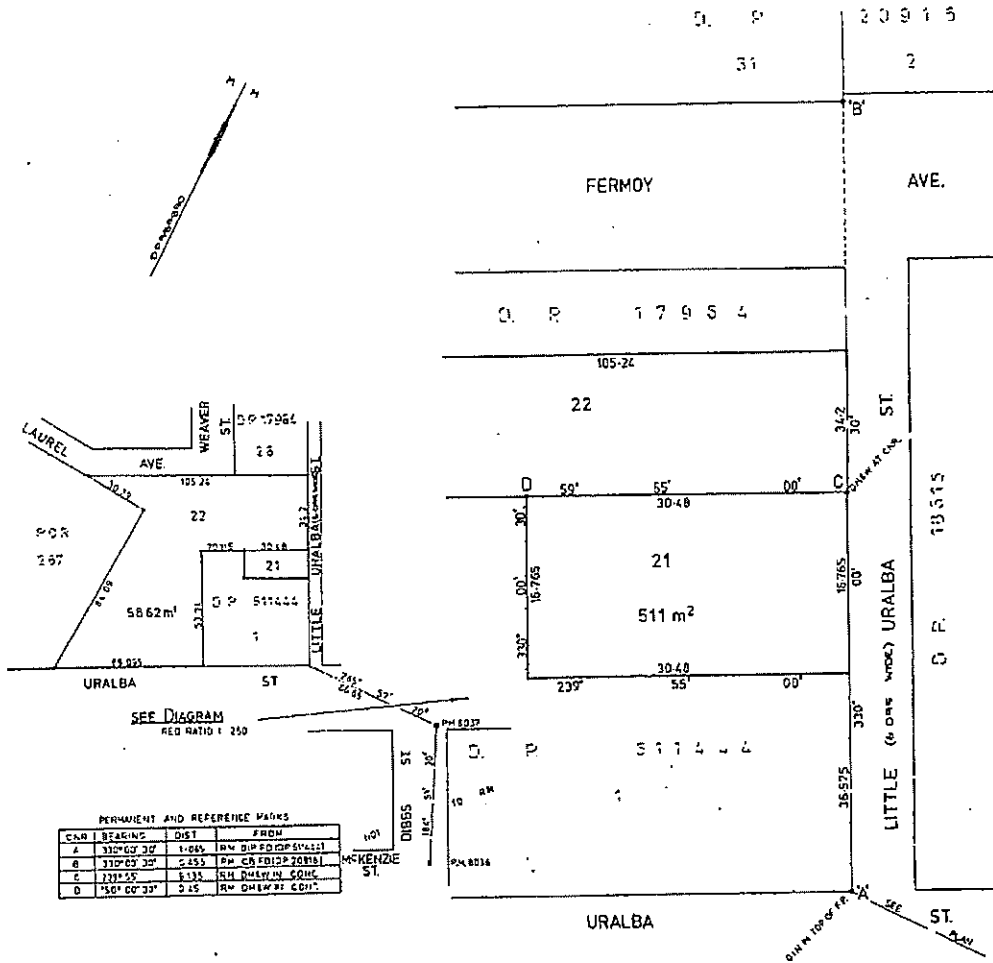
*[Signature]*

Registrar General.



**PLAN SHOWING LOCATION OF LAND**

LENGTHS ARE IN METRES



SEE DIAGRAM  
RED RATIO 1:250

CAN	BEARING	DIST	FROM
A	310° 02' 30"	1.024	RM DUNLOP CORNER
B	310° 02' 30"	2.453	RM CH. EDWARDS CORNER
C	231° 55'	1.135	RM DUNLOP CORNER
D	35° 00' 30"	2.15	RM DUNLOP CORNER

**ESTATE AND LAND REFERRED TO**

Estate in Fee Simple in Lot 21 in Deposited Plan 509890 in the City of Lismore Parish of Lismore and County of Rous.

**FIRST SCHEDULE**

THE LISMORE BASE HOSPITAL.  
 THE LISMORE BASE HOSPITAL.

**SECOND SCHEDULE**

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.

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

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





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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/511444

SEARCH DATE	TIME	EDITION NO	DATE
21/12/2012	5:02 PM	-	-

VOL 9864 FOL 229 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 1 IN DEPOSITED PLAN 511444  
AT LISMORE  
LOCAL GOVERNMENT AREA LISMORE  
PARISH OF LISMORE COUNTY OF ROUS  
TITLE DIAGRAM DP511444

FIRST SCHEDULE

THE LISMORE BASE HOSPITAL

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 K3764 LEASE TO THE COMMONWEALTH OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*



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

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

-----  
 21/12/2012 5:03PM

FOLIO: 1/511444

-----  
 First Title(s): SEE PRIOR TITLE(S)  
 Prior Title(s): VOL 9864 FOL 229

Recorded	Number	Type of Instrument	C.T. Issue
-----	-----	-----	-----
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
21/6/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

\*\*\* END OF SEARCH \*\*\*

**CERTIFICATE OF TITLE**  
PROPERTY ACT, 1900, as amended.



NEW SOUTH WALES :  
Crown Grant Volume 831 Folio 37  
Prior Title Volume 5551 Folio 91

Vol. 9864 Fol. 229

ID

1st Edition issued 18-11-1964

**CANCELLED**

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

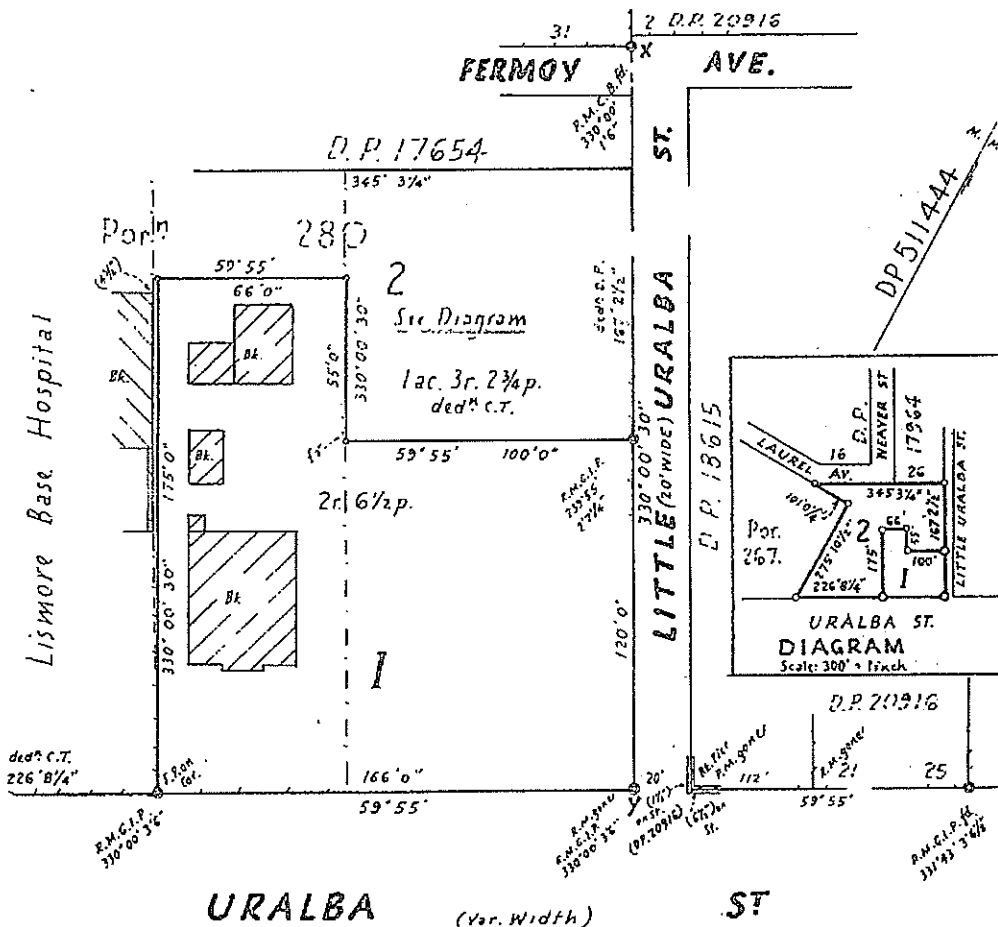
Witness

*Bohen*

*Jawatson*  
SEE AUTO FOLIO  
Registrar General.



PLAN SHOWING LOCATION OF LAND



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

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

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 511444 at Lismore in the City of Lismore Parish of Lismore and County of Rous.

FIRST SCHEDULE (continued overleaf)

THE LISMORE BASE HOSPITAL.

*Jawatson*  
Registrar General

SECOND SCHEDULE (continued overleaf)

*GRY* Reservations and conditions, if any, contained in the Crown Grant above referred to.

*Jawatson*  
Registrar General

Vol. 9864 Fol. 229

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		
<p>CANCELLED</p> <p>SEE AUTO FOLIO</p>					

SECOND SCHEDULE (continued)

NATURE	INSTRUMENT		PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION	
	NUMBER	DATE					
L Lease	K3764.P	28.9.1964	to the Commonwealth of Australia	11.6.1965	<i>Jackson</i>		

(Page 2 of 2 pages)

# **ADVANCE LEGAL SEARCHERS PTY LTD**

(ACN 147 943 842)

ABN 82 147 943 842

PO Box 149  
Yagoona NSW 2199

Telephone: +612 9754 1590

Mobile: 0412 169 809

Facsimile: +612 8076 3026

Email: [alsearch@optusnet.com.au](mailto:alsearch@optusnet.com.au)

2<sup>nd</sup> January, 2013

**COFFEY GEOSCIENCES Pty Ltd**

1/18 Hurley Drive

**COFFS HARBOUR NSW 2450**

**Attention: Joel Parkin**

**RE:**

**Lismore Base Hospital  
60 Uralba Street, Lismore  
Ref: GEOTALST01618AO**

<b>Note 1:</b>	<b>Folio Identifier 5/17510</b>	<b>(page 2)</b>
<b>Note 2:</b>	<b>Folio Identifier 6/17510</b>	<b>(page 4)</b>
<b>Note 3:</b>	<b>Folio Identifier 7/17510</b>	<b>(page 6)</b>
<b>Note 4:</b>	<b>Folio Identifier 15/17964</b>	<b>(page 8)</b>
<b>Note 5:</b>	<b>Folio Identifier 1/350716</b>	<b>(page 10)</b>
<b>Note 6:</b>	<b>Folio Identifier 1/350717</b>	<b>(page 12)</b>
<b>Note 7:</b>	<b>Folio Identifier C/347500</b>	<b>(page 14)</b>
<b>Note 8:</b>	<b>Folio Identifier 22/589890</b>	<b>(page 16)</b>
<b>Note 9:</b>	<b>Folio Identifier 21/589890</b>	<b>(page 18)</b>
<b>Note 10:</b>	<b>Folio Identifier 1/511444</b>	<b>(page 20)</b>



Our Ref: D12/198598  
Your Ref: Joel Parkin

27 December 2012

Attention: Joel Parkin  
Coffey Geotechnics  
1/18 Hurley Dr  
Coffs Harbour NSW 2450

Dear Mr Parkin,

**RE SITE: 60 Uralba St Lismore NSW**

I refer to your site search request received by WorkCover NSW on 21 December 2012 requesting information on licences to keep dangerous goods for the above site.

Enclosed are copies of the documents that WorkCover NSW holds on Dangerous Goods Licences 35/027248 & 35/026871 & 35/030969 relating to the storage of dangerous goods at the above-mentioned premises, as listed on the Stored Chemical Information Database (SCID).

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

Yours Sincerely

A handwritten signature in black ink, appearing to read 'Brent Jones', written over a faint circular stamp or watermark.

Brent Jones  
Senior Licensing Officer  
Dangerous Goods Notification Team

WorkCover. **Watching out for you.**

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

NOTIFICATION OF DANGEROUS GOODS ON PREMISES FORM

FDG01

CONTACT FOR NOTIFICATION INQUIRIES

Title: Mr / Miss / Ms / Mrs / Other (please specify) MR Family name COOMBS  
 Given name JOHN Other names FRANCIS  
 Business phone 0409246160 Business fax number 66202394  
 Business email address JOHN.COOMBS@NCIANS.HEALTH.NSW.GOV.AU

Previous Licence Number or Acknowledgement Number (if known)

35/ 027248

Previous Occupier (if known)

N/A

Site on which dangerous goods are to be kept:

Number 11 Street WEAVER

Suburb/Town/Locality

LISMORE

Postcode

2480

Nearest cross Street

FERRY AV

Lot and DP if no street number

N/A

Is the site staffed? If yes state number of employees

200 +

Site staffing: hours per day

24

Days per week

7

Site Emergency Contact

Phone number

(0409246160)

Name

JOHN COOMBS

Nature of site (eg petrol station, warehouse etc)

HOSPITAL

Nature of primary business activity

HEALTH

ABN Number (if any)

37940606983

Website details (if any)

N/A

What is the ANSZIC code most applicable to your business? (see guide for list of codes and further information)

Code

861

Description

HOSPITAL

Attach a site sketch(s) of the premises. Refer to the Guide GDG01 for information on the requirements for the site sketch.

Attach a legible photocopy page from a local Street Directory or other map showing the locality of the premises. Mark the location of the premises with an X.

\$ 100.00  
 Date: 1/8/11  
 Rec No: 639456

NOTIFICATION OF DANGEROUS GOODS ON PREMISES FORM

FDG01

List the dangerous goods that will be stored and/or processed on these premises (refer to Guide GDG01). Copy this page and attach additional sheets if there is insufficient space.

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
1	BULK ABOVE GROUND	2.25.1	15,000 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
1073	LIQUID OXYGEN	2.2	-	LIQUID OXYGEN		15,000	L
		5.1	-				

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)
2	BULK ABOVE GROUND	2.25.1	1,500 L

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg
1073	LIQUID OXYGEN	2.2	-	LIQUID OXYGEN		1,500	L
		5.1	-				

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg

Depot No	Type of storage location or process	Class	Maximum Storage Capacity (L, kg)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Code	Typical Qty	Unit eg L, kg

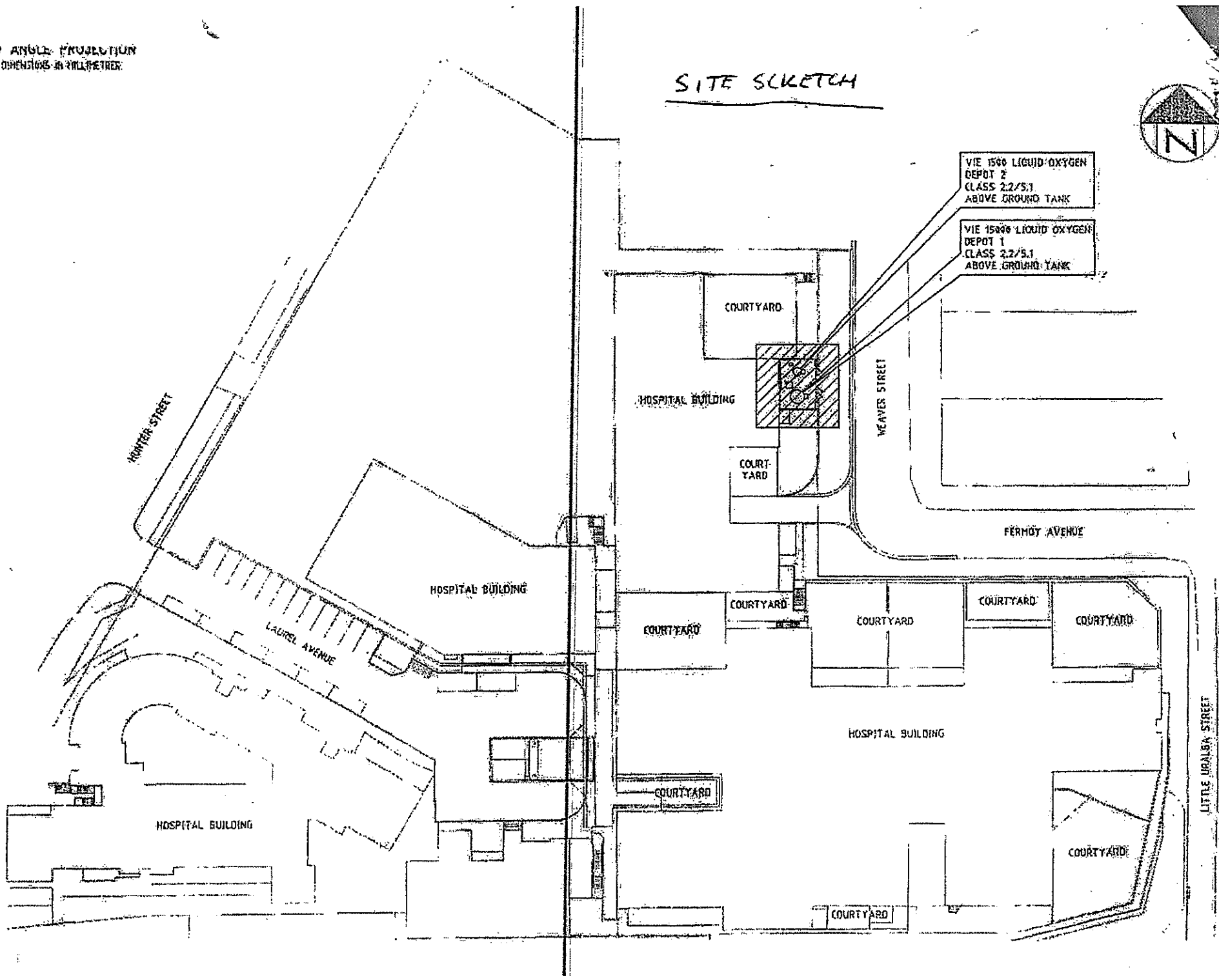
THIRD ANGLE PROJECTION  
ALL DIMENSIONS IN MILLIMETERS

# SITE SKETCH

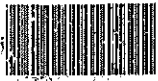


VIE 1500 L. LIQUID OXYGEN  
DEPOT 2  
CLASS 2.2/5.1  
ABOVE GROUND TANK

VIE 1500 L. LIQUID OXYGEN  
DEPOT 1  
CLASS 2.2/5.1  
ABOVE GROUND TANK



100675K



Box 60

RECEIVED SERVICE CENTRE

WorkCover New South Wales, 400 Kent Street, Sydney 2000. Telephone 9370 5000 ALL MAIL TO G.P.O. BOX 5364 SYDNEY 2001  
Licence No. 35/027248

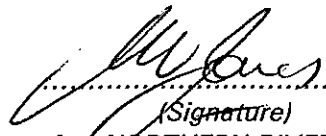
10 MAY 2000  
WORKCOVER NEW SOUTH WALES



# APPLICATION FOR RENEWAL OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

**DECLARATION:** Please renew licence number 35/027248 to 28/05/2001. I confirm that all the licence details shown below are correct (amend if necessary).

  
 (Signature)

WARREN V. JONES  
 (Please print name)

08.05.00  
 (Date signed)

for NORTHERN RIVERS HEALTH SERVICE

**THIS SIGNED DECLARATION SHOULD BE RETURNED TO: (please do not fax)**

WorkCover New South Wales  
 Dangerous Goods Licensing Section  
 GPO BOX 5364  
 SYDNEY 2001

Enquiries: ph (02) 9370 5187  
 fax (02) 9370 6104

### Details of licence on 29 April 2000

**Licence Number** 35/027248      **Expiry Date** 28/05/2000  
**Licensee** NORTHERN RIVERS HEALTH SERVICE  
 LISMORE BASE HOSPITAL  
**Postal Address:** LISMORE BASE HOSPITAL BOX 419 P O LISMORE NSW 2480  
**Licence Contact** WARREN JAMES Ph. 0266 202406 Fax. 0266 202394  
**Premises Licensed to Keep Dangerous Goods**  
 NORTHERN RIVERS HEALTH SERVICE LISMORE BASE HOSPITAL  
 60-70 URALBA ST LISMORE 2480

**Nature of Site** HOSPITALS (EXCEPT PSYCHIATRIC HOSPITALS)  
**Major Supplier of Dangerous Goods** BOC  
**Emergency Contact for this Site** SWITHBOARD Ph. 0266 218000  
**Site staffing** 24 HRS 7 DAYS

### Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	ABOVE-GROUND TANK	Class 2.2	5499 M3
		UN 1073 OXYGEN, REFRIGERATED LIQUID	5000 M3

DATA  
11 MAY 2000  
ENTERED

PLEASE AMEND

# Application for Licence to Keep Dangerous Goods

Status: Conditional  
 Comments: app d/e +  
 licence issued on condition  
 site sketch submitted  
 by 19/12/97.

VER  
 /ALES

Application for  new licence  amendment  transfer  extension

Expiry: 29.5.99

## PART A - Applicant and site information

1 Name of applicant ACN

X Northern Rivers Health Service

2 Postal address of applicant Suburb/Town Postcode

P.O. Box 419 Lismore 2480

3 Trading name or site occupier's name

X Lismore Base Hospital

4 Contact for licence inquiries

Phone Fax Name

(066) 202406 (066) 202394 Mr John Lambert

X 02 6620 2406 02 6620 2394

5 Previous licence number (if known) 35/ N/A 35/027248.

6 Previous occupier (if known) N/A.

7 Site to be licensed

No Street

X 60 - 70 Uralba Street

Suburb/Town Postcode

Lismore 2480

8 Main business of site Health Care \* 8611

9 Site staffing: Hours per day X 24 Days per week X 7

10 Emergency contact

Phone Name

X 02 66218000 X Switchboard

11 Major supplier of dangerous goods X B.O.C. Gases.

12 If a new site or for amendments to depots  
 Plan stamped by: Name of Accredited Consultant Date stamped

X Greg Allen (L8989) X 11.2.97

I certify that the details in this application (including any accompanying computer disk) are correct and cover all licensable quantities of dangerous goods kept on the premises.

13 Signature of applicant Date

 23.5.97

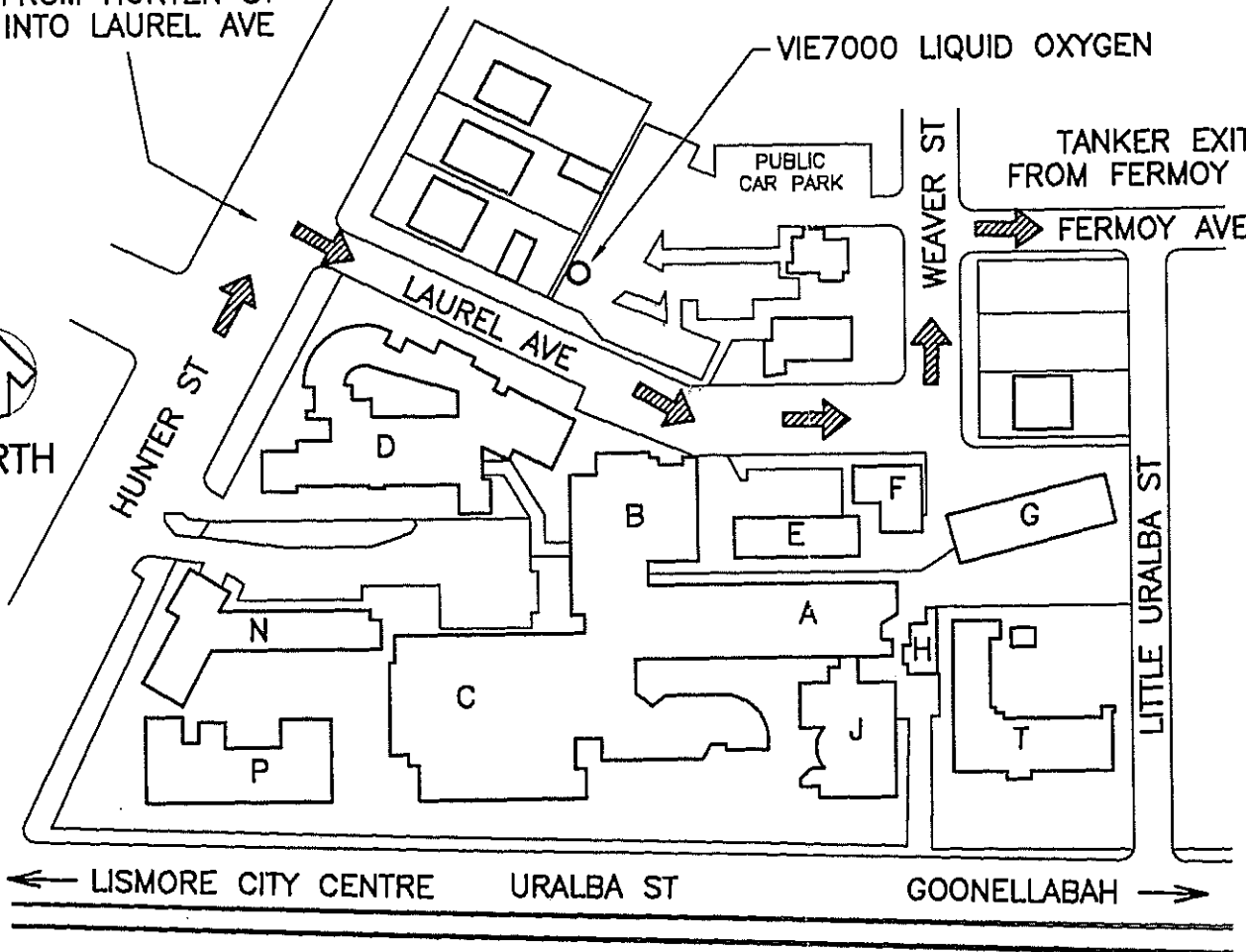
**DATA**  
 10 NOV 1997  
**ENTERED**

Please send your application, marked **CONFIDENTIAL**, to:  
**Dangerous Goods Licensing, Level 3, Locked Bag 10, Clarence Street,  
 SYDNEY NSW 2000**

TANKER ENTRY FROM HUNTER ST INTO LAUREL AVE

DO NOT SCALE  
UNCONTROLLED DRAWING

INFORMATION AS SUPPLIED BY BOC GASES



NOTES  
REFER DWG.No BOC-001/2 FOR VIE7000 PLAN  
➔ DIRECTION OF TANKER

				PROJECT	SCALE	VIE7000 LIQUID OXYGEN	
				N.T.S.		SITE SKETCH	
						LISMORE HOSPITAL	
						URALBA ST. LISMORE	
0	10-02-97	B.S.	ORIGINAL ISSUE	G.ALLEN	G.ALLEN	A4	DRAWING N <sup>o</sup>
ISSUE	DATE	DRAWN	REVISIONS	PASSED	APPROVED	FORM N <sup>o</sup>	BOC-001/1
				CUSTOMER ENGINEERING DEPARTMENT NSW		EP-002-F09/4	SHEET 1 OF 2
				COPYRIGHT BOC GASES AUSTRALIA LIMITED			DATE 10-02-97
							TIME 3:30PM
							ISSUE 0

INFORMATION AS SUPPLIED BY BOC GASES

**BOC GASES** THE GASES COMPANY THAT DELIVERS

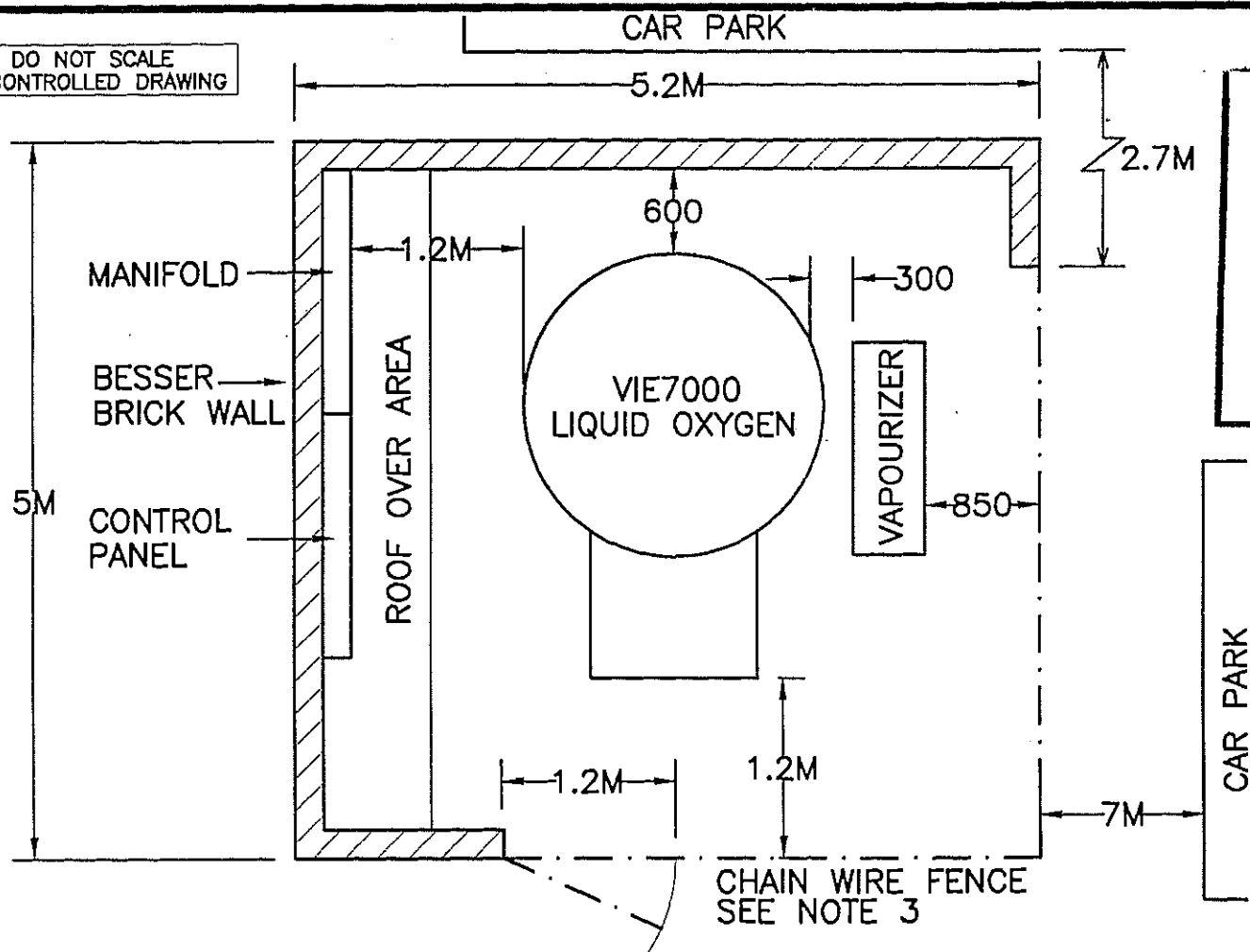
This plan conforms with the Dangerous Goods Act NSW 1975 Information and Drawing Supplied By BOC GASES / AS 1894 Approval for Class 2 Depot

*G. Allen* Date 11-2-97  
GREG ALLEN 18989

**NOTES**

- ELECTRICAL POWER OUTLET**  
TO BE INSTALLED FOR VESSEL OF 415V 3 PHASE WITH EARTH 32 Amp 4 PIN WEATHERPROOF WILCO TYPE WICM4322 PLUS FUSE FITTED WITH GEC TYPE 32MC3 IN A 32 Amp FUSE HOLDER. THE POWER OUTLET IS TO BE INSTALLED 1000mm ABOVE GROUND LEVEL ATTACHED EITHER TO A WALL OR A STAND AND NOT MORE THAN 5000mm FROM VESSEL CONTROLS.
- CONCRETE PLINTH**  
TO BE GRADE 25MPa WITH 28 DAY CURE OR 40MPa WITH 7 DAY CURE. REINFORCED WITH MESH TOP AND BOTTOM WITH 50mm COVER.
- SECURITY FENCES**  
TO BE 50mm CHAIN WIRE MESH 1800mm HIGH WITH DOUBLE OUTWARD OPENING GATES. CORNER POSTS TO BE NB WITH EXTENSION POSTS FOR 2 STRANDS OF BARBED WIRE
- REFER DWG.No BOC-001/1 FOR SITE SKETCH

DO NOT SCALE UNCONTROLLED DRAWING



TANKER ENTRY FROM HUNTER ST. →

LAUREL AVE

→ TANKER EXIT TO FERMOY AVE

				PROJECT	SCALE	VIE7000 LIQUID OXYGEN			
				1=50		PLAN VESSEL INSTALLATION			
						LISMORE HOSPITAL			
						URALBA ST, LISMORE			
0	10-02-97	B.S.	ORIGINAL ISSUE	G.ALLEN	G.ALLEN	A4	DRAWING N°	SHEET 2 OF 2	
ISSUE	DATE	DRAWN	REVISIONS	PASSED	APPROVED	FORM N°	BOC-001/2	DATE	ISSUE 0
						CUSTOMER ENGINEERING DEPARTMENT NSW			
						COPYRIGHT BOC GASES AUSTRALIA LIMITED 1996			

**PART C – Dangerous Goods Storage** Complete one section per depot.

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot	Depot Class	Maximum storage capacity
1	WC# 153-U-10616 Above ground tank <del>Brick and wire cage</del> roofless	2.2	5499 m <sup>3</sup>

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>
1073	Oxygen, liquid	2 2	Oxygen	5000	m <sup>3</sup>

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>

N/A

INSERT

Department of Industrial Relations & Employment

DANGEROUS GOODS ACT, 1975

LICENCE No.

35-027248-0

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE)\* FOR THE KEEPING OF DANGEROUS GOODS NEW LICENCE

(\* delete whichever is not required)

EXEMPT.

FEE: \$15.00 per Depot for new licence. \$15.00 for amendment or transfer.

DC 9008 0000 Exempt 90

Name of Applicant in full (see Item 1 - Explanatory notes - page 4) KEVIN DEREK ALBERTIN  
~~DEPARTMENT OF PUBLIC WORKS~~

Trading name or occupier's name (if any) DEPT. OF HEALTH

Postal Address PF CENTRAL OFFICE - MCKELL BUILDING  
PO RAWSON PLACE, SYDNEY, N. S. W Postcode 2000

Address of the premises to be licensed. (Including Street No.) LF "URADAL STREET", LISMORE Postcode 2480

Nature of premises (See Item 2 - Explanatory notes - page 4) HOSPITAL

Telephone number of applicant STD Code (02) Number 228-3061

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (See item 3 - Explanatory notes - page 4)	Storage capacity	Dangerous goods	C & C Office use only
			Product being stored	
1	ABOVEGROUND TANK	20 KL	LPG	1.100.21
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

DATA ENTERED  
- 1 MAR 1990  
OPERATOR ONE

D/E 19/7/90

Has site plan been approved by the Dangerous Goods Branch? Yes  No  If yes, no plans required. If no, please attach site plan, or provide sketch plan overleaf.

Have premises previously been licensed? Yes  No  If, yes, state name of previous occupier, and licence No. (if known).

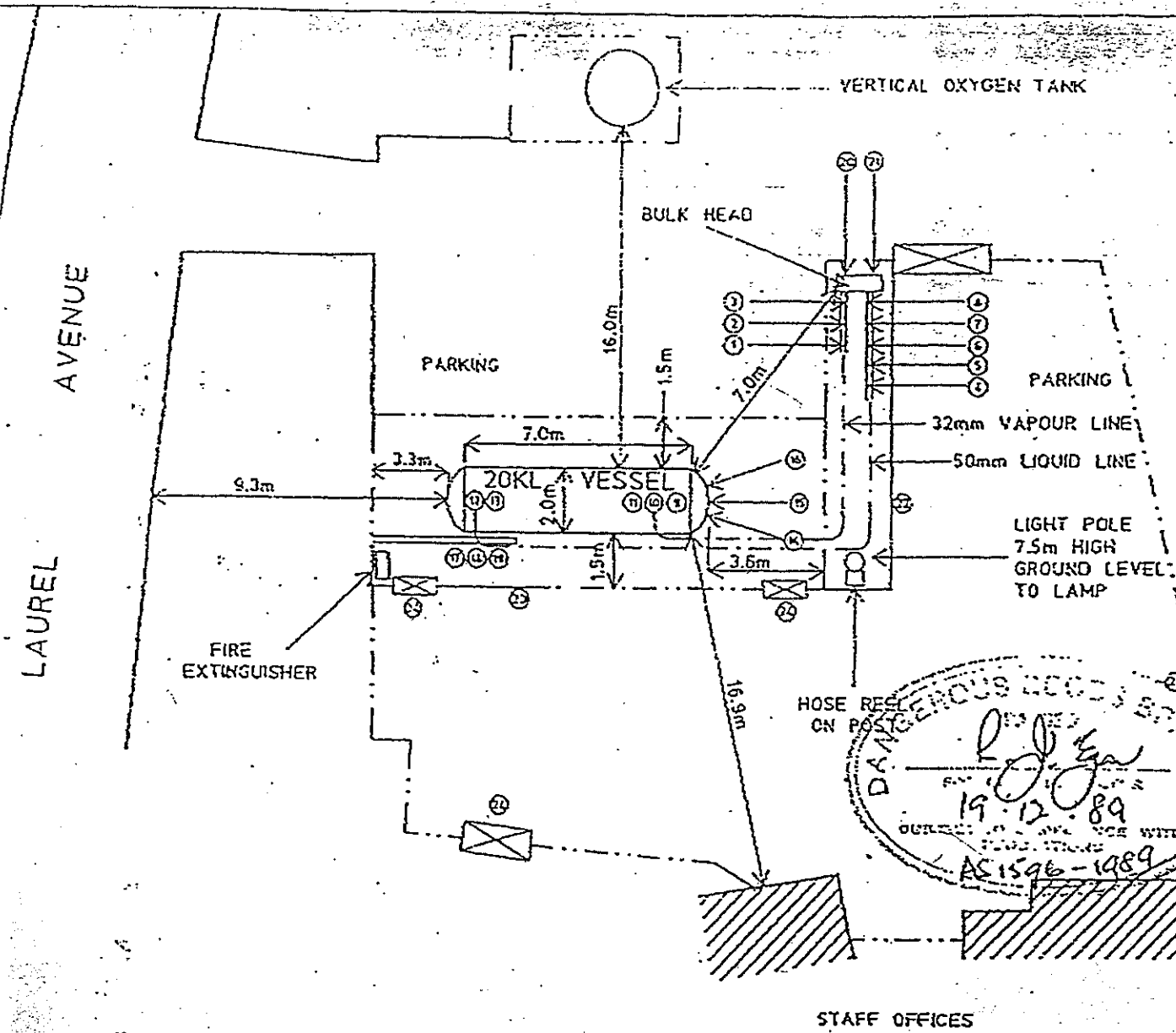
Name of oil company supplying flammable liquid (if applicable) N/A  
Signature of applicant K. D. Albertin Date 17.01.90

For external explosives magazine(s), please fill in page 3.

FOR OFFICE USE ONLY CERTIFICATE OF INSPECTION

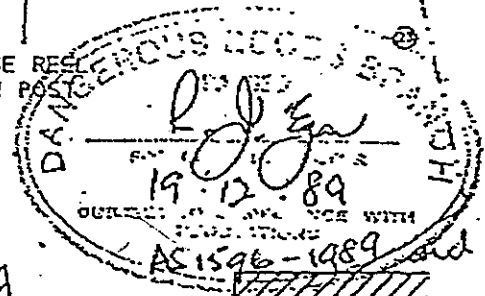
I, being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector ..... Date .....



**KEY**

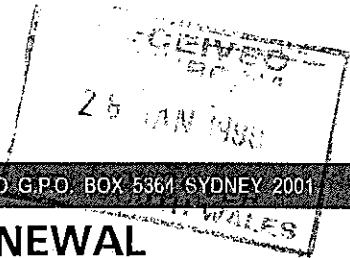
- 1 VENT VALVE
- 2 EXCESS FLOW VALVE
- 3 GLOBE VALVE
- 4 VENT VALVE
- 5 EXCESS FLOW
- 6 SITE GLASS
- 7 GLOBE VALVE
- 8 HYDROSTATIC RELIEF VALVE
- 9 DRAIN VALVE
- 10 VAPOUR RETURN I.S.C
- 11 VAPOUR OUT I.S.C
- 12 LIQUID FILL
- 13 SAFETY RELIEF VALVE
- 14 THERMOMETER
- 15 MAGNATEL VALVE
- 16 GAUGE PRESSURE
- 17 BALL VALVE
- 18 FIRST STAGE REGULATOR
- 19 PRESSURE GAUGE
- 20 ACME ADAPTER
- 21 ACME ADAPTER
- 22 150mm KERR & GUTTER
- 23 FENCE
- 24 GATE



DEC 19 '89 15:23 M.C.R.A. OF NSW 61 2 662834

SCALE	SURVEYED BY .....	APPROVED .....	<b>LISMORE CITY COUNCIL</b>		AUTOCAD NAME	SHEET No.
	DATE 8-12-89				CITY ENGINEER .....	GASTANK
DRAWN	DESIGNED .....	DATE .....	LOCATION OF 20KL L.P.G VESSEL AT LISMORE BASE HOSPITAL			PLAN No.
	DRAWN D. STUCKEY					
PASSED .....						



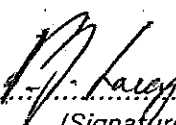


WorkCover New South Wales, 400 Kent Street, Sydney 2000. Telephone 9370 5000 ALL MAIL TO G.P.O. BOX 5364 SYDNEY 2001  
Licence No. 35/026871

### APPLICATION FOR RENEWAL OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

**DECLARATION:** Please renew licence number 35/026871 to 21/02/2000. I confirm that all the licence details shown below are correct (amend if necessary).


 (ACTING CHIEF PHARMACEUTIST)  
 (Signature)

P. J. LACEY  
 (Please print name)

25/1/99  
 (Date signed)

for: RICHMOND HEALTH SERVICE

**THIS SIGNED DECLARATION SHOULD BE RETURNED TO:**

WorkCover New South Wales  
Dangerous Goods Licensing Section  
GPO BOX 5364  
SYDNEY 2001


Enquiries: ph (02) 9370 5187  
fax (02) 9370 6105

Details of licence on 16 January 1999

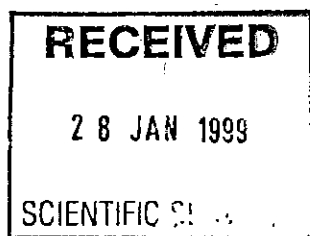
Licence Number 35/026871      Expiry Date 21/02/1999

Licensee RICHMOND HEALTH SERVICE  
PHARMACY DEPT

Postal Address: BOX 419 P O LISMORE NSW 2480

Licensee Contact  F. RUDWICK Ph. 066 202 477 Fax. 066 202 488  
(F. Rudwick Retires)

Premises Licensed to Keep Dangerous Goods  
RICHMOND HEALTH SERVICE PHARMACY DEPT  
60 URALBA ST LISMORE 2480



Nature of Site PHARMACEUTICAL, COSMETIC AND TOILETRY RETAILING

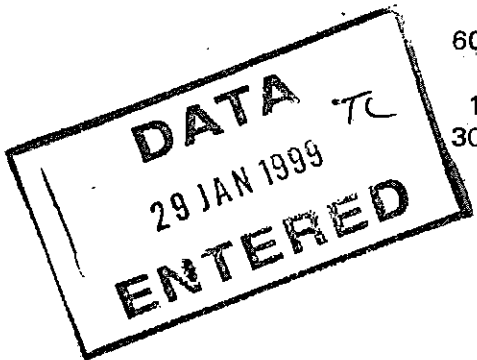
Major Supplier of Dangerous Goods VARIOUS

Emergency Contact for this Site DAVID GRAY (A/H 867 989) Ph. 066 202 463

Site staffing 24 HRS 7 DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	ROOFED STORE	Class 3	
		UN 1090 ACETONE	600 L
		UN 1155 DIETHYL ETHER (ETHYL ETHER)	5 L
		UN 1170 ETHANOL (ETHYL ALCOHOL)	15 L
			300 L



# WORKCOVER AUTHORITY



## LICENCE TO KEEP DANGEROUS GOODS

(Dangerous Goods Act 1975)

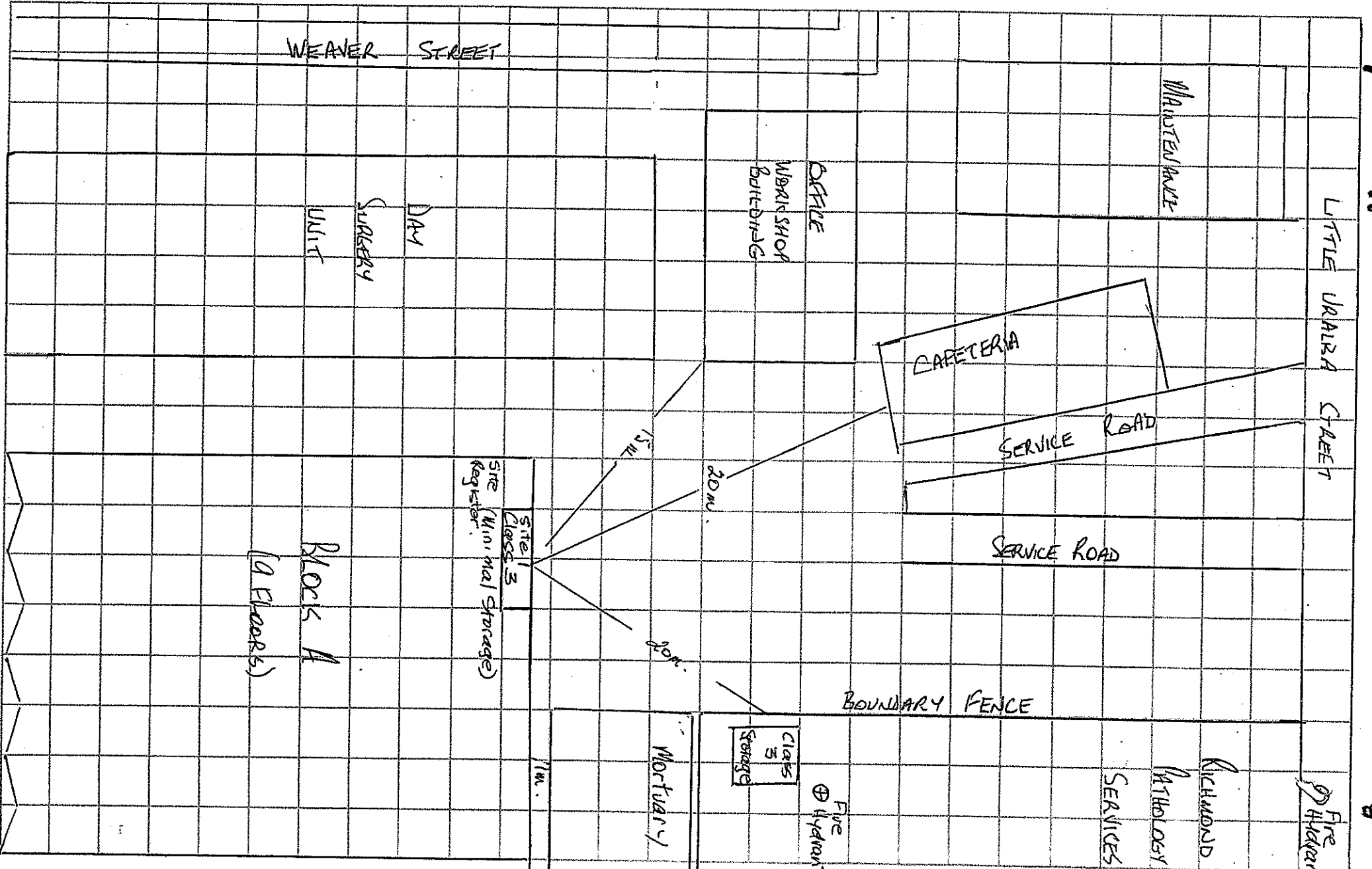
**Application for new licence, amendment or transfer**  
21.2.97.

1. Name of applicant	DEPARTMENT OF PHARMACY, RICHMOND HEALTH SERVICE		ACN
2. Site to be licensed	60 Uralba St		DATA
No	Street		12 JUL 1995
Suburb/Town	Postcode		ENTERED
Lismore	2480		
3. Previous licence number (if known)	35/026871		
4. Nature of site	Hospital		
5. Emergency contact on site:			
Phone	Name		
X 202 463 / A.H. 221909	Mr. RON CHAMBERS		
6. Site staffing:	Hours per day	Days per week	
	TWENTY-FOUR	SEVEN	
7. Major supplier of dangerous goods	GLENDALE CHEMICALS P.L./Q. STORES (NSW) / CLIFFORD HALLAM P.L. (NSW)		
8. If new site or significant modification	Plan stamped by:	Accredited consultant's name:	Date stamped
	N/A		
9. Number of dangerous goods depots at site	ONE		
10. Trading name or occupier's name	RICHMOND HEALTH SERVICE, DEPARTMENT OF PHARMACY		
11. Postal address of applicant	Suburb/Town	Postcode	
P.O. Box 449	LISMORE	2480	
12. Contact for licence enquiries:	Phone	Fax	Name
X 066 202 477	066 202 488		F.M. RUDWICK (Mr)
I certify that the details contained in this application (or the accompanying computer disk) are true and correct			
13. Signature of applicant	[Signature]		Date 10/3/95

RECEIVED  
21 APR 1995  
SCIENTIFIC SERVICES  
BRANCH

# Site Sketch

Please carefully read the instructions in Part B of the guide before sketching the site.



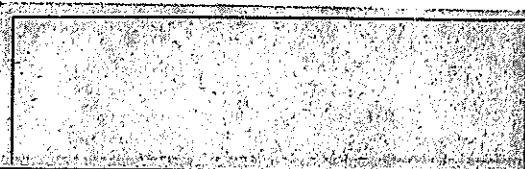
35/026871

PART B



(\*delete whichever is not required)

FEE: \$10.00 per Depot



DC 8802 0001 90

Name of Applicant in full (see over)	Surname <u>NF MAHAFFEY</u> Given Names <u>BRIAN HAMILTON</u> (CHIEF EXECUTIVE OFFICER)
Trading name or occupier's name (if any)	<u>TFLISMORE BASE HOSPITAL</u>
Postal address	<u>PPF.O, BOX 419 PPLISMORE</u> Postcode <u>2480</u>
Telephone number of applicant	STD Code <u>066</u> Number <u>21 8000</u>
Address of the premises in or on which the depot or depots are situated (including street number, if any)	<u>LF "URANBA STREET" 284253 LISMORE</u> 350268718 Postcode <u>2480</u> \$10.00
Nature of premises (see over)	<u>HOSPITAL PHARMACY</u>

PLEASE ATTACH SITE PLAN

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods	
			Product being stored	C & C Office use only
1	<u>ROOFED BRICK-WALLED PACKAGE STORE</u>	<u>600 LITRES</u>	<u>ETHER, ETHANOL, ACETOONE</u>	<u>DD 001.100.0</u> <u>6.100.62</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

DATA ENTERED  
23 FEB 1989  
OPERATOR ONE

Name of company supplying flammable liquid (if any) GOVERNMENT STORES OR CLIFFORD HALLAM PHARMACEUTICAL

Have premises previously been licensed? No

If known, state name of previous occupier \_\_\_\_\_ Licence No. \_\_\_\_\_

Signature of applicant [Signature] CHIEF EXECUTIVE OFFICER LISMORE BASE HOSPITAL Date 3/2/1989

For external explosives magazine(s), please fill in side 2.

FOR OFFICE USE ONLY  
CERTIFICATE OF INSPECTION

I, \_\_\_\_\_ being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector \_\_\_\_\_

Date \_\_\_\_\_

# Application for Licence to Keep Dangerous Goods



Application for  new licence  amendment  transfer  renewal of expired licence

## PART A - Applicant and site information

1. Name of applicant: JOHN WHITE JEBDOULT LAB MANAGER NIA

2. Postal address of applicant:  
P.O. Box 68 Suburb/Town: LISMORE Postcode: 2480

3. Trading name of the occupier's name:  
RICHMOND PATHOLOGY SERVICE

4. Contact for licence enquiries:  
 Phone: (066) 202900 Fax: (066) 202901 Name: JOHN WHITE JEBDOULT

5. Previous licence number (if known): 35/ N/A-030969 RE

6. Previous occupier (if known): NIA. 10/11/1995

7. Site to be licensed:  
 No: 76 Street: ORALBA  
 Suburb/Town: LISMORE Postcode: 2480

8. Main business of site: PATHOLOGY LABORATORY

9. Site staffing: Hours per day: 19 Days per week: 7

10. Emergency contact:  
 Phone: (066) 202222 Name: LISMORE BASE HOSPITAL

11. Major supplier of dangerous goods: N.S.W. GOVT STORES

12. If a new site or for amendments to details:  
 Not stamped by: Name of Accredited Consultant: \_\_\_\_\_ Date stamped: \_\_\_\_\_

13. Signature of applicant: John White Jebdault Date: 11/11/1995



LITTLE URALBA ST. FROM ABOVE

DRIVEWAY.

FLAMMABLE STORES. 1, 2 & 3. (FS1, FS2 & FS3)

20 L. DRUMS CLASS 3

4 METRES.

**RICHMOND  
PATHOLOGY  
SERVICE**

1-11-1995

SITE SKETCH  
FLAMMABLE  
STORES.



MORGUE

WALKWAY  
TO UPPER FLOOR.

BULK  
STORE

OFFICE

STORAGE  
FILES

OPEN  
AREA.

POWER  
ISOLATION.  
(UPPER  
FLOOR)

ENTRANCE

FIRE HOSE.

ENTRANCE

STORE ENTRANCE

SIDE  
ENTRANCES

SITE  
REGISTER

ENTRANCES DRIVEWAY.

OFFICES

FLAMMABLE  
STORE 4 (FS4)

EARTH BANK.

CLASS 3.

STAIRWELL  
TO UPPER  
FLOOR.

FIRE HOSE.

PATHOLOGY.  
LABORATORY.

SIDE  
ENTRANCE

DRIVEWAY.

SIDE  
ENTRANCE

MAIN ENTRANCE.

LITTLE URALBA ST.

76 URALBA ST, LISMORE.

50 METRES.

50 METRES

**PART C - Dangerous Goods Storage** Complete one section per depot.

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot	Depot Class		Maximum storage capacity
FS 1	BULK SOLID STORE (EXTERNAL)	3		1000 L

UN Number	Correct Shipping Name	Class (I, II, III)	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>
1170	ABSOLUTE ALCOHOL	3	II	ETHANOL	640	L
1307	XYLOL	3	III	XYLOL	100	L
1090	ACETONE	3	II	ACETONE	20	L
1300	WHITE SPIRIT	3	III	WHITE SPIRIT	20	L
2052	DIPENTENE	3	II	HISTOLENE	50	L

Depot Number	Type of depot	Depot Class		Maximum storage capacity
FS 2	BULK SOLID STORE (EXTERNAL)	3		1000L.

UN Number	Correct Shipping Name	Class (I, II, III)	PG (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>
1198	FORMALDEHYDE	3	III	FORMALDEHYDE	50	L
1230	METHANOL	3	II	METHANOL	100	L
1219	ISO PROPYL ALCOHOL	3	II	ISO PROPYL ALCOHOL	20	L
1173	ETHYL ACETATE	3	II	ETHYL ACETATE	5	L
1105	AMYL ALCOHOL	3	III	AMYL ALCOHOL	3	L
1201	PETROLEUM SPIRIT	3	II	PETROLEUM ETHER	7.5	L
1282	PYRIDINE	3	II	PYRIDINE.	0.5	L

**PART C - Dangerous Goods Storage** Complete one section per depot.

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot Number	Type of depot	Depot Class	Maximum storage capacity
FS3	BULK SOLID FLAMMABLE STORE EXTERNAL		1000L

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>
	* EMPTY. NO FLAMMABLE LIQUIDS				

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>

Depot Number	Type of depot	Depot Class	Maximum storage capacity

UN Number	Correct Shipping Name	PG Class (I, II, III)	Product or common name	Typical quantity	Unit, e.g. L, kg, m <sup>3</sup>



# Appendix B

## **Laboratory Certificates**

Coffey Geotechnics Pty Ltd  
 Unit 1 18 Hurley Dve  
 Coffs Harbour  
 NSW 2450



NATA Accredited  
 Accreditation Number 1261  
 Site Number 18217

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

Attention: Andrew Ballard

Report **366150-S**  
 Client Reference GEOTALST01618AO  
 Received Date Jan 22, 2013

Client Sample ID			BH2 (0.4-0.5) 0.5	BH2 (0.9-1.0) 1	BH3 (0.4-0.5) 0.5	BH3 (0.9-1.0) 1
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Ja10118	S13-Ja10119	S13-Ja10120	S13-Ja10121
Date Sampled			Jan 17, 2013	Jan 17, 2013	Jan 15, 2013	Jan 15, 2013
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	10	mg/kg	< 10	-	< 10	-
TRH C10-C14	50	mg/kg	< 50	-	< 50	-
TRH C15-C28	100	mg/kg	< 100	-	< 100	-
TRH C29-C36	100	mg/kg	< 100	-	< 100	-
TRH C10-36 (Total)	100	mg/kg	< 100	-	< 100	-
<b>BTEX</b>						
Benzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
m&p-Xylenes	1	mg/kg	< 1	-	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes - Total	1.5	mg/kg	< 1.5	-	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	92	-	90	-
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	< 2	8.7	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	20	17	18	17
Lead	5	mg/kg	6.6	6.3	18	7.4
Mercury	0.05	mg/kg	0.06	< 0.05	0.07	< 0.05
Nickel	5	mg/kg	36	28	17	21
Zinc	5	mg/kg	130	110	120	100
% Moisture	0.1	%	25	28	25	12

Client Sample ID			SS01 0-0.15	SS02 0-0.15	SS05 0-0.15	SS06 0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Ja10122	S13-Ja10123	S13-Ja10126	S13-Ja10127
Date Sampled			Jan 17, 2013	Jan 17, 2013	Jan 17, 2013	Jan 17, 2013
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	< 100
<b>BTEX</b>						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	117	97	90	98
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
<b>Organochlorine Pesticides (OC)</b>						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-Chlordane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-Chlordane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchloroendate (surr.)	1	%	114	75	70	74
Tetrachloro-m-xylene (surr.)	1	%	71	74	73	70
<b>Organophosphorus Pesticides (OP)</b>						
Chlorpyrifos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SS01 0-0.15	SS02 0-0.15	SS05 0-0.15	SS06 0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Ja10122	S13-Ja10123	S13-Ja10126	S13-Ja10127
Date Sampled			Jan 17, 2013	Jan 17, 2013	Jan 17, 2013	Jan 17, 2013
Test/Reference	LOR	Unit				
<b>Organophosphorus Pesticides (OP)</b>						
Coumaphos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Demeton (total)	1	mg/kg	< 1	< 1	< 1	< 1
Diazinon	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorvos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethoprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fensulfothion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methyl azinphos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methyl parathion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mevinphos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Monocrotophos	10	mg/kg	< 10	< 10	< 10	< 10
Parathion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Profenofos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Prothiofos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Stirophos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloronate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Triphenylphosphate (surr.)	1	%	106	117	100	109
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	< 2	< 2	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	12	< 5
Copper	5	mg/kg	100	21	14	20
Lead	5	mg/kg	16	68	30	71
Mercury	0.05	mg/kg	< 0.05	0.07	0.17	2.4
Nickel	5	mg/kg	5.8	12	5.7	7.0
Zinc	5	mg/kg	51	150	57	170
<b>% Moisture</b>						
Asbestos	0.1	%	3.3	9.5	16	7.8
			see attached	see attached	see attached	see attached

Client Sample ID			SS07 0-0.15	SS08 0-0.15	QC01 0-0.15	QC03 0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Ja10128	S13-Ja10129	S13-Ja10130	S13-Ja10131
Date Sampled			Jan 17, 2013	Jan 17, 2013	Jan 17, 2013	Jan 17, 2013
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C6-C9	10	mg/kg	< 10	< 10	-	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	-	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	-	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	-	< 100

Client Sample ID			SS07 0-0.15	SS08 0-0.15	QC01 0-0.15	QC03 0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Ja10128	S13-Ja10129	S13-Ja10130	S13-Ja10131
Date Sampled			Jan 17, 2013	Jan 17, 2013	Jan 17, 2013	Jan 17, 2013
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>						
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	-	< 100
<b>BTEX</b>						
Benzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
m&p-Xylenes	1	mg/kg	< 1	< 1	-	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Xylenes - Total	1.5	mg/kg	< 1.5	< 1.5	-	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	-	< 1.5
4-Bromofluorobenzene (surr.)	1	%	93	94	-	94
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *</b>						
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
<b>Organochlorine Pesticides (OC)</b>						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4,4'-DDT	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-Chlordane	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	0.11	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-Chlordane	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchloroendate (surr.)	1	%	70	86	-	79
Tetrachloro-m-xylene (surr.)	1	%	70	70	-	70
<b>Organophosphorus Pesticides (OP)</b>						
Chlorpyrifos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Coumaphos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Demeton (total)	1	mg/kg	< 1	< 1	-	< 1
Diazinon	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dichlorvos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dimethoate	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			SS07 0-0.15	SS08 0-0.15	QC01 0-0.15	QC03 0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S13-Ja10128	S13-Ja10129	S13-Ja10130	S13-Ja10131
Date Sampled			Jan 17, 2013	Jan 17, 2013	Jan 17, 2013	Jan 17, 2013
Test/Reference	LOR	Unit				
<b>Organophosphorus Pesticides (OP)</b>						
Disulfoton	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Ethoprop	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fenitrothion	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fensulfothion	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fenthion	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Methyl azinphos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Malathion	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Methyl parathion	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Mevinphos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Monocrotophos	10	mg/kg	< 10	< 10	-	< 10
Parathion	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phorate	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Profenofos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Prothiofos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Ronnel	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Stirophos	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Trichloronate	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Triphenylphosphate (surr.)	1	%	101	110	-	107
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	4.8	< 2	< 2
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	25	22	110	18
Lead	5	mg/kg	51	21	16	68
Mercury	0.05	mg/kg	0.24	0.07	< 0.05	2.1
Nickel	5	mg/kg	19	11	< 5	140
Zinc	5	mg/kg	180	160	37	200
<b>% Moisture</b>						
% Moisture	0.1	%	16	11	3.6	8.0
Asbestos			see attached	see attached	-	-

**Sample History**

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Jan 23, 2013	14 Day
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Jan 23, 2013	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Jan 22, 2013	14 Day
Organochlorine Pesticides (OC) - Method: E013 Organochlorine Pesticides (OC)	Sydney	Jan 23, 2013	14 Day
Organophosphorus Pesticides (OP) - Method: E014 Organophosphorus Pesticides (OP)	Sydney	Jan 23, 2013	14 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Jan 22, 2013	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Jan 22, 2013	28 Day

<b>Company Name:</b> Coffey Geotechnics Pty Ltd COFFS	<b>Order No.:</b>	<b>Received:</b> Jan 22, 2013 11:25 AM
<b>Address:</b> Unit 1 18 Hurley Dve Coffs Harbour NSW 2450	<b>Report #:</b> 366150	<b>Due:</b> Jan 30, 2013
	<b>Phone:</b> 02 6651 3213	<b>Priority:</b> 5 Day
	<b>Fax:</b> 02 6651 5194	<b>Contact Name:</b> Andrew Ballard
<b>Client Job No.:</b> GEOTALST01618AO		

**mgt-LabMark Client Manager: Jean Heng**

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	Metals M8 filtered	BTEX	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
<b>Laboratory where analysis is conducted</b>													
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>													
<b>Sydney Laboratory - NATA Site # 18217</b>					X		X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA Site # 20794</b>													
<b>External Laboratory</b>						X							
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
BH2 (0.4-0.5) 0.5	Jan 17, 2013		Soil	S13-Ja10118	X			X		X			X
BH2 (0.9-1.0) 1	Jan 17, 2013		Soil	S13-Ja10119	X			X					
BH3 (0.4-0.5) 0.5	Jan 15, 2013		Soil	S13-Ja10120	X			X		X			X
BH3 (0.9-1.0) 1	Jan 15, 2013		Soil	S13-Ja10121	X			X					
SS01 0-0.15	Jan 17, 2013		Soil	S13-Ja10122	X	X		X		X	X	X	X
SS02 0-0.15	Jan 17, 2013		Soil	S13-Ja10123	X	X		X		X	X	X	X
SS03 0-0.15	Jan 17, 2013		Soil	S13-Ja10124			X						
SS04 0-0.15	Jan 17, 2013		Soil	S13-Ja10125			X						

<b>Company Name:</b> Coffey Geotechnics Pty Ltd COFFS	<b>Order No.:</b>	<b>Received:</b> Jan 22, 2013 11:25 AM
<b>Address:</b> Unit 1 18 Hurley Dve Coffs Harbour NSW 2450	<b>Report #:</b> 366150	<b>Due:</b> Jan 30, 2013
	<b>Phone:</b> 02 6651 3213	<b>Priority:</b> 5 Day
	<b>Fax:</b> 02 6651 5194	<b>Contact Name:</b> Andrew Ballard
<b>Client Job No.:</b> GEOTALST01618AO		

**mgt-LabMark Client Manager: Jean Heng**

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	Metals M8 filtered	BTEX	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
<b>Laboratory where analysis is conducted</b>													
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>													
<b>Sydney Laboratory - NATA Site # 18217</b>					X		X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA Site # 20794</b>													
<b>External Laboratory</b>						X							
SS05 0-0.15	Jan 17, 2013		Soil	S13-Ja10126	X	X	X	X	X	X	X	X	X
SS06 0-0.15	Jan 17, 2013		Soil	S13-Ja10127	X	X	X	X	X	X	X	X	X
SS07 0-0.15	Jan 17, 2013		Soil	S13-Ja10128	X	X	X	X	X	X	X	X	X
SS08 0-0.15	Jan 17, 2013		Soil	S13-Ja10129	X	X	X	X	X	X	X	X	X
QC01 0-0.15	Jan 17, 2013		Soil	S13-Ja10130	X		X						
QC03 0-0.15	Jan 17, 2013		Soil	S13-Ja10131	X		X		X	X	X	X	X
WB1	Jan 17, 2013		Water	S13-Ja10132				X					

## mgt-LabMark Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

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

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

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

### UNITS

**mg/kg:** milligrams per Kilogram

**mg/l:** milligrams per litre

**ug/l:** micrograms per litre

**ppm:** Parts per million

**ppb:** Parts per billion

**%:** Percentage

**org/100ml:** Organisms per 100 millilitres

**NTU:** Units

**MPN/100mL:** Most Probable Number of organisms per 100 millilitres

### TERMS

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

### QC - ACCEPTANCE CRITERIA

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

Results <10 times the LOR : No Limit

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

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

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

### QC DATA GENERAL COMMENTS

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

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>						
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)</b>						
TRH C6-C9	mg/kg	< 10		10	Pass	
TRH C10-C14	mg/kg	< 50		50	Pass	
TRH C15-C28	mg/kg	< 100		100	Pass	
TRH C29-C36	mg/kg	< 100		100	Pass	
<b>Method Blank</b>						
<b>BTEX E029/E016 BTEX</b>						
Benzene	mg/kg	< 0.5		0.5	Pass	
Toluene	mg/kg	< 0.5		0.5	Pass	
Ethylbenzene	mg/kg	< 0.5		0.5	Pass	
m&p-Xylenes	mg/kg	< 1		1	Pass	
o-Xylene	mg/kg	< 0.5		0.5	Pass	
Xylenes - Total	mg/kg	< 1.5		1.5	Pass	
Total BTEX	mg/kg	< 1.5		1.5	Pass	
<b>Method Blank</b>						
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010</b>						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
<b>Method Blank</b>						
<b>Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)</b>						
4.4'-DDD	mg/kg	< 0.05		0.05	Pass	
4.4'-DDE	mg/kg	< 0.05		0.05	Pass	
4.4'-DDT	mg/kg	< 0.2		0.2	Pass	
a-BHC	mg/kg	< 0.05		0.05	Pass	
a-Chlordane	mg/kg	< 0.05		0.05	Pass	
Aldrin	mg/kg	< 0.05		0.05	Pass	
b-BHC	mg/kg	< 0.05		0.05	Pass	
d-BHC	mg/kg	< 0.05		0.05	Pass	
Dieldrin	mg/kg	< 0.05		0.05	Pass	
Endosulfan I	mg/kg	< 0.05		0.05	Pass	
Endosulfan II	mg/kg	< 0.05		0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05		0.05	Pass	
Endrin	mg/kg	< 0.05		0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05		0.05	Pass	
Endrin ketone	mg/kg	< 0.05		0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05		0.05	Pass	
g-Chlordane	mg/kg	< 0.05		0.05	Pass	
Heptachlor	mg/kg	< 0.05		0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05		0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05		0.05	Pass	
Methoxychlor	mg/kg	< 0.2		0.2	Pass	
<b>Method Blank</b>						
<b>Organophosphorus Pesticides (OP) E014 Organophosphorus Pesticides (OP)</b>						
Chlorpyrifos	mg/kg	< 0.5		0.5	Pass	
Coumaphos	mg/kg	< 0.5		0.5	Pass	
Demeton (total)	mg/kg	< 1		1	Pass	
Diazinon	mg/kg	< 0.5		0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorvos	mg/kg	< 0.5			0.5	Pass	
Dimethoate	mg/kg	< 0.5			0.5	Pass	
Disulfoton	mg/kg	< 0.5			0.5	Pass	
Ethoprop	mg/kg	< 0.5			0.5	Pass	
Fenitrothion	mg/kg	< 0.5			0.5	Pass	
Fensulfothion	mg/kg	< 0.5			0.5	Pass	
Fenthion	mg/kg	< 0.5			0.5	Pass	
Methyl azinphos	mg/kg	< 0.5			0.5	Pass	
Malathion	mg/kg	< 0.5			0.5	Pass	
Methyl parathion	mg/kg	< 0.5			0.5	Pass	
Mevinphos	mg/kg	< 0.5			0.5	Pass	
Monocrotophos	mg/kg	< 10			10	Pass	
Parathion	mg/kg	< 0.5			0.5	Pass	
Phorate	mg/kg	< 0.5			0.5	Pass	
Profenofos	mg/kg	< 0.5			0.5	Pass	
Prothiofos	mg/kg	< 0.5			0.5	Pass	
Ronnel	mg/kg	< 0.5			0.5	Pass	
Stirophos	mg/kg	< 0.5			0.5	Pass	
Trichloronate	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Metals M8 E022 Acid Extractable metals in Soils &amp; E026 Mercury</b>							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)</b>							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	75			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>BTEX E029/E016 BTEX</b>							
Benzene	%	95			70-130	Pass	
Toluene	%	90			70-130	Pass	
Ethylbenzene	%	89			70-130	Pass	
m&p-Xylenes	%	91			70-130	Pass	
o-Xylene	%	89			70-130	Pass	
Xylenes - Total	%	90			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010</b>							
Naphthalene	%	92			70-130	Pass	
TRH C6-C10	%	93			70-130	Pass	
TRH >C10-C16	%	74			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)</b>							
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	108			70-130	Pass	
4.4'-DDT	%	89			70-130	Pass	
a-BHC	%	109			70-130	Pass	
a-Chlordane	%	98			70-130	Pass	
Aldrin	%	106			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
b-BHC	%	115			70-130	Pass		
d-BHC	%	113			70-130	Pass		
Dieldrin	%	98			70-130	Pass		
Endosulfan I	%	106			70-130	Pass		
Endosulfan II	%	91			70-130	Pass		
Endosulfan sulphate	%	108			70-130	Pass		
Endrin	%	97			70-130	Pass		
Endrin aldehyde	%	91			70-130	Pass		
Endrin ketone	%	92			70-130	Pass		
g-BHC (Lindane)	%	101			70-130	Pass		
g-Chlordane	%	100			70-130	Pass		
Heptachlor	%	106			70-130	Pass		
Heptachlor epoxide	%	102			70-130	Pass		
Hexachlorobenzene	%	119			70-130	Pass		
Methoxychlor	%	90			70-130	Pass		
<b>LCS - % Recovery</b>								
<b>Organophosphorus Pesticides (OP) E014 Organophosphorus Pesticides (OP)</b>								
Chlorpyrifos	%	99			70-130	Pass		
Coumaphos	%	113			70-130	Pass		
Diazinon	%	99			70-130	Pass		
Dichlorvos	%	124			70-130	Pass		
Dimethoate	%	96			70-130	Pass		
Disulfoton	%	101			70-130	Pass		
Ethoprop	%	109			70-130	Pass		
Fenitrothion	%	101			70-130	Pass		
Fensulfothion	%	120			70-130	Pass		
Fenthion	%	103			70-130	Pass		
Methyl azinphos	%	73			70-130	Pass		
Malathion	%	118			70-130	Pass		
Methyl parathion	%	107			70-130	Pass		
Mevinphos	%	111			70-130	Pass		
Monocrotophos	%	105			70-130	Pass		
Parathion	%	96			70-130	Pass		
Phorate	%	119			70-130	Pass		
Profenofos	%	100			70-130	Pass		
Prothiofos	%	102			70-130	Pass		
Ronnel	%	104			70-130	Pass		
Stirophos	%	89			70-130	Pass		
Trichloronate	%	101			70-130	Pass		
<b>LCS - % Recovery</b>								
<b>Metals M8 E022 Acid Extractable metals in Soils &amp; E026 Mercury</b>								
Arsenic	%	89			70-130	Pass		
Cadmium	%	93			70-130	Pass		
Chromium	%	92			70-130	Pass		
Copper	%	88			70-130	Pass		
Lead	%	94			70-130	Pass		
Mercury	%	104			70-130	Pass		
Nickel	%	92			70-130	Pass		
Zinc	%	94			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>								
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>								
				Result 1				
TRH C6-C9	S13-Ja10118	CP	%	90		70-130	Pass	
TRH C10-C14	S13-Ja10118	CP	%	74		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>									
<b>BTEX</b>				Result 1					
Benzene	S13-Ja10118	CP	%	92			70-130	Pass	
Toluene	S13-Ja10118	CP	%	86			70-130	Pass	
Ethylbenzene	S13-Ja10118	CP	%	85			70-130	Pass	
m&p-Xylenes	S13-Ja10118	CP	%	87			70-130	Pass	
o-Xylene	S13-Ja10118	CP	%	85			70-130	Pass	
Xylenes - Total	S13-Ja10118	CP	%	86			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions</b>				Result 1					
Naphthalene	S13-Ja10118	CP	%	70			70-130	Pass	
TRH C6-C10	S13-Ja10118	CP	%	90			70-130	Pass	
TRH >C10-C16	S13-Ja10118	CP	%	75			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Metals M8</b>				Result 1					
Mercury	S13-Ja10506	NCP	%	109			70-130	Pass	
Zinc	S13-Ja10506	NCP	%	118			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Organophosphorus Pesticides (OP)</b>				Result 1					
Chlorpyrifos	S13-Ja10223	NCP	%	94			70-130	Pass	
Coumaphos	S13-Ja10223	NCP	%	112			70-130	Pass	
Diazinon	S13-Ja10223	NCP	%	93			70-130	Pass	
Dichlorvos	S13-Ja10223	NCP	%	107			70-130	Pass	
Dimethoate	S13-Ja10223	NCP	%	80			70-130	Pass	
Disulfoton	S13-Ja10223	NCP	%	90			70-130	Pass	
Ethoprop	S13-Ja10223	NCP	%	98			70-130	Pass	
Fenitrothion	S13-Ja10223	NCP	%	83			70-130	Pass	
Fensulfthion	S13-Ja10223	NCP	%	113			70-130	Pass	
Fenthion	S13-Ja10223	NCP	%	97			70-130	Pass	
Methyl azinphos	S13-Ja10223	NCP	%	74			70-130	Pass	
Malathion	S13-Ja10223	NCP	%	103			70-130	Pass	
Methyl parathion	S13-Ja10223	NCP	%	95			70-130	Pass	
Mevinphos	S13-Ja10223	NCP	%	102			70-130	Pass	
Monocrotophos	S13-Ja10223	NCP	%	71			70-130	Pass	
Parathion	S13-Ja10223	NCP	%	91			70-130	Pass	
Phorate	S13-Ja10223	NCP	%	96			70-130	Pass	
Profenofos	S13-Ja10223	NCP	%	95			70-130	Pass	
Prothiofos	S13-Ja10223	NCP	%	97			70-130	Pass	
Ronnel	S13-Ja10223	NCP	%	98			70-130	Pass	
Stirophos	S13-Ja10223	NCP	%	92			70-130	Pass	
Trichloronate	S13-Ja10223	NCP	%	94			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Metals M8</b>				Result 1					
Arsenic	S13-Ja10127	CP	%	91			70-130	Pass	
Cadmium	S13-Ja10127	CP	%	89			70-130	Pass	
Chromium	S13-Ja10127	CP	%	91			70-130	Pass	
Copper	S13-Ja10127	CP	%	88			70-130	Pass	
Lead	S13-Ja10127	CP	%	110			70-130	Pass	
Nickel	S13-Ja10127	CP	%	98			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				Result 1	Result 2	RPD			
TRH C6-C9	S13-Ja10118	CP	mg/kg	< 10	< 10	<1	30%	Pass	
TRH C10-C14	S13-Ja10118	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C15-C28	S13-Ja10118	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C29-C36	S13-Ja10118	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Ja10118	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S13-Ja10118	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S13-Ja10118	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	S13-Ja10118	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S13-Ja10118	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total	S13-Ja10118	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S13-Ja10118	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Ja10118	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S13-Ja10118	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Ja10118	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S13-Ja10118	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S13-Ja10118	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S13-Ja10118	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides (OP)				Result 1	Result 2	RPD			
Chlorpyrifos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Coumaphos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diazinon	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorvos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethoate	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Disulfoton	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethoprop	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fenitrothion	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fensulfthion	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fenthion	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methyl azinphos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Malathion	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methyl parathion	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Mevinphos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Monocrotophos	S13-Ja10223	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Parathion	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phorate	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Profenofos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Prothiofos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ronnel	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Stirophos	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloronate	S13-Ja10223	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S13-Ja10126	CP	mg/kg	< 2	< 2	110	30%	Fail	Q15
Cadmium	S13-Ja10126	CP	mg/kg	< 0.4	< 0.4	17	30%	Pass	
Chromium	S13-Ja10126	CP	mg/kg	12	9.6	25	30%	Pass	
Copper	S13-Ja10126	CP	mg/kg	14	11	21	30%	Pass	
Lead	S13-Ja10126	CP	mg/kg	30	32	9.0	30%	Pass	
Mercury	S13-Ja10126	CP	mg/kg	0.17	0.08	70	30%	Fail	Q15
Nickel	S13-Ja10126	CP	mg/kg	5.7	< 5	20	30%	Pass	
Zinc	S13-Ja10126	CP	mg/kg	57	47	18	30%	Pass	

### Comments

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference ASET32140/ 35320 / 1 - 6.

### Sample Integrity

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

### Qualifier Codes/Comments

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

### Authorised By

Jean Heng	Client Services
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
James Norford	Senior Analyst-Metal (NSW)



### Dr. Bob Symons

#### Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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

## Certificate of Analysis

Coffey Geotechnics Pty Ltd  
 Unit 1 18 Hurley Dve  
 Coffs Harbour  
 NSW 2450

Attention: Andrew Ballard

Report **366150-W**  
 Client Reference GEOTALST01618AO  
 Received Date Jan 22, 2013



NATA Accredited  
 Accreditation Number 1261  
 Site Number 18217

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

<b>Client Sample ID</b>			<b>WB1</b>
<b>Sample Matrix</b>			<b>Water</b>
<b>mgt-LabMark Sample No.</b>			<b>S13-Ja10132</b>
<b>Date Sampled</b>			<b>Jan 17, 2013</b>
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0001	mg/L	< 0.0001
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005

**Description**

Metals M8 filtered

- Method: E020/E030 Filtered Metals in Water & E026 Mercury

**Testing Site**

Sydney

**Extracted**

Jan 22, 2013

**Holding Time**

28 Day

<b>Company Name:</b> Coffey Geotechnics Pty Ltd COFFS	<b>Order No.:</b>	<b>Received:</b> Jan 22, 2013 11:25 AM
<b>Address:</b> Unit 1 18 Hurley Dve Coffs Harbour NSW 2450	<b>Report #:</b> 366150	<b>Due:</b> Jan 30, 2013
	<b>Phone:</b> 02 6651 3213	<b>Priority:</b> 5 Day
	<b>Fax:</b> 02 6651 5194	<b>Contact Name:</b> Andrew Ballard
<b>Client Job No.:</b> GEOTALST01618AO		

**mgt-LabMark Client Manager: Jean Heng**

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	Metals M8 filtered	BTEX	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
<b>Laboratory where analysis is conducted</b>													
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>													
<b>Sydney Laboratory - NATA Site # 18217</b>					X		X	X	X	X	X	X	
<b>Brisbane Laboratory - NATA Site # 20794</b>													
<b>External Laboratory</b>						X							
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
BH2 (0.4-0.5) 0.5	Jan 17, 2013		Soil	S13-Ja10118	X			X		X		X	
BH2 (0.9-1.0) 1	Jan 17, 2013		Soil	S13-Ja10119	X			X					
BH3 (0.4-0.5) 0.5	Jan 15, 2013		Soil	S13-Ja10120	X			X		X		X	
BH3 (0.9-1.0) 1	Jan 15, 2013		Soil	S13-Ja10121	X			X					
SS01 0-0.15	Jan 17, 2013		Soil	S13-Ja10122	X	X		X		X	X	X	
SS02 0-0.15	Jan 17, 2013		Soil	S13-Ja10123	X	X		X		X	X	X	
SS03 0-0.15	Jan 17, 2013		Soil	S13-Ja10124			X						
SS04 0-0.15	Jan 17, 2013		Soil	S13-Ja10125			X						

<b>Company Name:</b> Coffey Geotechnics Pty Ltd COFFS	<b>Order No.:</b>	<b>Received:</b> Jan 22, 2013 11:25 AM
<b>Address:</b> Unit 1 18 Hurley Dve Coffs Harbour NSW 2450	<b>Report #:</b> 366150	<b>Due:</b> Jan 30, 2013
	<b>Phone:</b> 02 6651 3213	<b>Priority:</b> 5 Day
	<b>Fax:</b> 02 6651 5194	<b>Contact Name:</b> Andrew Ballard
<b>Client Job No.:</b> GEOTALST01618AO		

**mgt-LabMark Client Manager: Jean Heng**

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	Metals M8 filtered	BTEX	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Total Recoverable Hydrocarbons
<b>Laboratory where analysis is conducted</b>													
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>													
<b>Sydney Laboratory - NATA Site # 18217</b>					X		X	X	X	X	X	X	X
<b>Brisbane Laboratory - NATA Site # 20794</b>													
<b>External Laboratory</b>						X							
SS05 0-0.15	Jan 17, 2013		Soil	S13-Ja10126	X	X	X	X	X	X	X	X	X
SS06 0-0.15	Jan 17, 2013		Soil	S13-Ja10127	X	X	X	X	X	X	X	X	X
SS07 0-0.15	Jan 17, 2013		Soil	S13-Ja10128	X	X	X	X	X	X	X	X	X
SS08 0-0.15	Jan 17, 2013		Soil	S13-Ja10129	X	X	X	X	X	X	X	X	X
QC01 0-0.15	Jan 17, 2013		Soil	S13-Ja10130	X		X						
QC03 0-0.15	Jan 17, 2013		Soil	S13-Ja10131	X		X		X	X	X	X	X
WB1	Jan 17, 2013		Water	S13-Ja10132				X					

## mgt-LabMark Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

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

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

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

### UNITS

<b>mg/kg:</b> milligrams per Kilogram	<b>mg/l:</b> milligrams per litre
<b>ug/l:</b> micrograms per litre	<b>ppm:</b> Parts per million
<b>ppb:</b> Parts per billion	<b>%:</b> Percentage
<b>org/100ml:</b> Organisms per 100 millilitres	<b>NTU:</b> Units
<b>MPN/100mL:</b> Most Probable Number of organisms per 100 millilitres	

### TERMS

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

### QC - ACCEPTANCE CRITERIA

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

Results <10 times the LOR : No Limit

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

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

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

### QC DATA GENERAL COMMENTS

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

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Method Blank</b>										
<b>Metals M8 filtered E020/E030 Filtered Metals in Water &amp; E026 Mercury</b>										
Lead (filtered)			mg/L	< 0.001			0.001	Pass		
Mercury (filtered)			mg/L	< 0.0001			0.0001	Pass		
Nickel (filtered)			mg/L	< 0.001			0.001	Pass		
Arsenic (filtered)			mg/L	< 0.001			0.001	Pass		
Cadmium (filtered)			mg/L	0.0001			0.0001	Pass		
Chromium (filtered)			mg/L	< 0.001			0.001	Pass		
Copper (filtered)			mg/L	< 0.001			0.001	Pass		
Zinc (filtered)			mg/L	< 0.005			0.005	Pass		
<b>LCS - % Recovery</b>										
<b>Metals M8 filtered E020/E030 Filtered Metals in Water &amp; E026 Mercury</b>										
Lead (filtered)			%	99			70-130	Pass		
Mercury (filtered)			%	95			70-130	Pass		
Nickel (filtered)			%	93			70-130	Pass		
Arsenic (filtered)			%	99			70-130	Pass		
Cadmium (filtered)			%	100			70-130	Pass		
Chromium (filtered)			%	98			70-130	Pass		
Copper (filtered)			%	96			70-130	Pass		
Zinc (filtered)			%	103			70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Spike - % Recovery</b>										
<b>Metals M8 filtered</b>				Result 1						
Lead (filtered)			S13-Ja11043	NCP	%	100	70-130	Pass		
Mercury (filtered)			S13-Ja10533	NCP	%	116	70-130	Pass		
Nickel (filtered)			S13-Ja11043	NCP	%	98	70-130	Pass		
Arsenic (filtered)			S13-Ja11043	NCP	%	104	70-130	Pass		
Cadmium (filtered)			S13-Ja11043	NCP	%	100	70-130	Pass		
Chromium (filtered)			S13-Ja11043	NCP	%	103	70-130	Pass		
Copper (filtered)			S13-Ja11043	NCP	%	103	70-130	Pass		
Zinc (filtered)			S13-Ja11043	NCP	%	107	70-130	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Duplicate</b>										
<b>Metals M8 filtered</b>				Result 1	Result 2	RPD				
Lead (filtered)			S13-Ja10533	NCP	mg/L	< 0.001	< 0.001	7.0	30%	Pass
Mercury (filtered)			S13-Ja10532	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)			S13-Ja10533	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Arsenic (filtered)			S13-Ja10533	NCP	mg/L	< 0.001	< 0.001	2.0	30%	Pass
Cadmium (filtered)			S13-Ja10533	NCP	mg/L	< 0.0001	< 0.0001	29	30%	Pass
Chromium (filtered)			S13-Ja10533	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)			S13-Ja10533	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Zinc (filtered)			S13-Ja10533	NCP	mg/L	0.017	0.016	4.0	30%	Pass

**Comments**

Asbestos analysed by: ASET, NATA accreditation no. 14484, report reference ASET32140/ 35320 / 1 - 6.

**Sample Integrity**

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

**Authorised By**

Jean Heng                      Client Services  
James Norford                Senior Analyst-Metal (NSW)



**Dr. Bob Symons**

**Laboratory Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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

## Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd COFFS**

Contact name: Andrew Ballard  
Client job number: GEOTALST01618AO  
COC number: Not provided  
Turn around time: 5 Day  
Date/Time received: Jan 22, 2013 11:25 AM  
mgt-LabMark reference: **366150**

### Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Sample containers for volatile analysis received with zero headspace.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

### Notes

Asbestos conducted at ASET| QC02 and QC04 forwarded to mgt LabMark Melbourne

### Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Andrew Ballard - Andrew\_Ballard@coffey.com.

### mgt-LabMark Sample Receipt

Chain of Custody			Laboratory Quotation/ Order No: N/A			Project No.: GEOTALST01618AO		Sheet 1 of 1											
Dispatch to:		MGT LabMark Environmental	Sampled By:		Andrew Ballard		Consigning Officer:		Oliver Hoschke										
Attention:		Sample Receipt	Project Manager:		andrew_ballard@coffey.com		Date Dispatched:		21-Jan-13										
Relinquished By:			Date:	Time:	Received By:		Date:	Time:											
					17.1.13 11:30 AM N. Mard MGT-LM JLC #366388 8:35 AM 23/1														
			22/1/13	2:15 PM			22-1-13	11:25 AM											
Comments:	Sample Matrix	Container Type & Preservative	Sample No.	Sample Depth (m)	Date Sampled:	Analyses Required										Sample Condition on Receipt			
						PAHS	TPHS	MAHS=BTEX	Metals 8	TRH/BTEX	OCPP/OPP	ASBESTOS	Send to Melbourne	HOLD					
	SOIL	GLASS 250ml	BH2 (0.4-0.5)	0.5	17-Jan-13				X	X									
	SOIL	GLASS 250ml	BH2 (0.9-1.0)	1	17-Jan-13				X										
	SOIL	GLASS 250ml	BH3 (0.4-0.5)	0.5	15-Jan-13				X	X									
	SOIL	GLASS 250ml	BH3 (0.9-1.0)	1	15-Jan-13				X										
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS01	0-0.15	17-Jan-13				X	X	X	X							
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS02	0-0.15	17-Jan-13				X	X	X	X							
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS03	0-0.15	17-Jan-13											X			
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS04	0-0.15	17-Jan-13											X			
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS05	0-0.15	17-Jan-13				X	X	X	X							
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS06	0-0.15	17-Jan-13				X	X	X	X							
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS07	0-0.15	17-Jan-13				X	X	X	X							
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS08	0-0.15	17-Jan-13				X	X	X	X							
	SOIL	GLASS 250ml	QC01	0-0.15	17-Jan-13				X										
	SOIL	GLASS 250ml	QC03	0-0.15	17-Jan-13				X	X	X								
	WATER	VIALS	WB1	-	17-Jan-13				X										
	SOIL	GLASS 250ml	QC02	0-0.15	17-Jan-13				X				X						
	SOIL	GLASS 250ml	QC04	0-0.15	17-Jan-13								X						
Special Laboratory Instructions:		Metals 8 = arsenic, cadmium, chromium (total), copper, lead, mercury, nickel, & zinc, OCP/OPP = Organochlorine & Organophosphate Pesticides.									Send to Melbourne - Send this QC sample to MGT Melbourne laboratory for analysis								
Detection Limits: Standard											Turnaround Required: Normal (5 Day TAT)								

Coffey Geotechnics Pty Ltd  
 Unit 1 18 Hurley Dve  
 Coffs Harbour  
 NSW 2450



NATA Accredited  
 Accreditation Number 1261  
 Site Number 18217

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

Attention: Andrew Ballard

Report **367010-S**  
 Client Reference GEOTALST01618AO  
 Received Date Jan 30, 2013

Client Sample ID			BH1 (0.15-0.25)	BH1 (0.45-0.55)
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S13-Ja16268	S13-Ja16269
Date Sampled			Jan 24, 2013	Jan 24, 2013
Test/Reference	LOR	Unit		
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>				
TRH C6-C9	10	mg/kg	< 10	-
TRH C10-C14	50	mg/kg	< 50	-
TRH C15-C28	100	mg/kg	< 100	-
TRH C29-C36	100	mg/kg	< 100	-
TRH C10-36 (Total)	100	mg/kg	< 100	-
<b>BTEX</b>				
Benzene	0.5	mg/kg	< 0.5	-
Toluene	0.5	mg/kg	< 0.5	-
Ethylbenzene	0.5	mg/kg	< 0.5	-
m&p-Xylenes	1	mg/kg	< 1	-
o-Xylene	0.5	mg/kg	< 0.5	-
Xylenes - Total	1.5	mg/kg	< 1.5	-
Total BTEX	1.5	mg/kg	< 1.5	-
4-Bromofluorobenzene (surr.)	1	%	97	-
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *</b>				
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-
<b>Heavy Metals</b>				
Arsenic	2	mg/kg	2.7	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5
Copper	5	mg/kg	19	12
Lead	5	mg/kg	21	6.5
Mercury	0.05	mg/kg	0.06	< 0.05
Nickel	5	mg/kg	24	23
Zinc	5	mg/kg	110	82
<b>% Moisture</b>				
	0.1	%	13	27

**Sample History**

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Feb 01, 2013	14 Day
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Feb 01, 2013	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Jan 30, 2013	14 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Jan 31, 2013	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Jan 30, 2013	28 Day

<b>Company Name:</b> Coffey Geotechnics Pty Ltd COFFS	<b>Order No.:</b>	<b>Received:</b> Jan 30, 2013 3:00 PM
<b>Address:</b> Unit 1 18 Hurley Dve Coffs Harbour NSW 2450	<b>Report #:</b> 367010	<b>Due:</b> Feb 6, 2013
	<b>Phone:</b> 02 6651 3213	<b>Priority:</b> 5 Day
	<b>Fax:</b> 02 6651 5194	<b>Contact Name:</b> Andrew Ballard
<b>Client Job No.:</b> GEOTALST01618AO		

**mgt-LabMark Client Manager: Jean Heng**

Sample Detail					% Moisture	Metals MB	BTEX	Total Recoverable Hydrocarbons
<b>Laboratory where analysis is conducted</b>								
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>								
<b>Sydney Laboratory - NATA Site # 18217</b>					X	X	X	X
<b>Brisbane Laboratory - NATA Site # 20794</b>								
<b>External Laboratory</b>								
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
BH1 (0.15-0.25)	Jan 24, 2013		Soil	S13-Ja16268	X	X	X	X
BH1 (0.45-0.55)	Jan 24, 2013		Soil	S13-Ja16269	X	X		

## mgt-LabMark Internal Quality Control Review and Glossary

### General

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

### Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

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

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

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

### UNITS

<b>mg/kg:</b> milligrams per Kilogram	<b>mg/l:</b> milligrams per litre
<b>ug/l:</b> micrograms per litre	<b>ppm:</b> Parts per million
<b>ppb:</b> Parts per billion	<b>%:</b> Percentage
<b>org/100ml:</b> Organisms per 100 millilitres	<b>NTU:</b> Units
<b>MPN/100mL:</b> Most Probable Number of organisms per 100 millilitres	

### TERMS

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

### QC - ACCEPTANCE CRITERIA

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

Results <10 times the LOR : No Limit

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

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

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

### QC DATA GENERAL COMMENTS

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

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>						
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)</b>						
TRH C6-C9	mg/kg	< 10		10	Pass	
TRH C10-C14	mg/kg	< 50		50	Pass	
TRH C15-C28	mg/kg	< 100		100	Pass	
TRH C29-C36	mg/kg	< 100		100	Pass	
<b>Method Blank</b>						
<b>BTEX E029/E016 BTEX</b>						
Benzene	mg/kg	< 0.5		0.5	Pass	
Toluene	mg/kg	< 0.5		0.5	Pass	
Ethylbenzene	mg/kg	< 0.5		0.5	Pass	
m&p-Xylenes	mg/kg	< 1		1	Pass	
o-Xylene	mg/kg	< 0.5		0.5	Pass	
Xylenes - Total	mg/kg	< 1.5		1.5	Pass	
Total BTEX	mg/kg	< 1.5		1.5	Pass	
<b>Method Blank</b>						
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010</b>						
Naphthalene	mg/kg	< 0.5		0.5	Pass	
TRH C6-C10	mg/kg	< 20		20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20		20	Pass	
TRH >C10-C16	mg/kg	< 50		50	Pass	
TRH >C16-C34	mg/kg	< 100		100	Pass	
TRH >C34-C40	mg/kg	< 100		100	Pass	
<b>Method Blank</b>						
<b>Metals M8 E022 Acid Extractable metals in Soils &amp; E026 Mercury</b>						
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.05		0.05	Pass	
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)</b>						
TRH C6-C9	%	109		70-130	Pass	
TRH C10-C14	%	102		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>BTEX E029/E016 BTEX</b>						
Benzene	%	93		70-130	Pass	
Toluene	%	93		70-130	Pass	
Ethylbenzene	%	94		70-130	Pass	
m&p-Xylenes	%	101		70-130	Pass	
o-Xylene	%	100		70-130	Pass	
Xylenes - Total	%	101		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions LM-LTM-ORG2010</b>						
Naphthalene	%	84		70-130	Pass	
TRH C6-C10	%	109		70-130	Pass	
TRH >C10-C16	%	108		70-130	Pass	
<b>LCS - % Recovery</b>						
<b>Metals M8 E022 Acid Extractable metals in Soils &amp; E026 Mercury</b>						

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic				%	81			70-130	Pass	
Cadmium				%	85			70-130	Pass	
Chromium				%	85			70-130	Pass	
Copper				%	84			70-130	Pass	
Lead				%	87			70-130	Pass	
Mercury				%	90			70-130	Pass	
Nickel				%	84			70-130	Pass	
Zinc				%	89			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>										
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>					Result 1					
TRH C6-C9	S13-Ja15732	NCP	%	103				70-130	Pass	
TRH C10-C14	S13-Ja14132	NCP	%	105				70-130	Pass	
<b>Spike - % Recovery</b>										
<b>BTEX</b>					Result 1					
Benzene	S13-Ja15732	NCP	%	88				70-130	Pass	
Toluene	S13-Ja15732	NCP	%	87				70-130	Pass	
Ethylbenzene	S13-Ja15732	NCP	%	88				70-130	Pass	
m&p-Xylenes	S13-Ja15732	NCP	%	95				70-130	Pass	
o-Xylene	S13-Ja15732	NCP	%	94				70-130	Pass	
Xylenes - Total	S13-Ja15732	NCP	%	95				70-130	Pass	
<b>Spike - % Recovery</b>										
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions</b>					Result 1					
TRH C6-C10	S13-Ja15732	NCP	%	103				70-130	Pass	
TRH >C10-C16	S13-Ja14132	NCP	%	112				70-130	Pass	
<b>Spike - % Recovery</b>										
<b>Metals M8</b>					Result 1					
Arsenic	S13-Ja15758	NCP	%	73				70-130	Pass	
Cadmium	S13-Ja15758	NCP	%	89				70-130	Pass	
Chromium	S13-Ja15758	NCP	%	90				70-130	Pass	
Copper	S13-Ja15758	NCP	%	81				70-130	Pass	
Lead	S13-Ja14135	NCP	%	85				70-130	Pass	
Mercury	S13-Fe00926	NCP	%	88				70-130	Pass	
Nickel	S13-Ja14135	NCP	%	80				70-130	Pass	
Zinc	S13-Ja15758	NCP	%	71				70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>										
<b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b>					Result 1	Result 2	RPD			
TRH C6-C9	S13-Ja15732	NCP	mg/kg	< 10	< 10	<1		30%	Pass	
TRH C10-C14	S13-Ja14132	NCP	mg/kg	< 50	< 50	<1		30%	Pass	
TRH C15-C28	S13-Ja14132	NCP	mg/kg	< 100	< 100	<1		30%	Pass	
TRH C29-C36	S13-Ja14132	NCP	mg/kg	< 100	< 100	<1		30%	Pass	
<b>Duplicate</b>										
<b>BTEX</b>					Result 1	Result 2	RPD			
Benzene	S13-Ja15732	NCP	mg/kg	< 0.5	< 0.5	<1		30%	Pass	
Toluene	S13-Ja15732	NCP	mg/kg	< 0.5	< 0.5	<1		30%	Pass	
Ethylbenzene	S13-Ja15732	NCP	mg/kg	< 0.5	< 0.5	<1		30%	Pass	
m&p-Xylenes	S13-Ja15732	NCP	mg/kg	< 1	< 1	<1		30%	Pass	
o-Xylene	S13-Ja15732	NCP	mg/kg	< 0.5	< 0.5	<1		30%	Pass	
Xylenes - Total	S13-Ja15732	NCP	mg/kg	< 1.5	< 1.5	<1		30%	Pass	
Total BTEX	S13-Ja15732	NCP	mg/kg	< 1.5	< 1.5	<1		30%	Pass	
<b>Duplicate</b>										
<b>Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions</b>					Result 1	Result 2	RPD			
Naphthalene	S13-Ja15732	NCP	mg/kg	< 0.5	< 0.5	<1		30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C10	S13-Ja15732	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Ja15732	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S13-Ja14132	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S13-Ja14132	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S13-Ja14132	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S13-Ja15758	NCP	mg/kg	< 2	< 2	74	30%	Fail	Q15
Cadmium	S13-Ja15758	NCP	mg/kg	< 0.4	< 0.4	200	30%	Fail	Q15
Chromium	S13-Ja15758	NCP	mg/kg	< 5	< 5	53	30%	Fail	Q15
Copper	S13-Ja15758	NCP	mg/kg	< 5	< 5	3.0	30%	Pass	
Lead	S13-Ja14127	NCP	mg/kg	87	88	1.0	30%	Pass	
Mercury	S13-Fe00926	NCP	mg/kg	0.15	0.16	5.0	30%	Pass	
Nickel	S13-Ja14135	NCP	mg/kg	< 5	< 5	31	30%	Fail	Q15
Zinc	S13-Ja15758	NCP	mg/kg	11	8.4	22	30%	Pass	

**Comments**

**Sample Integrity**

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

**Qualifier Codes/Comments**

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

**Authorised By**

Jean Heng	Client Services
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
James Norford	Senior Analyst-Metal (NSW)



**Dr. Bob Symons**

**Laboratory Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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

## Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd COFFS**  
Contact name: **Andrew Ballard**  
Client job number: **GEOTALST01618AO**  
COC number: **Not provided**  
Turn around time: **5 Day**  
Date/Time received: **Jan 30, 2013 3:00 PM**  
mgt-LabMark reference: **367010**

### Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

### Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Andrew Ballard - Andrew\_Ballard@coffey.com.

### mgt-LabMark Sample Receipt





# AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET32140/ 35320 / 1 - 6

Your ref: 366150

**NATA Accreditation No: 14484**

24 January 2013

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

**Attn: Dr Robert Symons**

Dear Bob

## **Asbestos Identification**

This report presents the results of six samples, forwarded by MGT- Labmark Environmental Pty Ltd on 23 January 2013, for analysis for asbestos.

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

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

**3. Results :** **Sample No. 1. ASET32140 / 35320 / 1. SS01 – 0.0 - 0.15 - Ja10122**  
Approx dimensions 6.1 cm x 5.4 cm x 5.2 cm  
The sample consisted of a mixture of soil, stones, plant matter, fragments of glass and plastic.  
**No asbestos detected.**

**Sample No. 2. ASET32140 / 35320 / 2. SS02 – 0.0 - 0.15 - Ja10123**  
Approx dimensions 5.8 cm x 5.6 cm x 5.4 cm  
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster and glass.  
**No asbestos detected.**

**Sample No. 3. ASET32140 / 35320 / 3. SS05 – 0.0 - 0.15 - Ja10126**  
Approx dimensions 5.6 cm x 4.5 cm x 4.4 cm  
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster.  
**No asbestos detected.**

**Sample No. 4. ASET32140 / 35320 / 4. SS06 – 0.0 - 0.15 - Ja10127**  
Approx dimensions 5.6 cm x 4.5 cm x 4.3 cm  
The sample consisted of a mixture of sandy soil, stones, plant matter, fragments of plaster and glass.  
**No asbestos detected.**

**Sample No. 5. ASET32140 / 35320 / 5. SS07 – 0.0 - 0.15 - Ja10128**  
Approx dimensions 5.2 cm x 4.6 cm x 4.2 cm  
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster.  
**No asbestos detected.**

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635

PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: [aset@bigpond.net.au](mailto:aset@bigpond.net.au) WEBSITE: [www.Ausset.com.au](http://www.Ausset.com.au)

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**Sample No. 6. ASET32140 / 35320 / 6. SS08 – 0.0 - 0.15 - Ja10129**  
Approx dimensions 5.2 cm x 4.5 cm x 4.3 cm  
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster.  
**No asbestos detected.**

Analysed and reported by,

A handwritten signature in black ink, appearing to read "Laxman Dias". The signature is fluid and cursive, with a long horizontal stroke at the end.

**Laxman Dias. BSc**  
**Analyst / Approved Identifier**  
**Approved Signatory**



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

## Certificate of Analysis

Coffey Geotechnics Pty Ltd  
 Unit 1 18 Hurley Dve  
 Coffs Harbour  
 NSW 2450

Attention: Andrew Ballard

Report **366388-S**  
 Client Reference GEOTALST01618AO  
 Received Date Jan 23, 2013



NATA Accredited  
 Accreditation Number 1261  
 Site Number 1254

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

<b>Client Sample ID</b>			<b>QC02</b>
<b>Sample Matrix</b>			<b>Soil</b>
<b>mgt-LabMark Sample No.</b>			<b>M13-Ja11514</b>
<b>Date Sampled</b>			<b>Jan 17, 2013</b>
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Arsenic	2	mg/kg	< 2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	7.0
Copper	5	mg/kg	120
Lead	5	mg/kg	16
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	35
% Moisture	0.1	%	4.0

**Sample History**

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

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Metals M8 - Method: USEPA 6010/6020 Heavy Metals & USEPA 7470/71 Mercury	Melbourne	Jan 23, 2013	28 Day
% Moisture - Method: Method 102 - ANZECC - % Moisture	Melbourne	Jan 23, 2013	14 Day

<b>Company Name:</b> Coffey Geotechnics Pty Ltd COFFS <b>Address:</b> Unit 1 18 Hurley Dve Coffs Harbour NSW 2450  <b>Client Job No.:</b> GEOTALST01618AO	<b>Order No.:</b> <b>Report #:</b> 366388 <b>Phone:</b> 02 6651 3213 <b>Fax:</b> 02 6651 5194	<b>Received:</b> Jan 23, 2013 8:35 AM <b>Due:</b> Jan 31, 2013 <b>Priority:</b> 5 Day <b>Contact Name:</b> Andrew Ballard
<b>mgt-LabMark Client Manager: Jean Heng</b>		

<b>Sample Detail</b>					% Moisture	HOLD	Metals M8
<b>Laboratory where analysis is conducted</b>							
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>					X	X	X
<b>Sydney Laboratory - NATA Site # 18217</b>							
<b>Brisbane Laboratory - NATA Site # 20794</b>							
<b>External Laboratory</b>							
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
QC02	Jan 17, 2013		Soil	M13-Ja11514	X		X
QC04	Jan 17, 2013		Soil	M13-Ja11515		X	

## mgt-LabMark Internal Quality Control Review

### General

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

### Holding Times

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

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

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

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

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

### UNITS

<b>mg/kg:</b> milligrams per Kilogram	<b>mg/l:</b> milligrams per litre
<b>ug/l:</b> micrograms per litre	<b>ppm:</b> Parts per million
<b>ppb:</b> Parts per billion	<b>%:</b> Percentage
<b>org/100ml:</b> Organisms per 100 millilitres	<b>NTU:</b> Units
<b>MPN/100mL:</b> Most Probable Number of organisms per 100 millilitres	

### TERMS

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

### QC - ACCEPTANCE CRITERIA

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

Results <10 times the LOR : No Limit

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

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

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

### QC DATA GENERAL COMMENTS

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

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>									
<b>Metals M8 USEPA 6010/6020 Heavy Metals &amp; USEPA 7470/71 Mercury</b>									
Arsenic			mg/kg	< 2			2	Pass	
Cadmium			mg/kg	< 0.4			0.4	Pass	
Chromium			mg/kg	< 5			5	Pass	
Copper			mg/kg	< 5			5	Pass	
Lead			mg/kg	< 5			5	Pass	
Mercury			mg/kg	< 0.1			0.1	Pass	
Nickel			mg/kg	< 5			5	Pass	
Zinc			mg/kg	< 5			5	Pass	
<b>LCS - % Recovery</b>									
<b>Metals M8 USEPA 6010/6020 Heavy Metals &amp; USEPA 7470/71 Mercury</b>									
Arsenic			%	95			80-120	Pass	
Cadmium			%	98			80-120	Pass	
Chromium			%	102			80-120	Pass	
Copper			%	108			80-120	Pass	
Lead			%	101			80-120	Pass	
Mercury			%	108			75-125	Pass	
Nickel			%	103			80-120	Pass	
Zinc			%	97			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>									
<b>Metals M8</b>				Result 1					
Arsenic	M13-Ja10925	NCP	%	85			75-125	Pass	
Cadmium	M13-Ja10104	NCP	%	78			75-125	Pass	
Chromium	M13-Ja10925	NCP	%	84			75-125	Pass	
Copper	M13-Ja10104	NCP	%	91			75-125	Pass	
Lead	M13-Ja10925	NCP	%	80			75-125	Pass	
Mercury	M13-Ja11468	NCP	%	98			70-130	Pass	
Nickel	M13-Ja10104	NCP	%	77			75-125	Pass	
Zinc	M13-Ja10104	NCP	%	75			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Metals M8</b>				Result 1	Result 2	RPD			
Arsenic	M13-Ja10104	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	M13-Ja10104	NCP	mg/kg	0.50	0.50	9.0	30%	Pass	
Chromium	M13-Ja10104	NCP	mg/kg	66	59	11	30%	Pass	
Copper	M13-Ja10104	NCP	mg/kg	5.3	6.0	13	30%	Pass	
Lead	M13-Ja10104	NCP	mg/kg	8.0	8.8	10	30%	Pass	
Mercury	M13-Ja11468	NCP	mg/kg	< 0.1	< 0.1	100	30%	Fail	Q15
Nickel	M13-Ja10104	NCP	mg/kg	8.4	9.5	13	30%	Pass	
Zinc	M13-Ja10104	NCP	mg/kg	5.3	5.5	4.0	30%	Pass	



## Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd COFFS**  
Contact name: **Andrew Ballard**  
Client job number: **GEOTALST01618AO**  
COC number: **Not provided**  
Turn around time: **5 Day**  
Date/Time received: **Jan 23, 2013 8:35 AM**  
mgt-LabMark reference: **366388**

### Sample information

- A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- All samples have been received as described on the above COC.
- COC has been completed correctly.
- Attempt to chill was evident.
- Appropriately preserved sample containers have been used.
- All samples were received in good condition.
- Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- Organic samples had Teflon liners.
- Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

### Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Andrew Ballard - Andrew\_Ballard@coffey.com.

### mgt-LabMark Sample Receipt

Chain of Custody			Laboratory Quotation/ Order No: N/A			Project No.: GEOTALST01618AO		Sheet 1 of 1									
Dispatch to:		MGT LabMark Environmental	Sampled By:		Andrew Ballard		Consigning Officer:		Oliver Hoschke								
Attention:		Sample Receipt	Project Manager:		andrew_ballard@coffey.com		Date Dispatched:		21-Jan-13								
Relinquished By:			Date:	Time:	Received By:		Date:	Time:									
					17.1.13 11:30 AM N. Mard MGT-LM JLC #366388 8:35 AM 23/1												
			22/1/13	2:15 PM			22-1-13	11:25 AM									
Comments:	Sample Matrix	Container Type & Preservative	Sample No.	Sample Depth (m)	Date Sampled:	Analyses Required										Sample Condition on Receipt	
						PAHS	TPHS	MAHS=BTEX	Metals 8	TRH/BTEX	OCPP/OPP	ASBESTOS	Send to Melbourne	HOLD			
	SOIL	GLASS 250ml	BH2 (0.4-0.5)	0.5	17-Jan-13				X	X							
	SOIL	GLASS 250ml	BH2 (0.9-1.0)	1	17-Jan-13				X								
	SOIL	GLASS 250ml	BH3 (0.4-0.5)	0.5	15-Jan-13				X	X							
	SOIL	GLASS 250ml	BH3 (0.9-1.0)	1	15-Jan-13				X								
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS01	0-0.15	17-Jan-13				X	X	X	X					
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS02	0-0.15	17-Jan-13				X	X	X	X					
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS03	0-0.15	17-Jan-13											X	
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS04	0-0.15	17-Jan-13											X	
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS05	0-0.15	17-Jan-13				X	X	X	X					
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS06	0-0.15	17-Jan-13				X	X	X	X					
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS07	0-0.15	17-Jan-13				X	X	X	X					
	SOIL	GLASS 250ml / ziplock bag (ACM)	SS08	0-0.15	17-Jan-13				X	X	X	X					
	SOIL	GLASS 250ml	QC01	0-0.15	17-Jan-13				X								
	SOIL	GLASS 250ml	QC03	0-0.15	17-Jan-13				X	X	X						
	WATER	VIALS	WB1	-	17-Jan-13				X								
	SOIL	GLASS 250ml	QC02	0-0.15	17-Jan-13				X				X				
	SOIL	GLASS 250ml	QC04	0-0.15	17-Jan-13								X				
Special Laboratory Instructions:		Metals 8 = arsenic, cadmium, chromium (total), copper, lead, mercury, nickel, & zinc, OCP/OPP = Organochlorine & Organophosphate Pesticides.								Send to Melbourne - Send this QC sample to MGT Melbourne laboratory for analysis							
Detection Limits: Standard		Turnaround Required: Normal (5 Day TAT)															