

# Wallarah 2 Coal Project

# Environmental Impact Statement

April 2013

# **Appendix AA** Contamination Impact Assessment



Hansen Bailey environmental consultants

AA

# **Contamination** Impact Assessment

# Wallarah 2 **Coal Project**

#### **Prepared for**

#### Hansen Bailey Pty Ltd

6/127-129 John Street Singleton NSW 2330

#### Prepared by

**DLA Environmental** 

#### **DLH2067**

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### 1.0 INTRODUCTION

#### 1.1 General

DLA Environmental (DLA) was commissioned by Hansen Bailey Pty Ltd to prepare a Phase 1 Contamination Impact Assessment (CIA) for the Wallarah 2 Coal Project. The CIA was undertaken to support a Development Application under Division 4.1 in Part 4 of the *Environmental Planning and Assessment Act, 1979*.

This CIA has the same status as *a Preliminary Investigation* in terms of that definition provided within State Environmental Planning Policy No.55 (SEPP 55) relating to the planning aspects of contamination assessments.

This CIA has been prepared in accordance with the Director-General's Requirements (DGRs) issued for the Project on the 12<sup>th</sup> January 2012 in accordance with the requirements in Part 2 in Schedule 2 to the Environmental Planning & Assessment Regulation 2000.

#### 1.2 Project Overview

The Wyong Areas Coal Joint Venture (WACJV) seeks a Development Consent under Division 4.1 in Part 4 of the *Environmental Planning and Assessment Act 1979* for the Project. This CIA supports 'The Wallarah 2 Coal Project Environmental Impact Statement' prepared by Hansen Bailey Environmental Consultants.

Refer to **Figure 1** – *Site Location*.

Development Consent is sought for a period of twenty eight (28) years. The majority of this resource lies beneath the Wyong State Forest and surrounding ranges (including the Jilliby State Conservation Area (SCA)) while a proportion, to be extracted first, lies beneath a section of the Dooralong Valley and the Hue Hue area.

Key features of the Project include:

- The construction and operation of an underground mining operation extracting up to 5.0 Mt pa of export quality thermal coal by longwall methods at a depth of between 350 m and 690 m below the surface within the underground Extraction Area;
- Mining and related activities will occur 24 hours a day 7 days a week for a Project period of 28 years;

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- Tooheys Road Site surface facilities on company owned and third party land (subject to a mining lease) between the Motorway Link Road and the F3 Freeway which will include (at least) a rail loop and spur, stockpiles, water and gas management facilities, workshop and offices;
- Buttonderry Site Surface Facilities on company owned land at Hue Hue Road between Sparks Road and the Wyong Shire Council's (WSC) Buttonderry Waste Management Facility. This facility will include (at least) the main personnel access to the mine, main ventilation facilities, offices and employee amenities;
- An inclined tunnel (or "drift") constructed from the coal seam beneath the Buttonderry Site to the surface at the Tooheys Road Site;
- Construction and use of various mining related infrastructure including water management structures, water treatment plant (reverse osmosis or similar), generator, second air intake ventilation shaft, boreholes, communications, water discharge point, powerlines, and connection to the WSC (after July 2013, the Central Coast Water Corporation) town water supply and sewerage system;
- Capture of methane for treatment initially involving flaring as practicable for greenhouse emission management and ultimately for beneficial use of methane such as electricity generation at the Tooheys Road Site;
- Transport of coal by rail to either the Newcastle port for export or to domestic power stations;
- A workforce of approximately 300 full-time company employees (plus an additional 30 contractors); and
- Rehabilitation and closure of the site at cessation of mining operations.

The total Project Boundary area covers 4,544ha, however the land which is the subject of this assessment comprises the areas identified as Tooheys Road Site Surface Facilities (152ha), Buttonderry Site Surface Facilities (10.3ha) and the Western Ventilation Shaft Site (3.2ha), covering a combined area of 165ha.

Refer to Figures 1, 2, 3 and 4.

#### 1.3 Objectives of the Assessment

The Project Objectives of the CIA are to conduct a review of all existing information on the Site and to assess the possibility for past and present Site activities which may have caused contamination to soils or groundwater underlying the Site. The Site is to be assessed for potential contamination as a result of anthropogenic influences.

- Any issues raised in preliminary investigations;



- The type, extent and level of contamination and assess;
- Contaminant dispersal in the air, surface water, soil and dust;
- The potential effects of contaminants on public health and the environment;
- Where applicable, off-Site impacts on soil, sediment and biota, and;
- The adequacy and completeness of all information available to be used in making decisions on remediation.

The Office of Environment and Heritage (OEH) submission to the DGR's indicates that a Preliminary Site Environmental Investigation should:

- Identify all past and potentially contaminating activities;
- Identify potential contamination types;
- Discuss the Site condition;
- Provide a preliminary assessment of Site contamination; and,
- Assess the need for further investigations.

The proposed investigation program and this report were designed to be suitable for due diligence purposes so the document can be incorporated for redevelopment purposes, or the ongoing management of the Site. It is suitable for review by the OEH, Department of Natural Resources (DNR) and Wyong Shire Council (WSC). In particular the document meets the requirements of SEPP55 (*Environmental Planning & Assessment Act, 1979*).

The CIA has the same status as *a Preliminary Investigation* in terms of that definition provided within SEPP55 relating to the planning aspects of contamination assessments.

#### 1.4 Data Quality Objectives

The National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) and Australian Standard (AS) 4482.1-2005 recommend that Data Quality Objectives (DQOs) be implemented during the investigation of potentially contaminated Sites. The DQO process described in AS 4482.1-2005 *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil Part 1: Non-Volatile and Semi-Volatile Compounds* outlines seven (7) distinct steps to outline the project goals, decisions, constraints and an assessment of the project uncertainties and how to address these when they arise. They define the quality and quantity of data needed to support decisions relating to the environmental condition of a Site.

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The DQO's for the investigations for the Project were to:

#### State the Problem

Determine, from a contamination point of view, if the land is suitable to be developed for Industrial land use in accordance with the requirements of *State Environmental Planning Policy No. 55* and the *Environmental Planning and Assessment Act. 1979*. This includes researching previous Site investigations, historical searches (titles, landuse of Site and adjacent Sites, and aerial photographs), identification of potential chemicals of concern, media they inhabit and possible migration pathways (to and from the Site), potential exposures to human or/and environmental receptors, and concerns with the potential clean up and desired future landuse of the property.

 Investigations into the Site need to determine if contamination has potential to be present from previous land use activities or off Site sources that could present an unacceptable risk to human health or the environment and prevent the Site being suitable for the intended land use.

#### Identify the Decision

The decisions to be made on the contamination and the new environmental data required includes considering relevant Site contamination sources to the Site from a desk top study of Site history and potential contamination sources.

#### **Identify Inputs to Decision**

This step requires the identification of the factors that may, or may not have influenced the Site to make it unsuitable for the intended land use. Inputs include:

- Determine the lateral extents of the Site under investigation.
- Undertake appropriate searches of the Site to determine any recorded history of detrimental effects on the Site.
- Undertaking a review of historical aerial photographs to identify previous land use activities on Site.
- Targeted/Judgemental soil sampling and laboratory analysis of residual soils identified as potentially contaminated.



#### Define the Study Boundaries

Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision. To identify the boundaries (both spatial and temporal) of the investigation and to identify any restrictions that may hinder the assessment process. This includes on and off Site inspections and discussions with informed individuals.

#### Develop a Decision Rule.

To define the parameter(s) of interest, specify the action level and provide a logical basis for choosing additional actions.

The following publications have been reviewed with respect to the assessment criteria and sampling methodology of soils and water at the Site

- NSW EPA Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites.
- Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 1999 Table 5a Column F – Commercial/Industrial.
- NSW DEC Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination, 2007.
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000).
- Standards Australia AS4482.1 2<sup>nd</sup> Edition: Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil Part 1: Non-Volatile and Semi-Volatile Compounds, 2005.
- NSW EPA Contaminated Sites: Sampling Design Guidelines, 1995.
- NSW EPA Guidelines for the NSW Site Auditor Scheme, second edition 2006.

#### **Specify Limits on Decision Errors**

Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data. Incorrect decisions are caused by using data that is not representative of Site conditions because of sampling or analytical error.

Field and laboratory quality controls are implemented to avoid error and to ensure the action levels exceed the measurement detection limits for Contaminants of Concern (COC). This is achieved by analysing concentrations detected in field blanks, rinsate blanks, volatile-spiked

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trip samples and laboratory method blanks. The performance of decision making inputs will be enhanced through the application of Data quality indicators (DQI), defined as follows:

**Precision** A quantitative measure of the variability (or reproducibility) of data.

**Accuracy** A quantitative measure of the closeness of reported data to the "true" value.

**Representativeness** The confidence (expressed qualitatively) that data are representative of each media present on the Site.

**Completeness** A measure of the amount of useable data from a data collection activity.

**Comparability** The confidence (expressed qualitatively) that data can be considered equivalent for each sampling and analytical event.

DLA Environmental adopted the following methods to satisfy all DQI's within the table below

#### Table 1a

#### Methods Adopted to Satisfy DQI's : Data Precision and Accuracy

Methods Adopted to Satisfy	DQI's: Data Precision and Accuracy	
Adequate Sampling Density	<ul> <li>Sampling carried out in accordance with Procedure B of the NSW EPA <i>Contaminated Sites: Sampling Design Guidelines</i>, 1995;</li> <li>Use of analytical laboratories with adequately trained and experienced testing staff experienced in the analyses undertaken, with appropriate NATA certification.</li> </ul>	
	<ul> <li>y &gt;10 x LOR: 30% inorganics; 50% organics (Field)</li> <li>&lt;10 x LOR: Assessed on individual basis (Field)</li> <li>&gt;5 x LOR: 50% (laboratory)</li> <li>&lt;5 x LOR: No Limit (laboratory)</li> <li>2005 field duplicate RPD criteria is increased with organic analytes</li> <li>These criteria cannot reasonably exceed the laboratory's precision;</li> </ul>	
Trip Blanks/ Rinsate Blanks	No Detection above LOR	
Trip Spikes	Recoverable concentrations of volatiles between 60 – 140%	
Adequate laboratory performance	Based on acceptance criteria of laboratory as specified on certificate of analysis: includes: blank samples, matrix spikes, control samples, and surrogate spike samples	
Data Representativeness		
Sample and analysis selection	Representativeness of all potential contaminants	
Trip Blanks/ Rinsate Blanks	No Detection above LOR	
Trip Spikes	Recoverable concentrations of volatiles between 60 – 140%	
Duplicate Samples	Adequate duplicate, split, rinsate and trip blank sample numbers	
Laboratory selection	Adequate laboratory internal quality control and quality assurance methods, complying with the NEPM.	
Documentation Completeness		
Chain of custody records	Laboratory sample receipt information received confirming receipt of samples intact and appropriate chain of custody	
	NATA registered laboratory results certificates provided	
Data Completeness		
	Analysis for all potential contaminants of concern.	
<b>L</b>		



	Field duplicate sample numbers complying with NEPM	
	Rinsate and Trip spike samples recovered regularly	
Comparability		
	Use of NATA registered laboratories	
Methods Adopted to Satisfy DQIs: Data Precision and Accuracy cont'd		
	Test methods consistent for each sample in accordance with the Sampling Analysis and Quality Plan	
	Detailed logs of all sample locations to be recorded	
	Test methods comparable between primary and secondary laboratory	
	Acceptable RPD's between original samples and field duplicates and inter-laboratory triplicate samples.	

#### Optimise the Design for Obtaining Data.

Identify a resource-effective sampling and analysis design for data collection that satisfy the DQO's. The sampling and analytical plan is designed to avoid Type 1 and Type 2 errors and includes defining minimum sample numbers required to detect contamination as determined with procedures provided in the NSW EPA 1995 Sampling Design Guidelines and AS 4482.1 - 2005 and appropriate quality control procedures.

#### 1.5 Statutory Framework

The pollution control and environmental planning statutes in NSW, which most likely apply are:

- Contaminated Land Management Act 1997;
- Protection of the Environment Operations Act 1997;
- Dangerous Goods Act 1975;
- Ozone Protection Act 1989;
- Waste Avoidance and Resource Recovery Act 2001;
- Water Board (Corporatisation) Act 1994;
- Environmental Planning and Assessment Act 1979; and,
- Local Government Act 1993.

In addition, regulations and planning instruments made under these Acts may also apply.

The *POEO Act, 1997* provides a common licence to cover emissions to all environmental media. The Act lists certain "scheduled activities" which have to be licensed. The *Contaminated Land Management Act*, 1997 specifies the legal requirements for the registration, investigation and remediation of contaminated land, and for the registration and accreditation of Site auditors.

The *Environmental Planning and Assessment Act*, 1989 gives local authorities the power to regulate development within their areas of responsibility and to impose specific consent conditions, which cover environmental issues. In addition, the *Local Government Act* 1993 requires approval from Council for certain works/activities to be obtained.

#### 1.6 Scope of Works

The specific scope of work included for the preparation of the CIA to meet the DGRs included the following:

- Undertake Site history search for potential contaminated Sites;
- Review available Site information with reference to local geology and groundwater;
- Conduct a Site inspection of potentially contaminated Sites;
- Complete required soil testing in line with regulatory requirements for contamination Assessment; and,
- Provision of a detailed technical report as an appendix to the EIS.

The investigation and assessment was conducted using the following methods:

- Search and review of records and Site plans available locally and from State Regulatory Authorities, including WorkCover, Department of Lands and OEH;
- Review of historical aerial photographs available from the Land Information Centre;
- Reviewing all environmental conditions of the Site including the geology and hydrogeology,
- Providing a comprehensive overview of the Sites past and current land uses and potential contamination issues; and,
- Investigation of soil chemical concentrations relative to the NEPM 1999 Health Investigation Levels.

The assessment and report has been conducted in accordance with the following:

- The National Environment Protection (Assessment of Site Contamination) Measure (NEPM), National Environment Protection Council 1999.
- NSW EPA Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, November 1997.
- NSW EPA Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, second edition 2006;
- NSW EPA Guidelines for Assessing Service Station Sites, 1994.

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- The Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites, Australian and New Zealand Environment and Conservation Council and the National Health and Medical Research Council (NHMRC), January 1992; and,
- NSW DECC Waste Classification Guidelines, 2009.

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## 2.0 SITE DESCRIPTION

#### 2.1 Site Identification

The eastern boundary of the Wallarah 2 Coal Project Extraction Area is located approximately 4.5 kilometres north-west of the Wyong CBD and lies solely within the WSC Local Government Area. The largest proportion of the Project's underground coal extraction area is located beneath the Wyong State Forest and adjacent forested hills, including beneath part of the Jilliby State Conservation Area.

The Scope of this CIA has focused upon the pit top and associated infrastructure for the Project, rather than covering the larger natural forested areas which have not been affected by anthropogenic influences, or private properties above the Extraction Area.

Three (3) distinct areas containing the proposed mine surface facilities and infrastructure are identified as the Tooheys Road Site, Buttonderry Site and Western Shaft Site. A complete list of street address and Lot/DP information is included within Table 2B.

The Tooheys Road Site is the largest of the three (3) areas covering approximately 151.9ha. The Site is located off Tooheys Road at Bushells Ridge between the F3 Freeway and Motorway Link Road. A variety of semi-rural properties, including agricultural and forested areas exist within this area comprising of six (6) separate lots.

The Tooheys Road Site is primarily zoned 4(e) Regional Industrial and Employment Development, with a small area not included within the Project area that is zoned 7(g) Wetlands Management in accordance with the Wyong Local Environmental Plan 1991.

#### Refer to Figure 5: Current Site Layout - Tooheys Road Site

The Buttonderry Site covers approximately 10.3ha off Hue Hue Road between Sparks Road and the Wyong Shire Council's (WSC) Buttonderry Waste Management Facility. The Site is identified as Lot 1 and 2 within DP791157 and is zoned 1(c) Rural Holdings. The properties are currently used for cattle grazing, with no building structures evident.

Refer to Figure 6: Current Site Layout – Buttonderry Site

The Western Ventilation Shaft Site is located within the Wyong State Forest off Brothers Road, Jilliby. The Site is identified as Lot 1 DP581339 covering an area of approximately 3.2ha and is undisturbed bushland, with dirt road access.



#### Refer to Figure 7: Current Site Layout - Western Ventilation Shaft

#### Table 2a:

#### **DP/Lot and Street Address Information**

Tooheys Road Site			
DP	Lot	Street Address	
DP260217	3	84 Tooheys Road Bushells Ridge 2259	
DP260217	1	106 Tooheys Road Bushells Ridge 2259	
DP658436	128	9 Kiar Ridge Road Kiar 2259	
DP755245	124	77 Tooheys Road Bushells Ridge 2259	
DP755245	126	9 Kiar Ridge Road Kiar 2259	
DP755245	102	9 Kiar Ridge Road Kiar 2259	
DP755245	103	9 Kiar Ridge Road Kiar 2259	
DP1032847	194	425 Bushells Ridge Road Bushells Ridge 2259	
DP1032847	195	425 Bushells Ridge Road Bushells Ridge 2259	
DP1032847	193	Bushells Ridge Road Bushells Ridge 2259	
DP258584	4	No address	
DP260217	5	Tooheys Road Bushells Ridge 2259	
DP260217	4	Tooheys Road Bushells Ridge 2259	
Buttonderry Sit	Buttonderry Site		
DP	Lot	Street Address	
DP791157	1	672 Hue Hue Road Jilliby 2259	
DP791157	2	670 Hue Hue Road Jilliby 2259	
Western Ventil	Western Ventilation Shaft Site		
DP	Lot	Street Address	
DP581339	1	No address	



#### 2.2 Proposed Future Land Use

Tooheys Road Site Surface Facilities will be located on land owned by WACJV and third party land (subject to a mining lease) between the Motorway Link Road and the F3 Freeway which will include (at least) a rail loop and spur, stockpiles, water and gas management facilities, workshop and offices.

Refer to Figure 2: Proposed Site Layout – Tooheys Road Site

Buttonderry Site Surface Facilities will be located on WACJV owned land at Hue Hue Road between Sparks Road and the WSC's Buttonderry Waste Management Facility. This facility will include (at least) the main personnel access to the mine, main ventilation facilities, offices and employee amenities.

Refer to Figure 3: Proposed Site Layout - Buttonderry Site

A second ventilation shaft to augment the original shaft at the Buttonderry Site will be required around Year 10 and will be located in the Wyong State Forest as shown. This future western shaft facility will be a downcast shaft (for air intake to the underground). Only limited facilities will be required at this Site however the Site will also serve as a secondary emergency access point.

Refer to Figure 4: Proposed Site Layout - Western Ventilation Shaft

#### 2.3 Environmental Setting

#### 2.3.1 Boundaries and Surrounding Land Use

#### **Tooheys Road Site**

Property boundaries at the Tooheys Road Site consist of wire fencing with locked gates and are maintained by representatives of Wyong Areas Coal Joint Venture. To the east of the Site is bushland with some portions cleared. It is understood that this area forms part of an approved future Industrial development. To the west is the F3 freeway followed by semirural properties. The Doyalson Motorway Link Road exists to the south of the Site boundary. Wyong State Forest exists to the north of the Site with portions used for power line easements.



#### **Buttonderry Site**

Property boundaries at the Buttonderry Site also consist of wire fencing with locked gates which are maintained by representatives of Wyong Areas Coal Joint Venture. The Site is predominately surrounded by either bushland or semi-rural properties. Hue Hue Road exists to the east of the Site. A power line easement extends from the eastern boundary, through the Site to the north. The Wyong Shire Council owned and operated Buttonderry Waste Management Facility exists less than 1km from the northern boundary. Bushland exists between the boundary and landfill.

#### Western Ventilation Shaft Site

The Western Shaft Site is predominantly surrounded by Wyong State Forest. Apart from the northern portion of the Site (Site Access Road), the boundaries of the Site are not clearly defined by fencing. The northern section of the Site at the intersection of Brothers Road and Little Jilliby Road is bound by semi-rural residential properties.

#### 2.3.2 Site Hydrogeology

A search of the NSW OEH groundwater works database indicated there are several registered bores within two (2) kilometres of the Site. Minimal information was available regarding the construction and uses of the bores. One (1) bore used for domestic purposes positioned to the east of the Tooheys Road Site indicates that water bearing layers are present at 17m and 30m. Wells installed for monitoring purposes positioned to the north of the Tooheys Road and Buttonderry Sites indicate that a water bearing layer exists at approximately 1-5m.

A comprehensive groundwater impact assessment was carried out for the Project by Mackie Environmental Research (2012). The specialist report included numerical computer simulations and predictions of mine water seepage and depressurisation/dewatering impacts on hard rock and alluvial lands.

It is understood that groundwater monitoring wells installed at the Buttonderry Site as part of the aforementioned assessment adjacent to the Buttonderry Landfill. Groundwater samples have been collected from the wells for environmental monitoring purposes since July 2012.

Refer to Appendix D – Groundwater Bore Search Information

An environmental monitoring program was established on behalf of the WACJV to investigate environmental baseline conditions in the Wyong area. The purpose the baseline monitoring is to facilitate the planning, development and ongoing operational monitoring of the Project. The monitoring program collects ambient air quality, surface water and meteorological data on a regular basis. A number of surface water samples are collected from the Tooheys Road and Buttonderry Sites, with past monitoring results indicating elevated concentrations of cadmium, chromium and nutrients.

#### 2.3.3 Site Geology and Soils

The Wyong area is located within the north-eastern margin of the Sydney Basin and in the southern part of the Newcastle Coalfield. In this region any economic coal resources are contained within the upper part of the Permian Newcastle Coal Measures. These strata outcrop to the far north and north-east of the region and dip gently to the south-west beneath the Project Boundary. The lowermost strata of the Narrabeen Group comprise the Dooralong Shale which consists of between 50m and 70m of shales and laminites. This sequence coarsens upwards to contain beds of pebbly sandstone.

The overlying Munmorah Conglomerate is generally 70m to 80m thick and consists of coarse and pebbly sandstones with occasional green-grey shales. Neither of these sequences outcrop in the proposed target mining area. Outcropping in the north-east of the area is the Tuggerah Formation, a 200 m thick sequence of sandstones with minor siltstones and rare conglomerates.

The Patonga Claystone, which consists of 80m to 110m of inter-bedded grey-green and redbrown claystones and minor fine-grained sandstones, commonly outcrops in the lower elevation areas throughout (and immediately beneath) the Yarramalong and Dooralong Valleys. The uppermost strata of the Narrabeen Group in the area belong to the Terrigal Formation and consist of sandstones and minor siltstones. This sequence occurs through the more elevated zones of the south-western half of the Project Boundary, which is typically covered by State Forests.

Unconsolidated Quaternary silts and sands occur as fill along the Yarramalong and Dooralong Valleys and beneath Tuggerah Lake. Thicknesses of up to 50m have been recorded. Two broad synclines, which are recognised regionally, traverse the area. The Macquarie Syncline traverses the western edge of Tuggerah Lake in a north-easterly direction. The Yarramalong Syncline traverses the extreme western edge of the Project



Boundary in a similar orientation. (*ref: Wallarah 2 Coal Project Background Document prepared by Hanson Bailey October 2011*)

#### 2.3.4 Acid Sulphate Soils

Environmental Earth Sciences prepared a Soil and Land Capability Impact Assessment for the Wallarah EIS (2012). This assessment report made the following conclusions in regards to Potential Acid Sulphate Soils (PASS) or Actual Acid Sulphate Soils (AASS).

PASS and AASS areas of the Site are currently outside of the infrastructure footprint and so the likelihood of disturbance is low. In the event that land noted as AASS or PASS may be disturbed, prior to the commencement of activities, the proponent must prepare an Acid Sulfate Soils Management Plan to manage any AASS or PASS. The Plan shall be prepared in accordance with the Acid Sulfate Soils Manual 1998 published by the NSW Acid Sulfate Soil Management Advisory Committee.

General considerations for minimising the impacts of AASS disturbance are included within the report prepared by *Environmental Earth Sciences*.

#### 2.3.5 Site Meteorology

Climatic conditions in the region are recorded at the Bureau of Meteorology (BoM) Norah Head Australian Weather Station (AWS) (data available 1995 – 2011) and Narara Research Station (partial data available 1916 – 2011, all data available 1954 – 2011). Temperatures range from an average maximum of 27.6°C in summer down to an average minimum of 4.7°C in the winter months. The predominant wind at Charmhaven is from the south-west and the predominant winds at Buttonderry are from the west north-west.

#### 2.4 Regulatory Controls

#### 2.4.1 Wyong Shire Council Section 149 Certificate

Planning Certificates were obtained from WSC under Section 149 of the Environmental Planning and Assessment Act, 1979 for Lots comprising the Tooheys Road Site, the Buttonderry Site and Western Ventilation Shaft Site. The Tooheys Road Site, containing the rail loop and spur line and the coal handling facilities is primarily zoned 4(e) Regional Industrial and Employment Development, with a small area that will not form part of the Project area zoned 7(g) Wetlands Management. Under the Wyong LEP, mining is permissible in the 4(e) zone but prohibited in the 7(g) area.

The Buttonderry Site will provide the main ventilation fans, and access for personnel and services. This Site is zoned 1(c) Rural Holdings where development ancillary to mining is permitted with Development Consent.

#### 2.4.2 Work Cover Dangerous Goods Search

A WorkCover NSW search regarding the properties comprising Tooheys Road Site, Buttonderry Site and Western Ventilation Site, within their Stored Chemical Information Database (SCID), indicated that no Dangerous Goods Licenses have been issued for any of the premises.

Refer to Appendix E – Dangerous Goods Search.

#### 2.4.3 Contaminated Land Record Search

A search was conducted of all records pertaining to section 58 of the Contaminated Land Management Act 1997 and revealed that the entire Project Area is not encumbered by any notices from the NSW OEH with regard to contaminated land. No Sites in the vicinity of the Project were encumbered by any notices.

No matters apply to any of the properties within the Site Investigation Area under the Contaminated Land Management Act, 1997.

#### 2.4.4 Director Generals Requirements

The WACJV seeks a Development Consent under Division 4.1 in Part 4 of the Environmental Planning and Assessment Act 1979, for the Project. The following DGR's relevant to Contaminated Site Assessment and Remediation are outlined below in **Table 2b**.



#### Table 2b

#### **Director Generals Requirements**

Director Generals Requirements	Relevant Sections of Reports
<ul> <li>The EIS should include an</li> </ul>	Refer to Section 1.5 Statutory Framework,
assessment of the contaminated Site	Section 2.4 Regulatory Controls, Section 4.0
that is conducted in accordance with	Results, Section 5.0 Discussion and Section
the guidelines made or approved	6.0 Conclusions
under section 105 of the	
Contaminated Land Management Act	
1997, for example: Guidelines for	
Consultants Reporting on	
Contaminated Sites (EPA, 2000),	
Guidelines for the NSW Site Auditor	
Scheme - 2nd edition (DEC, 2006),	
Sampling Design Guidelines (EPA,	
1995), National Environment	
Protection (Assessment of Site	
Contamination) Measure 1999 (or	
update).	
- The EIS should provide the details on	Refer to Section 6.0 Conclusions
how the Site contamination will be	
remediated and/or managed so that	
the Site is or can be made suitable for	
the proposed use.	
<ul> <li>All reports should be prepared in</li> </ul>	Refer to Section 1.6 Scope of Works
accordance with the Guidelines for	,
Consultants Reporting on	
Contaminated Sites (EPA, 2000).	
<ul> <li>The EIS should specify whether or not</li> </ul>	Refer to Section 6.0 Conclusions
a Site auditor, accredited under the	
Contaminated Land Management Act	
1997 has been or will be engaged to	
issue a Site audit statement to certify	
on the suitability of the current or	
proposed uses.	



#### 2.5 Site History

#### 2.5.1 Aerial Photograph Review

Aerial photographs from 1954 to 2006, available from the NSW Lands Department, were reviewed by DLA Environmental with relevant observations being summarised below for the three (3) Sites. Copies of the photographs have been included within **Appendix F**.

Due to the heavily vegetated state of the three (3) Sites, ground conditions were not able to be clearly assessed; however, large scale clearing and large building structures were clearly observed.

#### Table 2c

#### Aerial Photograph Review – Western Shaft Site

Aerial Photograph	Description
7/3/1954 8/403 Run 5	<ul> <li>The Site is heavily vegetated with boundaries not evident. No access roads are visible in surrounding area.</li> <li>Vegetation cleared in surrounding areas allowing for small scale residential development and semi-rural agriculture land uses.</li> </ul>
8/3/1966 Run 6	<ul> <li>Site is still heavily vegetated and appears undisturbed.</li> <li>Very little development in surrounding areas</li> <li>Some large power line easements have been established several km to the north and west of the Site</li> </ul>
28/5/1975 Run 4	<ul> <li>Site is still heavily vegetated, Brothers Road, with access from Little Jilliby Road, is now visible through the Site.</li> <li>Minor semi-rural residential development is now visibly occurring along Jilliby Road adjacent to the Site and several km to the east.</li> </ul>
27/8/1984 Run 4	<ul> <li>Very little change from previous aerial photo, a minor increase in residential density along Little Jilliby Road.</li> <li>No other significant changes noted</li> </ul>
0/9/1991 Run 7	<ul> <li>No significant changes noted from previous photo.</li> </ul>
15/9/1994 Run 7	<ul> <li>No significant changes noted from previous photo.</li> </ul>
21/11/1998 Run 4	<ul> <li>A small section of vegetation within several hundred metres to the east of Brothers Road has been cleared.</li> <li>No other significant changes noted</li> </ul>
29/10/2001 Run 7	<ul> <li>Site appears to remain the same as previous aerial photo. One new residential property appears to have been constructed adjacent to the start of Brothers Road, and one property has been built in the clearing mentioned in the 1998 description.</li> </ul>
11/6/2006 Run 7	<ul> <li>No significant changes from previous aerial photo.</li> </ul>



#### Table 2d

#### Aerial Photograph Review – Buttonderry Site

Aerial Photograph	Description	
7/3/1954 Run 5	<ul> <li>Lot 1 and the majority of Lot 2 and surrounding areas remain heavily vegetated. Hue Hue Road is evident.</li> <li>A portion of land within the eastern half of Lot 2 adjoining Hue Hue Road is cleared of vegetation, several small structures are visible on the southern portion of the block.</li> <li>No other details of land uses onSite are visible.</li> </ul>	
8/3/1966 Run 5	<ul> <li>What appears to be an orchard/market garden is visible on a portion of the cleared section of Lot 2.</li> <li>A power easement now runs in a northerly direction from the northern boundary of Lot 1.</li> <li>A large semi-rural property is now visible approximately 1km to the southwest of Lot 2.</li> <li>No other changes are visible on the Site</li> </ul>	
28/5/1975 Run 4	<ul> <li>The eastern portion of Lot 1 has now been cleared of vegetation. The north western portion of Lot 2 has now been cleared of vegetation and it appears the orchard/market garden has been extended slightly to the west.</li> <li>A large section of vegetation approximately twice the size of lots 1 &amp; 2 combined has been cleared to the north east of the Site boundary. A small section of vegetation has been cleared where the Buttonderry Landfill is now situated.</li> </ul>	
27/4/1984 Run 4	<ul> <li>No significant changes visible to the Site. The F3 freeway is visible under construction to the east of the Site.</li> <li>Extensive development can be seen occurring to the northeast of the Site several km away.</li> </ul>	
21/9/1991 Run 6	<ul> <li>The orchard/market garden appears to no longer be in use. What appears to be a small structure is now visible in the southeast corner of Lot 1.</li> <li>The clearing in the location of the Buttonderry Landfill is now approximately half the size of the Site.</li> <li>No other significant changes are visible on-Site</li> </ul>	
15/9/1994 Run 6	<ul> <li>What appears to be a residential building structure has been built on the south eastern portion of Lot 2 adjacent Hue Hu Road.</li> <li>No other significant changes from previous aerial photos.</li> </ul>	
21/11/1998 Run 4	<ul> <li>The small structure on the southeast corner appears to have been removed.</li> <li>No other significant changes are visible.</li> </ul>	
29/10/2001 Run 6	<ul> <li>No significant changes from previous series.</li> </ul>	
11/4/2006 Run 6	<ul> <li>All building structures have been removed from both Lot 1 and Lot 2. No other significant changes are visible.</li> </ul>	



#### Table 2e

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#### Aerial Photograph Review – Tooheys Road Site

Aerial Photograph	Description	
7/3/1954 Run 5	<ul> <li>The rail line is visible to the east.</li> <li>The Site and surrounding areas are completely undeveloped and heavily vegetated.</li> </ul>	
8/3/1964 Run 5	<ul> <li>The Site shows some minor agricultural development on the western portion of the Site. Tooheys Road is now visible in its original configuration. Several large easements are visible in the surrounding areas.</li> </ul>	
28/5/1975 Run 4	<ul> <li>There has been a slight expansion of the agricultural area on Site to the east. The individual lot boundaries are now visible; however no further development has taken place.</li> </ul>	
27/4/1984 Run 4	<ul> <li>Much of the area of the remaining lots within the Site has been cleared of vegetation, with a configuration similar to the present day layout</li> <li>Tooheys Road has been straightened from its previous position.</li> <li>Two structures are visible near the western boundary of the Site. One structure is visible on the northern side of Tooheys Road in the central area of the Site.</li> <li>Properties cannot be distinguished easily in the aerial photos due to the resolution of the images.</li> <li>Clearing has begun at the location of the current quarry. Construction of the F3 freeway is underway to the west of the Site.</li> </ul>	
21/9/1991 Run 6 15/9/1994	<ul> <li>Vegetative cover and Site configuration appear similar to previous aerial photos.</li> <li>Construction of the F3 freeway is now complete.</li> <li>The quarry appears to have expanded significantly in size.</li> </ul>	
Run 6	<ul> <li>No significant changes noted from previous aerial photos.</li> </ul>	
21/11/1998 Run 4	<ul> <li>No significant changes noted from previous aerial photos.</li> </ul>	
29/10/2001 Run 6	<ul> <li>Several small dams are now visible on some of the western properties on the Site.</li> <li>No other significant changes noted from previous aerial photo.</li> </ul>	
11/04/06 Run 6	<ul> <li>No significant changes noted from previous aerial photo.</li> </ul>	

#### 2.5.2 Historical Title Search

#### **Tooheys Road Site**

The historical title search indicates that the majority of the properties have been in private ownership since the early 1970's. Two of the lots, Lot 124 DP 755245, and Lot 1 DP 260217, have been owned by farmers during the 1970's. No other information is available regarding land use in the historical title information.

Refer to **Appendix C** – Historical Title Search.



#### **Buttonderry Site**

The historical title search indicates the properties have been in private ownership since 1912. There is little information on the land use of the Lots at the Buttonderry Site. Both lots were owned by a farmer between 1947 and 1952. Between 1952 and 2001 the properties were owned by members of the same family prior to Wyong Coal Pty Ltd purchasing the property in 2001.

Refer to Appendix C – Historical Title Search.

#### Western Ventilation Shaft Site

The shaft site is entirely within State Forest land that has always been in ownership of the Crown. However, the historical title search in that area indicated that the adjacent property immediately to the east was in private ownership from 1910 until 1977 and has since been Crown land. It contains a track that will be used for access to the Western Ventilation Shaft site. The Shaft site in State Forest and the adjacent Lot 1 has not had any industrial uses however surrounding private properties may have been used for farming purposes.

Refer to **Appendix C** – Historical Title Search.

#### 2.5.3 Heritage / Archaeological Items

OzArk EHM reports demonstrated that only the Tooheys Road Surface facilities Site was considered to have areas containing potential Aboriginal Sites/items that could be affected by direct impacts of clearing and earthworks disturbance. Accordingly, a test excavation program was undertaken to allow detailed Site investigation and assessment.

As reported by DP&I in its assessment report in March 2011, the test excavation investigation found 14 artefacts (tool, flakes, etc) and concluded that there is very low archaeological potential within the area that may be directly impacted by the W2CP. OzArk EHM and WACJV recommended measures to manage construction activity (such as stop work practices) and to limit the extent of disturbance in areas that could potentially contain items of Aboriginal heritage.

The DP&I concurred with the findings of the assessment, and considered the management of this impact could be suitably conditioned, should the Minister determine to approve the Project.



Due to the lack of Site evidence found in Site survey of the other surface facility Sites (Buttonderry and Western Shaft Site), and given the nominated mitigation and management measures, it was concluded that there was very low risk associated with these developments in the Project.

#### 2.5.4 Site History Summary

#### **Tooheys Road**

The Site history indicates that the properties which make up the Tooheys Road Site have been utilised for small scale/semi-rural farming practices since the early 1960's, with a large portion of the Site remaining uncleared and heavily vegetated. Properties therefore have a potential for contamination due to past agricultural land use activities, including impacts from pesticides.

Site Observations, aerial photography and anecdotal evidence provided by a former property owner (*ref: Mr Barrie Toepfer, 2012*) suggests that the potential for pesticide contamination would be relatively low, as farming practices mainly included small scale cattle grazing and chicken sheds and not large scale horticultural and agricultural practices associated with more intensive chemical usage.

Aerial photography suggests that construction of the building structures onsite commenced during the 1960's and therefore the use of asbestos containing building materials is possible. Asbestos containing materials were observed within building structures associated with farming activity.

The aerial photographs also indicate that Tooheys Road was repositioned at some point between 1975 and 1984. Anecdotal evidence provided by residents and Site observations indicated that building structures including a residence and chicken sheds which have since been demolished were present along the former road. The properties were not evident on aerial photography due to insufficient resolution and heavy vegetation. A potential for contamination exists at these locations due to the use of pesticides and asbestos containing building materials associated with both the chicken sheds and residential properties.



#### Buttonderry

Site history suggests that the eastern portions of both Lot 1 and Lot 2 were used for cattle grazing, which has a low potential for pesticide contamination. However a small portion of Lot 2 adjacent to the northern boundary and Hue Hue Road was used as either an orchard or market garden, which suggests that there is a potential for pesticide use and contamination. The building structures also present prior to demolition could have contained asbestos containing building materials.

#### Western Shaft

The Site history indicates that the properties surrounding the Western Shaft Site have been used for residential and semi-rural purposes. No development or land uses were evident onsite apart from the clearing associated with Brothers Road.



### 3.0 SITE INVESTIGATION PLAN

#### 3.1 Field Investigation Procedure

Field investigations at Site were undertaken during and May and June 2012 and comprised of the following:

- Initial Site Inspection, conducting a review of Site history and aerial photographs to identify potential contaminant locations prior to the commencement of work.
- A targeted sampling program focusing on potential contaminants of concern/ materials.
- Collection of seven (7) soil samples, collected from Tooheys Road Site.
- Collection of three (3) soil samples from Buttonderry Site.

Refer to Figure 5 and 6 - Current Site Layout with Sample Locations

#### 3.1.1 Sampling Strategy

Field soil sampling comprised of the following:

- Identification of investigation locations prior to the commencement of work.
- The sampling program concentrated on natural soils.
- Collection of a total of ten (10) soil samples, obtained by using a decontaminated trowel.
- Sampling conducted on a gradient from lowest to highest potential contamination to minimise cross contamination;

A judgemental sampling strategy was employed in accordance with NSW EPA Sample Design Guidelines 1994 that targeted identified areas of potential contamination.

#### 3.1.2 Soil Collection

Samples were obtained by using a decontaminated trowel from surface soils excavated using a hand auger. The soil was placed into a non-preserved glass container with a Teflon lined threaded cap to be transported to the laboratory. Soil samples for chemical analyses were collected in accordance with the NSW EPA Samples Guidelines 1994, NEPM 1999 and AS4482.1-2005.



All samples were collected by DLA Environmental personnel who are specifically trained in hazardous waste field investigation techniques and health and safety procedures. All techniques used are specified in DLA Environmental Field Manual for Contaminated Sites, which are based on methods specified by the United States Environment Protection Agency (US EPA) and The National Environmental Protection (Assessment of Site Contamination) Measure (NEPM), 1999.

#### 3.1.3 Analytical Strategy

Samples were analysed for a range of contaminant indicators that may be associated with past and present land uses, i.e. imported fill material. Asbestos samples were taken to Australian Safer Environment & Technologies PTY LTD (ASET) of Hornsby. Soil samples were analysed by Envirolab Services Pty Ltd of Chatswood.

A summary of the project Soil analytical Strategy for samples collected from the Tooheys Road and Buttonderry Sites is summarised within **Table 3a** below. No soil samples were collected at the Western Ventilation Shaft Site as no potential contaminant sources were identified.

Refer to **Appendix B** – Quality Assurance and Quality Control and **Appendix B2** – Laboratory Analytical and Quality Plan



#### Table 3a

#### Soil Analytical Strategy

Sample ID	Sample Location	Potential Contaminant Sources Identified	Laboratory Analysis Selected
Т1	Tooheys Road Former Chicken Shed Footprint Area	Herbicide and Pesticide Use, Disease and Parasite treatment in chickens Termite Treatment in building structures	Organochlorine Pesticides (OCP); Organophosphorus Pesticides (OPP), Heavy Metals (As, Cu, Cr, Ca, Hg, Mn, Pb, Ni, Zn)
T2	Tooheys Road Former House Footprint Area	Herbicide and Pesticide Use, Termite Treatment	Organochlorine Pesticides (OCP); Organophosphorus Pesticides (OPP), Heavy Metals (As, Cu, Cr, Ca, Hg, Pb, Ni, Zn)
Т3	Tooheys Road Former Shed Footprint Area	Herbicide and Pesticide Use, Termite Treatment	Organochlorine Pesticides (OCP); Organophosphorus Pesticides (OPP), Heavy Metals (As, Cu, Cr, Ca, Hg, Pb, Ni, Zn)
Τ4	Tooheys Road Adjacent to Creek and Waste Stockpile	General Waste	Organochlorine Pesticides (OCP); Organophosphorus Pesticides (OPP), Heavy Metals (As, Cu, Cr, Ca, Hg, Pb, Ni, Zn)
Т5	Tooheys Road Stockyard (Former AC Sheet Storage)	Asbestos Sheeting	Asbestos
Т6	Tooheys Road Former House Footprint Area	Herbicide and Pesticide Use, Termite Treatment	Organochlorine Pesticides (OCP); Organophosphorus Pesticides (OPP), Heavy Metals (As, Cu, Cr, Ca, Hg, Pb, Ni, Zn)
Τ7	Tooheys Road Former Shed	Asbestos Sheeting	Asbestos
B1	Buttonderry Adjacent disused engine oil drum and creosote treated fencing	Engine oil and Creosote	Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAH)



#### Table 3a cont'd

B2			Organochlorine Pesticides
	Buttonderry		(OCP); Organophosphorus
	Former Orchard	Herbicide and Pesticide Use	Pesticides (OPP), Heavy
	Footprint Area		Metals (As, Cu, Cr, Ca, Hg,
			Pb, Ni, Zn)
В3		Herbicide and Pesticide Use, Termite Treatment	Organochlorine Pesticides
	Buttonderry		(OCP); Organophosphorus
	Former House		Pesticides (OPP), Heavy
	Footprint Area		Metals (As, Cu, Cr, Ca, Hg,
			Pb, Ni, Zn)

No Photo Ionisation Detection (PID) assessments were undertaken as TRH analyses was performed on all relevant samples collected. Results of contaminant concentrations were assessed with reference to the relevant HIL's, prior to reporting and making recommendations

Refer to Appendix A – NATA Certified Analytical Results.

#### 3.2 Soil Criteria

#### 3.2.1 Rationale for the Selection of Assessment Criteria

The criteria selected have been chosen in accordance with current Australian and NSW OEH guidelines. Australian Guidelines have been used in preference to international guidelines where available. These criteria are the most current and widely accepted guidelines in use at present in Australia, and have generally been developed using a risk-based approach. Therefore, the general selected guidelines provide a satisfactory framework for the Site assessment.

#### 3.2.2 Soil Criteria

Criteria for assessing the Site were derived from the following publications:

 Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 1999 Table 5a Column F – Commercial/Industrial.



- NSW EPA Guidelines for Assessing Service Station Sites 1994.
- NSW EPA Guidelines for the NSW Site Auditor Scheme, second edition 2006.

A summary of the selected Soil Assessment Criteria relevant to the Site are included within the table below.

#### Table 3b

#### Soil Assessment Criteria

Analytes	Threshold (mg/kg dry wt)	Sources	
BTEX			
Benzene	1		
Toluene	130 <sup>a</sup>	NSW Service Station Guidelines	
Ethylbenzene	50 <sup>b</sup>		
Xylene (Total)	25 <sup>b</sup>		
TPH: C6-C9 TPH: C10-C40	65 100	NSW Service Station Guidelines	
>C <sub>16</sub> -C <sub>35</sub> Aromatics	450		
$>C_{16}-C_{35}$ Aliphhatics	28000	NEPM 1999. Table 5a, Column F	
$>C_{35}$ Aliphatics	280000		
Arsenic	500		
Cadmium	100		
Chromium	500		
Copper	5000		
Lead	1500	NEPM 1999. Table 5a, Column F	
Mercury	75		
Nickel	3000		
Zinc	35000		
B(a)P	5		
Total PAH's	100	NEPM 1999. Table 5a, Column F	
PCB	50	· · _ · · · · · · · · · · · · · · · · ·	
Pesticides:			
(Aldrin/Dieldrin)	50		
Chlordane	250	NEPM 1999. Table 5a, Column F	
DDT+DDE+DDD	1000		
Heptachlor	50		
Odours	No Odours	NSW OEH	
Asbestos	No Asbestos Detected		

a Human health and ecological based protection level for toluene. The threshold concentration presented here is the Netherlands intervention value for the protection of terrestrial organisms. Other considerations such as odours and the protection of groundwater may require a lower remediation criterion.

b Human health based protection level for ethyl benzene or total xylenes as shown. The threshold concentration presented here is the Netherlands intervention value. Other considerations such as odours and the protection of groundwater may require a lower remediation criterion.



#### 3.2.3 Limitations of the Assessment Criteria

All criteria have limitations. Not all chemical analytes are covered by each set of guidelines, requiring some criteria to be sourced from elsewhere. This is particularly relevant to the Dutch guidelines, which provide a guideline for assessment for some analytes not covered by the Australian guidelines. Only criteria relevant to Australia have been used in the interpretation of analytical data on the Site.



#### 4.0 RESULTS

#### 4.1 Field Observations

Site Inspections were undertaken at the Buttonderry and Western Shaft Sites on 6<sup>th</sup> June 2012. Investigations were completed at the Tooheys Road Site on 10<sup>th</sup> July 2012.

Photographs of relevant Site features have been included within Appendix G.

#### 4.1.1 General Observations

#### 4.1.1.1 Tooheys Road Site

The Tooheys Road Site included a total of thirteen (13) separate lots. A large portion of the Site remains vegetated, with cleared areas utilised for residential/semi-rural purposes. A summary of Site Observations is included within the table below.

#### Table 4a

#### **General Site Observations - Tooheys Road Site**

Lot/DP	Address	General Observations
Lot 3 DP260217	84 Tooheys Road Bushells Ridge 2259	Natural soils observed. No imported fill noted. Residential property present at southern border of site, semi- rural use, Fire trails evident Dam present Easements present – power lines and water
Lot 1 DP260217	106 Tooheys Road Bushells Ridge 2259	Natural soils observed. No imported fill noted. Residential property present at southern border of site, Fire trails evident Dam present Easement present – power lines
Lot 124 DP755245	77 Tooheys Road Bushells Ridge 2259	Natural soils observed. No imported fill noted. Residential property, semi-rural currently used for horses only Large portion of northern half of site cleared and fenced.



Lot/DP	Address	General Observations	
Lot 128 DP658436		Large amount of concrete associated with freeway construction present within cleared area. Refer to Print <b>T-6</b> . Creek runs east west through centre of Site Small pile of dumped rubbish present to southern side of creek. Refer to Print <b>T-5</b> . Area to the west of F3 freeway vegetated apart from area cleared for power easement, small dam also present Natural soils observed. No imported fill noted. Lot 128 consists of a parcel of land between Tooheys Road and the Motorlink Road. A portion of the Site has been cleared with a dam present. The land is not currently in	
Lot 126 DP755245 Lot 102 DP755245		use and has no evidence of building structures. A large portion of Lot 126 is heavily vegetated, with a section cleared adjacent to the entry gate off Tooheys Road. A large manure/compost stockpile used for property maintenance is present within the clearing. Refer to Print <b>T-8</b> .	
Lot 103 DP755245	9 Kiar Ridge Road Kiar 2259	<ul> <li>Evidence of a former residential dwelling and shed is present within vegetated land adjacent to the creek. No building materials were identified. Refer to Print T-4.</li> <li>Evidence of former chicken sheds/farming was also noted. Refer to Prints T-1, T-2 and T-3</li> <li>Large portion of Lot 102 has been cleared. A small dam is adjacent to the Tooheys Road boundary. Evidence in form of a concrete slab of a former building structure believed to be a residence present adjacent to Tooheys Road and the Dam. No other building structures evident. Refer to Print T-9</li> <li>Large portion of Lot 103 has also been cleared. Western boundary adjoins Boral Quarry fencing. No evidence of building structures evident. No fencing present between Lot 102 and Lot 103.</li> </ul>	
Lot 194 DP1032847 Lot 195 DP1032847	425 Bushells Ridge Road Bushells 2259	Natural soils observed. No imported fill noted.	
Lot 193 DP1032847	Bushells Ridge Road Bushells 2259	Natural soils observed. No imported fill noted. Undisturbed forest area	
Lot 4 DP258584	No address	Natural soils observed. No imported fill noted. Undisturbed forest area. Irregular shape indicates possible easement in future	
Lot 5 DP260217 Lot 4 DP260217	Ourimbah 2258 / Tooheys Road Bushells Ridge 2259	Natural soils observed. No imported fill noted.	



#### 4.1.1.2 Buttonderry Site

The Buttonderry Site included a total of two (2) separate lots. A large portion of the Site remains vegetated with fire trails evident, with cleared areas utilised for cattle grazing. A summary of Site Observations is included within the table below.

#### Table 4b

#### **General Site Observations – Buttonderry Site**

Lot/DP	Address	General Observations		
Lot 1 DP 791157	672 Hue Hue Road Jilliby 2259	Natural soils observed. No imported fill noted. Approx. 20% of Lot 1 consists of cleared farmland currently used for Cattle Grazing. Internal fencing exists to restrict cattle movements. A cleared power line easement also extends from the south eastern boundary of the Site through to the northern boundary. The remainder of the Site comprises of bushland with fire trail access paths. Inspection of the fire trails indicates that there has been no illegal dumping or previous construction activities. No other potential contaminant sources were identified.		
Lot 2 DP 791157	670 Hue Hue Road Jilliby 2259	<ul> <li>No other potential containing sources were identified.</li> <li>Natural soils observed. No imported fill noted.</li> <li>Approx. 50% of Lot 2 consists of cleared farmland currently used for Cattle Grazing. Internal fencing exists to restrict cattle movements. The remainder of the Site comprises of virgin bushland with fire trail access paths.</li> <li>An area covering approximately 5000m2 appears to be previously used as an orchard or market garden. Refer to Print B3</li> <li>A damaged shipping container containing racking and timber is present off the main access path. Refer to Print B6.</li> <li>Adjacent to the container appears to be the footprint of the former residential property associated with the grazing activity. The footprint of a small shed is also present between the shipping container and small dam. Print B7 and B8.</li> <li>West of the small dam to the side of the fire trail are two (2) small piles of illegally dumped waste including tin, iron, brick, concrete and tyres. No Asbestos was detected within the waste. Refer to Print B1 and B2.</li> <li>One (1) 44 gallon grape seed oil drum was noted adjacent to the north eastern boundary. Refer to Print B4.</li> <li>A small stock yard was observed adjacent to Lot 1 boundary at the north eastern corner of the Site. A disused 20L drum of motor vehicle oil was observed at the base of the timber structure. No lid was observed on the drum and staining of the ground surface was observed on the drum and staining of the ground surface was</li> </ul>		



Lot/DP	Address	General Observations		
		the timber structure for termite protection. Refer to Print <b>B5</b> .		

#### 4.1.1.3 Western Ventilation Shaft Site

The Western Ventilation Shaft Site consists of a dirt access road surrounded forest area. A summary of Site Observations is included within the table below.

#### Table 4c

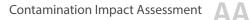
#### General Site Observations – Western Ventilation Shaft Site

Lot/DP	Address	General Observations				
N/A	No Address – Wyong State Forrest	Natural Soils observed. No Imported Fill The Site consists of unsealed dirt road access through Wyong Stat Forest. The road is only accessible to four wheel drive vehicles. Th condition of the road suggests that the area is sparingly accessed a wheel ruts were not evident. No evidence of land use or occupation was observed. No signs of illegal dumping of waste were observed within the Sit boundaries at the time of Inspection. The dense vegetation would likel limit dumping to areas immediately adjacent to the access road. No potential contamination sources were identified onsite or adjacent t the Site boundaries.				
Lot 1 DP 581339	Brothers Rd Jilliby	This lot will be used strictly for access to the Western Ventilation Shaft Site. Refer to above for site observations.				

#### 4.1.2 Asbestos

#### 4.1.2.1 Tooheys Road Site

Prior to Site Inspections asbestos removal works were undertaken during property maintenance. A summary of Asbestos Observations is included within the table below.





#### Table 4d

#### Asbestos Observations – Tooheys Road Site

Lot/DP	Address	Asbestos Observations		
Lot 3 DP260217	84 Tooheys Road Bushells Ridge 2259	No Asbestos Detected		
Lot 1 DP260217	106 Tooheys Road Bushells Ridge 2259	No Asbestos Detected		
Lot 124 DP755245	77 Tooheys Road Bushells Ridge 2259	Asbestos removed as part of property maintenance schedule from stockyard area adjacent creek.		
		Asbestos cement sheeting noted on roof of shed		
Lot 128 DP658436				
Lot 126 DP755245	9 Kiar Ridge Road Kiar 2259	Asbestos removed from shed footprint area and former chicken shed area as part of property maintenance schedule		
Lot 102 DP755245	5 Mar Muge Noau Mar 2235			
Lot 103 DP755245				
Lot 194 DP1032847	425 Bushells Ridge Road	No Asbestos Detected		
Lot 195 DP1032847	Bushells 2259			
Lot 193 DP1032847	Bushells Ridge Road Bushells Ridge 2259	No Asbestos Detected		
Lot 4 DP258584	No address	No Asbestos Detected		
Lot 5 DP260217	Tooheys Road Bushells Ridge	No Asbestos Detected		
Lot 4 DP260217	2259			

#### 4.1.2.2 Buttonderry Site

A summary of Asbestos Observations is included within the table below.

#### Table 4e

#### Asbestos Observations – Buttonderry Site

Lot/DP	Address	Asbestos
Lot 1 DP 791157	672 Hue Hue Road Jilliby 2259	No evidence of asbestos containing materials was observed
Lot 2 DP 791157	670 Hue Hue Road Jilliby 2259	No evidence of asbestos containing materials was observed within the former building footprint or the remainder of the Site



#### 4.1.2.3 Western Ventilation Shaft Site

A summary of Asbestos Observations is included within the table below.

#### Table 4f

#### Asbestos Observations – Western Shaft Site

Lot/DP	Address	Asbestos		
Lot 1 DP 581339	No Address – Wyong State Forrest	No Asbestos was observed within the project boundaries. Illegally dumped waste containing a minor amount of asbestos was observed on the edge of Brothers Road approximately 200m from the south western Site boundary.		

#### 4.1.3 Offsite Observations

#### 4.1.3.1 Tooheys Road Site

A summary of Offsite Observations is included within the table below.

#### Table 4g

#### **Offsite Observations – Tooheys Road Site**

Lot/DP	Address	Offsite Observations	
Lot 3 DP260217	84 Tooheys Road Bushells Ridge 2259	F3 Freeway to the north and west Lot 126 DP260217 to the south Lot 1 DP260217 to the east	
Lot 1 DP260217	106 Tooheys Road Bushells Ridge 2259	9 Kiar Ridge Property to the south 84 Tooheys Road Property and F3 freeway to the west Vegetated land outside project boundary to north	
Lot 124 DP755245	77 Tooheys Road Bushells Ridge 2259	Motorlink Road and vegetated land present to the south of Site. F3 freeway and vegetated land to the west 9 Kiar Ridge Property to the East 84 Tooheys Road Property to the North	
Lot 128 DP658436		Lot 128 – Motorlink Road to the South, Tooheys Road to the North, Lot 126 to the west, 203	
Lot 126 DP755245	9 Kiar Ridge Road Kiar 2259	Tooheys Road to the east (vacant land, small portion cleared, outside project area)	
Lot 102 DP755245		Lot 126 - Motorlink Road to the South, Tooheys Road to the North, Lot 128 to east, 77 Tooheys	



Lot/DP	Address	Offsite Observations
Lot 103 DP755245		Road to the west Lot 102 – Tooheys Road to South, vegetated land to the north, Lot 103 to east to 106 Tooheys Road to west Lot 103 - Tooheys Road to South, vegetated land to the north, Quarry to the east, Lot 102 to the west
Lot 194 DP1032847 Lot 195 DP1032847	425 Bushells Ridge Road Bushells 2259	
Lot 193 DP1032847	Bushells Ridge Road Bushells Ridge 2259	Bordered by Lots 102 and 103 within 9 Kiar Road to the south and undisturbed bushland in other directions.
Lot 4 DP258584	No address	Adjoins southern boundary of 77 Tooheys Road between it and Motorlink Road
Lot 5 DP260217		Lot 4 is bordered by F3 Freeway to west and north, Lot 5 to the east , 77 Tooheys Road to the South.
Lot 4 DP260217	Tooheys Road Bushells Ridge 2259	Lot 5 is bordered by Lot 4 to the west, 77 Tooheys Road to the south and 84 Tooheys Road to the East and North

#### 4.1.3.2 Buttonderry Site

A summary of Offsite Observations is included within the table below.

#### Table 4h

#### **Offsite Observations – Buttonderry Site**

Lot/DP	Address	Offsite Observations			
Lot 1 DP 791157	672 Hue Hue Road Jilliby 2259	Lot 1 is bordered by Lot 2 to the south, Hue Hue Road to the east and semi-rural residential properties to the west and north. The presence of creosote coated fencing and the motor oil drum identified within Lot 2 is approximately 20m from the south eastern boundary			
Lot 2 DP 791157	670 Hue Hue Road Jilliby 2259	Lot 2 is bordered by Lot 1 to the north, Hue Hue Road to the east and semi-rural residential properties to the west and south.			



#### 4.1.3.3 Western Ventilation Shaft Site

A summary of Offsite Observations is included within the table below.

#### Table 4i

#### Offsite Observations – Western Shaft Site

Lot/DP	Address	Offsite Observations			
N/A	No Address – Wyong State Forrest	No Asbestos was observed within the project boundaries. Illegally dumped waste containing a minor amount of asbestos was observed on the edge of Brothers Road approximately 200m from the south western Site boundary.			
Lot 1 DP 581339	Brothers Rd Jilliby	No Asbestos was observed within the Site boundaries.			

#### 4.1.4 Dangerous Goods

No Dangerous Goods were identified during Site Inspections at any of the properties within Tooheys Road, Buttonderry or Western Ventilation Shaft Site. Refer to Section 2.4: which details WorkCover Dangerous Goods Storage Licenses for all properties.

Refer to **Appendix E** – Dangerous Goods Search

#### 4.2 Laboratory Results

#### 4.2.1 Soil Analysis

All soils are analysed against the Site Criteria: NEPM, Table 5a Column F – *Commercial/Industrial*. The sampling regime involved the collection of representative surface samples and subsurface samples where possible.

In total of ten (10) soil samples were submitted to Envirolab Pty Ltd for a range of laboratory analyses. The results of the assessments conducted at the Site are summarised below.

Refer to Appendix A - Sample Log and NATA Certified Analytical Data



#### Total Recoverable Hydrocarbons (TRH)

One (1) sample was collected and analysed from the Buttonderry Site for Total Recoverable Hydrocarbons (TRH). Sample B1 returned a concentration of 56,190mg/kg which was in excess of the Service Station Guidelines (most sensitive) of 1000 mg/kg.

#### Table 4j

#### TRH Detections in Soil (mg/kg)

Sample ID	Total Recoverable Hydrocarbons			
	C <sub>10</sub> -C <sub>14</sub>	C <sub>15</sub> -C <sub>28</sub>	C <sub>29</sub> -C <sub>36</sub>	Total
B1	190	27,000	29,000	56,190
Criteria	-	-	-	1000

#### Polycyclic Aromatic Hydrocarbons (PAH)

One (1) sample, B1, was collected and analysed from the Buttonderry Site for Polycyclic Aromatic Hydrocarbons (PAH). The concentrations of PAH recorded were below the Site Assessment Criteria, indicating that the observed fence staining is not associated with the use of creosote and more associated with the use of used engine oil.

#### Pesticides

A total of seven (7) samples, B2 and B3 from Buttonderry and T1, T2, T3, T4 and T6 from the Tooheys Road Site were submitted for OCP and OPP analysis. No concentrations of OPP or OCP were recorded above the LOR and are therefore within the Site assessment criteria.

#### Heavy Metals

A total of seven (7) samples, B2 and B3 from Buttonderry and T1, T2, T3, T4, T6 and T7 from the Tooheys Road Site, were submitted for analysed for all eight (8) heavy metals as recommended by the NSW OEH. The samples collected from the Tooheys Road Site were also analysed for manganese. No sample exceeded the Site acceptance criteria of NEHF F – Commercial/Industrial for the heavy metals analysed.



#### Table 4k

#### Metals in Soil (mg/kg)

Sample ID				H	leavy N	letals			
Sample ID	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Mn
B2	<4	<0.5	5	7	10	<0.1	1	35	-
B3	6	<0.5	14	44	110	0.1	6	230	-
T1	<4	<0.5	21	9	380	0.2	11	3,300	180
T2	<4	<0.5	6	2	13	<0.1	1	19	42
Т3	<4	<0.5	4	<1	8	<0.1	<1	6	5
T4	<4	<0.5	2	1	6	<0.1	1	23	8
Т6	<4	2.4	15	47	60	<0.1	11	830	300
HIL	500	100	500	5000	1500	75	3000	35000	7500

#### Soil Asbestos Analysis

A total of seven (7) soil samples were collected for asbestos analysis from the Tooheys Road Site. Samples were collected from the footprint of areas where asbestos containing materials were removed as part of past property maintenance works. No asbestos containing materials were identified within any of the samples collected and no asbestos was observed during Site inspections.

#### 4.3 QA/QC Comments

The results of the field and laboratory quality assurance and quality control procedures complied with all stated DQOs. While relative homogeneity is expected, the very nature of the material and the contaminant concentrations would create expectancy for some heterogeneity.

Laboratory and Field duplicates, and quality assurance samples complied with stated data quality objectives.

A review of the QA/QC controls incorporated into the process and given the generally low concentrations of contaminants present in the soil on Site generally, relative to threshold concentrations, the required degree of confidence in the results can be obtained. It is considered that the analytical data generated is of an acceptable degree of accuracy and precision for the purpose of assessing the soil quality on the Site.



# 5.0 DISCUSSION

This CIA conducted included both visual and historical investigations at the Tooheys Road, Buttonderry and Western Ventilation Shaft Sites. The potential chemical contaminants of concern for each area were evaluated. A judgemental soil sampling approach was utilised, which involved sampling of areas identified as having a higher potential for anthropogenic influence.

#### 5.1 Tooheys Road Site

The field observations and a review of Site history information identified potential contaminant sources within two (2) of the properties at the Tooheys Road Site. Former building footprint areas and remnants of chicken farming were present at the property identified as 9 Kiar Ridge Road and dumped waste material was identified adjacent to the creek at 77 Tooheys Road. It is understood that asbestos containing materials were removed from the two (2) properties prior to Site Inspection, with clearance certification issued. The asbestos clearance certification and waste disposal documentation has been viewed but is not included in the report.

Soil samples collected from the identified areas complied with the respective HIL values for OC and OP Pesticides and Heavy Metals associated with the use of pesticides and herbicides. No asbestos containing materials were identified within soils onsite, however they were observed within existing building structures, sheds and residential dwellings.

#### 5.2 Buttonderry Site

The field observations and a review of Site history information identified former building footprint areas, the use of a portion of Lot 2 as a market garden or orchard, treated stockyard fencing, dumped waste material and a leaking engine oil drum as the most likely potential sources of contamination.

Surface soil samples (B2 and B3) collected from the building footprint and orchard areas were analysed for OC and OP Pesticides and Heavy Metals also associated with the use of pesticides and herbicides. Laboratory results indicated that the concentrations complied with the respective Commercial/Industrial Criteria outlined within Table 5a Column F within NEPM 1999.



One (1) soil sample (B1) was collected from the surface soils adjacent to the treated stock yard where the leaking motor oil drum was located. The sample was analysed for TRH compounds and was found to have a concentration of 56,190mg/kg, exceeding the Service Station Guideline (most sensitive) Guideline of 1000mg/Kg.

The sample was representative of a small area (approx. 3m x 3m) of surface soils (<0.2m below ground level) associated with a small drum (25L) of leaking motor oil, thought to be associated with the treatment of the stockyard fence line. An oil sheen was evident on the pooled surface water with subsurface soils not impacted. It is recommended that the impacted soils are removed utilising the *'Excavate and Dispose'* methodology. Due to the small volume of material requiring removal, a Remediation Action Plan is not deemed necessary.

Inspection of dumped waste adjacent to the main access fire trail indicated the presence of tin, iron, car parts, timber, wire and other assorted household waste. No asbestos containing materials was identified within any of the identified dumped waste piles.

With the remediation of the minor TRH contaminated soils, the Site can be made suitable for a land use consistent with *Commercial/Industrial*, Table 5a Column F within NEPM 1999. No off-Site influences were identified as having the potential to impact the suitability of the Site or future occupants of the land.

#### 5.3 Western Ventilation Shaft Site

No potential contaminant sources were identified within the Western Ventilation Shaft Site. What appeared to be illegally dumped waste including asbestos containing building materials was identified off Brothers Road, however this material was approximately 200m further south from the Site boundary.

It is the opinion of DLA that the Site is suitable for a land use consistent with *Commercial/Industrial*, Table 5a Column F within NEPM 1999. No off-Site influences were identified as having the potential to impact the suitability of the Site or future occupants of the land.



#### 5.4 Groundwater

Considering on-Site observations, and detected levels of contaminants in the soils, the likelihood of groundwater impaction is considered to be very low across the three (3) Sites. Groundwater is not expected to have been affected by activities onsite, based on the Site observations, detected levels of contaminants in the soil and hydraulic conductivity. It is the opinion of DLA that no further groundwater investigation is therefore warranted for assessment of contamination purposes.



## 6.0 CONCLUSIONS

#### 6.1 Tooheys Road Site

The sampling regime and subsequent assessment and reporting of the Tooheys Road Site is considered to be adequate to determine the land use suitability of the Site. No evidence can be found to infer contamination by heavy metals, pesticides, or asbestos at the Site.

A comprehensive Hazardous Materials Survey should be undertaken before any future demolition or refurbishment works of building structures are carried out to determine whether any asbestos containing materials are present within building materials.

It is the opinion of DLA that the Site is suitable for a land use consistent with *Commercial/Industrial*, Table 5a Column F within NEPM 1999. No off-Site influences were identified as having the potential to impact the suitability of the Site or future occupants of the land.

#### 6.2 Buttonderry Site

The sampling regime and subsequent assessment and reporting of the Buttonderry Site is considered to be adequate to determine the land use suitability of the Site. No evidence can be found to infer contamination by heavy metals, PAH compounds, pesticides or asbestos at the Site.

TPH contamination associated with a minor motor oil spill, identified in surface soils at the Buttonderry Site will require removal to a maximum depth of 0.2m prior to a Validation being conducted. The contaminated material should be disposed of at a suitably licensed landfill facility in accordance with NSW DECC Waste Classification Guidelines, 2009. The contamination noted is of a minor and localised nature, and does not currently pose a risk to health or the environment generally. The TRH hotspot, can simply be remediated by surface scraping of soils, and therefore does not warrant any further action by way of a Remedial Action Plan (RAP) or NSW Site Auditor involvement.

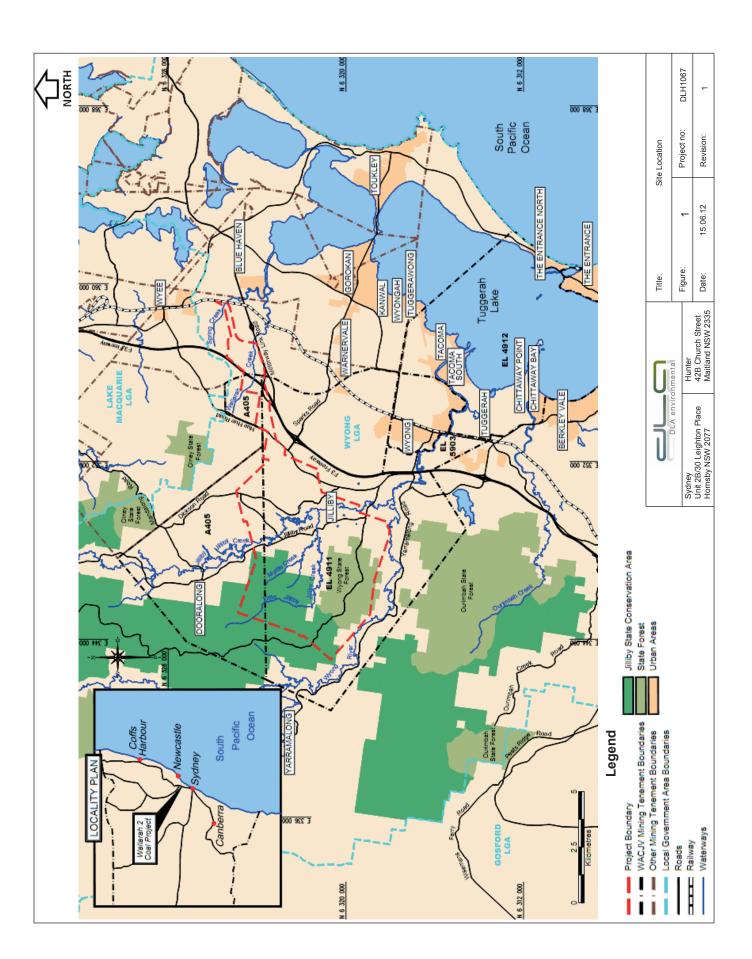
The completion of this report concludes that the Site assessment objectives and the Site Acceptance Criteria have been achieved. With the completion of minor remedial works associated with motor oil contamination in the described area, the Site can then be made suitable for an end land use consistent with NEPM 1999 Table 5a Column F – Commercial/Industrial.



### 6.3 Western Ventilation Shaft Site

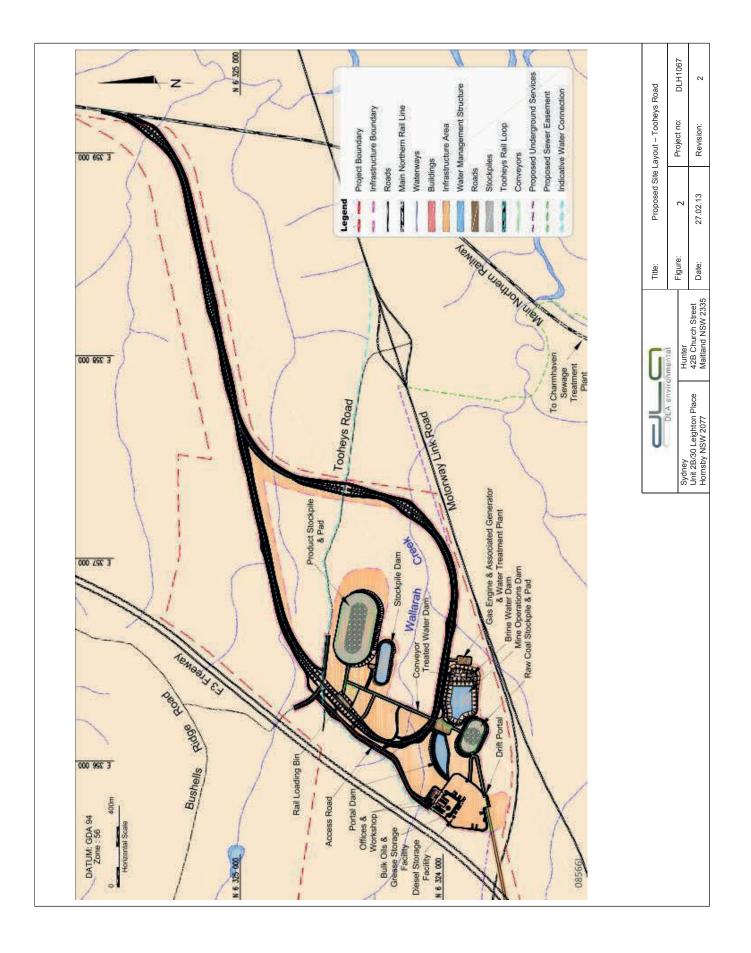
It is the opinion of DLA that the Site is suitable for a land use consistent with *Commercial/Industrial*, Table 5a Column F within NEPM 1999. No direct off-Site influences were identified as having the potential to impact the suitability of the Site or future occupants of the land.

It is the opinion of DLA Environmental, that the land in its present environmental condition is suitable for the intended land use.







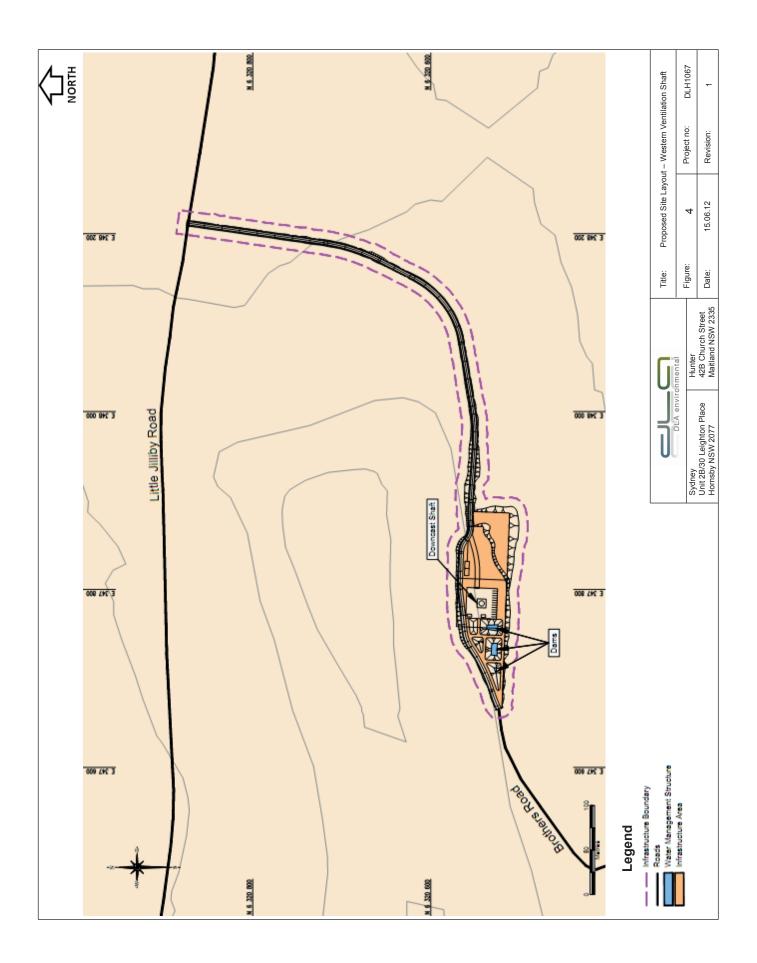


123 00 DLH1067 Proposed Underground Services 2 Water Management Structure Proposed Site Layout – Buttonderry Site Indicative Sewer Connection Infrastructure Boundary Vegetation Screening Project no: Infrastructure Area Project Boundary Revision Buildings Roads Bund 27.02.13 ო DEON ent ent Electrical Substation Figure: Date: Title: Hunter 42B Church Street Maitland NSW 2335 Office Open Yard Storage E 385 600 009 295 3 orn Gates 0 Sydney Unit 2B/30 Leighton Place Hornsby NSW 2077 **ן** the per LALLAN . Cummun Trum me Oli Packagi ase Storage. E 362 400 E 225 400 A DESCRIPTION OF THE PARTY OF T Heicopter F Open Yard Storage 8 98 Mine Ventilation Fai Workshop / St E 365 200 E 262 200 Fire & Gen DATUM: GDA 94 Zone : 56 Horizontal Sc Dry Goods 1 08567G N 6 322 800

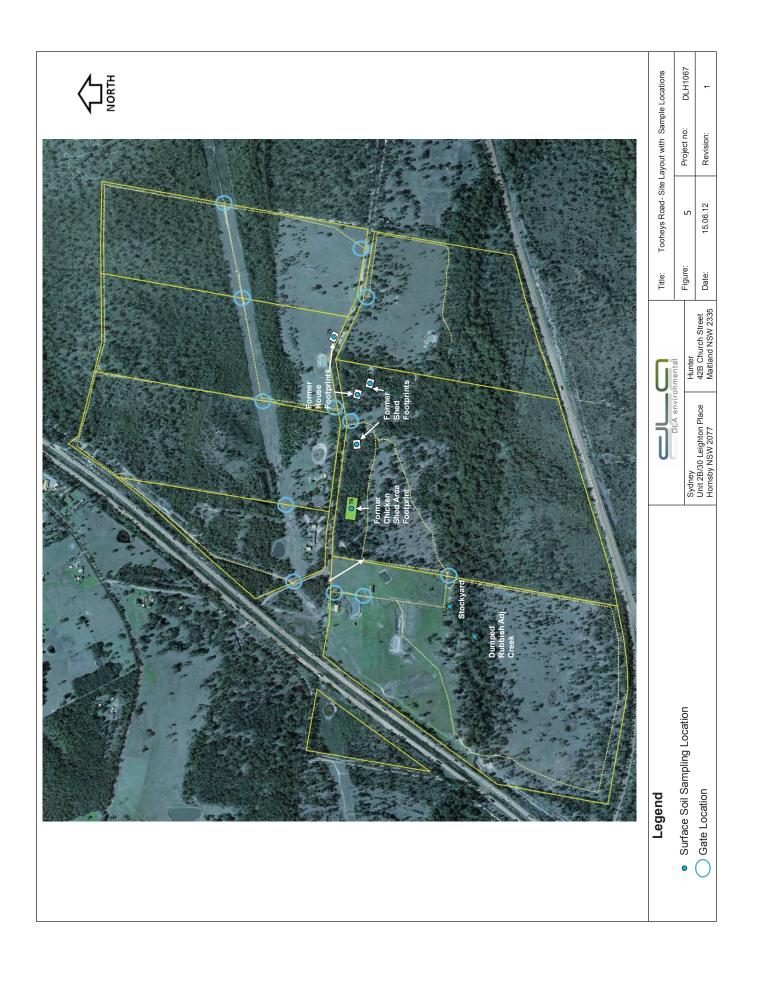
47





















# Appendix A

Sample Log and NATA Certified Analytical Data

ΔΔ	Contamination Impact Assessment



Tooehys Road Site	ad Site																						
Samula ID	Data	Analytical Bonort	Description			BTEX			Pet	Petroleum	PAH		Pesticides	ides				Heavy	Heavy Metals				
	Caro,	MIDINICAL NEPUL		Asb	Benz To	Toluen Et	EthylBe X	Xylene V	vTPH s	semi volatile TPH	B(a)P	Total	OP	ос	As	Cd	cr	Cu F	Pb F	Hg	Ni Zn	uM r	
Τ1	6/06/2012	74567	Dark Topsoil, Large volume of Organic										pu	pu	<4	<0.5	21	9 3	380 0	0.2	1 3,300	00 180	0
Τ2	10/07/2012	75928	Dark Topsoil and Underlying Grey Clays, moist	pu			,						pu	pu	<4	<0.5	9	2	13 <(	<0.1	1 19	9 42	
Т3	10/07/2012	75928	Dark Topsoil and Underlying Grey Clays. Moist	pu										,	<4	<0.5	4	v	⊗	<0.1	<1 6	2	
Τ4	10/07/2012	75928	Dark Topsoi, minor volume of gravel evident	pu			,						pu	pu	<4	<0.5	2	- -	6 <0	0.1	1 23	~	
T5	10/07/2012	75928	Grey/Red Clays	pu										,									
T6	10/07/2012	75928	Dark Topsoil Silty Loam	pu					,				pu	pu	<4	2.4	15	47 6	60 <0.	0.1 ·	1 830	0 300	0
T7	23/07/2012	76741	Grey/Red Clays	pu																			
Buttonderry Site	Site																						
Cample ID	Dato	Auchatical Deviced	Doervintion			BTEX			Pet	Petroleum	PAH		Pesticides	ides				Heavy	Heavy Metals				
	naid	MIDINICAL REPOR		Asb	Benz To	Toluen Et	EthylBe X	Xylene V	vTPH s	semi volatile TPH	B(a)P	Total	OP	ос	As	Cd	cr	Cu F	Pb F	Hg	Ni Zn	W	
B1	6/06/2012	74567	Dark Topsoil Loam, oil residue evident							56,190	pu	1.1											
В2	6/06/2012		74567 Dark Tonsoil Silty Loam										pu	pu	<4	<0.5	ĸ	2	10	<0.1	35		Γ

Appendix A: Sample Log





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

#### **CERTIFICATE OF ANALYSIS**

74567

Client: David Lane Associates (Maitland) 42B Church St Maitland NSW 2320

Attention: Jay Coburn

#### Sample log in details:

Your Reference:	DLH1067-Wallarah	
No. of samples:	4 Soils 3 Waters	
Date samples received / completed instructions received	07/06/2012 /	07/06/2012

#### Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data. Samples were analysed as received from the client. Results relate specifically to the samples as received. Results are reported on a dry weight basis for solids and on an as received basis for other matrices. *Please refer to the last page of this report for any comments relating to the results.* 

#### **Report Details:**

 Date results requested by: / Issue Date:
 15/06/12
 /
 14/06/12

 Date of Preliminary Report:
 Not issued

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 Accredited for compliance with ISO/IEC 17025.

 Tests not covered by NATA are denoted with \*.

#### **Results Approved By:**

Nancy Zhang Chemist

high Morgen Rhian Morgan

Reporting Supervisor



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Envirolab Reference: 74567 Revision No: R 00





sTRH in Soil (C10-C36)		
Our Reference:	UNITS	74567-1
Your Reference		B1
Date Sampled		06/06/2012
Type of sample		Soil
Date extracted	-	08/06/2012
Date analysed	-	08/06/2012
TRHC10 - C14	mg/kg	190
TRHC 15 - C28	mg/kg	27,000
TRHC29 - C36	mg/kg	29,000
Surrogate o-Terphenyl	%	#

Envirolab Reference: 74567 Revision No: R 00 Page 2 of 15





PAHs in Soil		
Our Reference:	UNITS	74567-1
Your Reference		B1
Date Sampled		06/06/2012
Type of sample		Soil
Date extracted	-	08/06/2012
Date analysed	-	09/06/2012
Naphthalene	mg/kg	<0.5
Acenaphthylene	mg/kg	<0.5
Acenaphthene	mg/kg	<0.5
Fluorene	mg/kg	<0.5
Phenanthrene	mg/kg	0.9
Anthracene	mg/kg	<0.5
Fluoranthene	mg/kg	<0.5
Pyrene	mg/kg	1.1
Benzo(a)anthracene	mg/kg	<0.5
Chrysene	mg/kg	<0.5
Benzo(b+k)fluoranthene	mg/kg	<1
Benzo(a)pyrene	mg/kg	<0.25
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.5
Dibenzo(a,h)anthracene	mg/kg	<0.5
Benzo(g,h,i)perylene	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	93

Envirolab Reference: 74567 Revision No: R 00 Page 3 of 15



Organochlorine Pesticides in soil				
Our Reference:	UNITS	74567-2	74567-3	74567-4
Your Reference		B2	В3	T1
Date Sampled		06/06/2012	06/06/2012	06/06/2012
Type of sample		Soil	Soil	Soil
Date extracted	-	08/06/2012	08/06/2012	08/06/2012
Date analysed	-	09/06/2012	09/06/2012	09/06/2012
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	122	127	75

Envirolab Reference: 74567 Revision No: R 00 Page 4 of 15



Organophosphorus Pesticides				
Our Reference:	UNITS	74567-2	74567-3	74567-4
Your Reference		B2	B3	T1
Date Sampled		06/06/2012	06/06/2012	06/06/2012
Type of sample		Soil	Soil	Soil
Date extracted	-	08/06/2012	08/06/2012	08/06/2012
Date analysed	-	09/06/2012	09/06/2012	09/06/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	122	127	75

Envirolab Reference: 74567 Revision No: R 00

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Acid Extractable metals in soil				
Our Reference:	UNITS	74567-2	74567-3	74567-4
Your Reference		B2	В3	T1
Date Sampled		06/06/2012	06/06/2012	06/06/2012
Type of sample		Soil	Soil	Soil
Date digested	-	08/06/2012	08/06/2012	08/06/2012
Date analysed	-	08/06/2012	08/06/2012	08/06/2012
Arsenic	mg/kg	<4	6	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5
Chromium	mg/kg	5	14	21
Copper	mg/kg	7	44	9
Lead	mg/kg	10	110	380
Mercury	mg/kg	<0.1	0.1	0.2
Nickel	mg/kg	1	6	11
Zinc	mg/kg	35	230	3,300

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Moisture					
Our Reference:	UNITS	74567-1	74567-2	74567-3	74567-4
Your Reference		B1	B2	B3	T1
Date Sampled		06/06/2012	06/06/2012	06/06/2012	06/06/2012
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/06/12	08/06/12	08/06/12	08/06/12
Date analysed	-	12/06/12	12/06/12	12/06/12	12/06/12
Moisture	%	24	35	53	66

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BTEX in Water			
Our Reference:	UNITS	74567-5	74567-6
Your Reference		TS	TB
Date Sampled		06/06/2012	06/06/2012
Type of sample		Water	Water
Date extracted	-	08/06/2012	08/06/2012
Date analysed	-	09/06/2012	09/06/2012
Benzene	µg/L	82%	<1
Toluene	µg/L	85%	<1
Ethylbenzene	µg/L	78%	<1
m+p-xylene	µg/L	79%	<2
o-xylene	µg/L	80%	<1
Surrogate Dibromofluoromethane	%	107	104
Surrogate toluene-d8	%	105	105
Surrogate 4-BFB	%	105	102

Envirolab Reference: 74567 Revision No: R 00 Page 8 of 15



	1	
Metals in Water - Dissolved		
Our Reference:	UNITS	74567-7
Your Reference		RB
Date Sampled		06/06/2012
Type of sample		Water
Date digested	-	08/06/2012
Date analysed	-	08/06/2012
Arsenic - Dissolved	mg/L	<0.05
Cadmium - Dissolved	mg/L	<0.01
Chromium - Dissolved	mg/L	<0.01
Copper - Dissolved	mg/L	<0.01
Lead - Dissolved	mg/L	<0.03
Mercury - Dissolved	mg/L	<0.0005
Nickel - Dissolved	mg/L	<0.02
Zinc - Dissolved	mg/L	<0.02

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Wallarah 2 Coal Project 62 Environmental Impact Statement April 2013

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Method ID	Methodology Summary
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Metals-020 ICP- AES	Determination of various metals by ICP-AES.
Metals-021 CV- AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.

Envirolab Reference: 74567 Revision No: R 00 Page 10 of 15



		Clie	ent Reference	e: D	LH1067-Wall	arah		
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTRH in Soil (C10-C36)						Base II Duplicate II % RPD		
Date extracted	-			08/06/2 012	[NT]	[TN]	LCS-1	08/06/2012
Date analysed	-			08/06/2 012	[NT]	[TN]	LCS-1	08/06/2012
TRHC 10 - C 14	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	93%
TRHC 15 - C28	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	108%
TRHC29 - C36	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	96%
Surrogate o-Terphenyl	%		Org-003	93	[NT]	[NT]	LCS-1	71%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II % RPD		
Date extracted	-			08/06/2 012	[NT]	[NT]	LCS-1	08/06/2012
Date analysed	-			09/06/2 012	[NT]	[NT]	LCS-1	09/06/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	125%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	129%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	118%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	119%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[TN]	LCS-1	121%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[TN]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[TN]	LCS-1	121%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	[NT]	[NT]	LCS-1	120%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
<i>Surrogate p-</i> Terphenyl- d <sub>14</sub>	%		Org-012 subset	109	[NT]	[NT]	LCS-1	113%

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Client Reference: DLH1067-Wallarah								
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II % RPD		
Date extracted	-			08/06/2 012	[NT]	[NT]	LCS-1	08/06/2012
Date analysed	-			09/06/2 012	[NT]	[NT]	LCS-1	09/06/2012
НСВ	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	107%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	109%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	107%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	104%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	104%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	106%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	111%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	113%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	116%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	100%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-005	108	[NT]	[NT]	LCS-1	118%

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	SpikeSm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II % RPD		
Date extracted	-			08/06/2 012	[NT]	[NT]	LCS-1	08/06/2012
Date analysed	-			09/06/2 012	[NT]	[NT]	LCS-1	09/06/2012
Diazinon	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	103%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	108%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	111%
Surrogate TCLMX	%		Org-008	108	[NT]	[NT]	LCS-1	109%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II % RPD		
Datedigested	-			[NT]	[NT]	[NT]	LCS-1	08/06/2012
Date analysed	-			[NT]	[NT]	[NT]	LCS-1	08/06/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-1	91%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	LCS-1	91%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	93%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	95%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	90%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-1	108%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	92%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[TN]	LCS-1	91%

Envirolab Reference: 74567 Revision No: R 00



		Clie	ent Referenc	e: D	LH1067-Wall	arah		
QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank				
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
BTEX in Water						Base II Duplicate II % RPD		
Date extracted	-			08/06/2 012	[NT]	[TN]	LCS-W1	08/06/2012
Date analysed	-			09/06/2 012	[NT]	[TN]	LCS-W1	09/06/2012
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	103%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	108%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	100%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	104%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	103%
<i>Surrogate</i> Dibromofluoromethane	%		Org-016	105	[NT]	[NT]	LCS-W1	82%
Surrogate toluene-d8	%		Org-016	104	[NT]	[NT]	LCS-W1	103%
Surrogate 4-BFB	%		Org-016	105	[NT]	[NT]	LCS-W1	104%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Metals in Water - Dissolved						Base II Duplicate II % RPD		
Date digested	-			08/06/2 012	[NT]	[TN]	LCS-W1	08/06/2012
Date analysed	-			08/06/2 012	[NT]	[TN]	LCS-W1	08/06/2012
Arsenic - Dissolved	mg/L	0.05	Metals-020 ICP-AES	<0.05	[NT]	[NT]	LCS-W1	102%
Cadmium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	107%
Chromium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	105%
Copper - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	104%
Lead - Dissolved	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	LCS-W1	103%
Mercury - Dissolved	mg/L	0.0005	Metals-021 CV-AAS	<0.000 5	[NT]	[TN]	LCS-W1	88%
Nickel - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[TN]	LCS-W1	105%
Zinc - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[TN]	LCS-W1	104%

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# Client Reference: DLH1067-Wallarah

# **Report Comments:**

Total Recoverable Hydrocarbons in soil (semivol):# Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

PAH's in soil:PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.

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

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

# **Quality Control Definitions**

**Blank**: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples. **Duplicate**: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist. LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample. Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

## Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

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

Envirolab Reference: 74567 Revision No: R 00

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			<b>CHAIN OF CUSTODY - Client</b>	QF	S	IOT 0	7	Clie	int					(Fný)rolah	4
				ENVIE	COLAE	SER	VIROLAB SERVICES								2
Client:	DLA Environmental			<b>Client Project Name and Number:</b>	oject Nam	e and Nu	nber:			ш	<b>Envirolab Services</b>	o Servi	Ses		
Project Mgr:	Jay Coburn				DLH10	DLH1067 - Waltarah	arah			H	2 Ashley	St, Chat	12 Ashley St, Chatswood, NSW, 2067	N, 2067	
Sampler:	Jay Coburn			PO No.:											
Address:	42b Church St			Envirolat	Envirolab Services Quote No. :	Quote No				Ā	Phone: 02 9910 6200	9910 62	00		
	Maitland 2320			Date resi	Date results required:	ä				Ë	Fax: 02	02 9910 6201	101		
Email:	dla.hunter@bigpond.com	E E		Or choos	e: standa	rd / 1 day	Or choose: standard / 1 day / 2 day / 3 day	3 day		يت	mail: at	ie@envi	rolabservi	E-mail: ahie@envirolabservices.com.au	
Phone:	(02) 49 33 0001	Fax:		Note: Infon surcharge a	n lab in adva oplies	nce if urgen	Note: Inform lab in advance if urgent turnaround is required surcharge applies	is required		Ū	<b>Contact: Aileen Hie</b>	ileen Hid	4		
	Sample information	nation						Tes	Tests Required	ų				Comments	s
Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	HAT	d0/70	8W	XāT8							Provide as much information about the sample as you can	uch out the r can
	B1	6/06/12	Soi	∠ ×											
.6	B2	6/06/12	Soil		X	Х									
1	B3	6/06/12	Soil		X	X									
4	T1	6/06/12	Soil		X	X									
•	TS	6/06/12	water				X								
<u>ب</u>	TB	6/06/12	water				ΪX							-	
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Delinoniched	Balinauishad hv (ramnanv).	A IG		Received	Received by (company);	anv):	ELS			<u> </u>	imples Rec	eivee: Co	Samples Received: Cool & Ambient (circle one)	(circle one)	
nonem hunou	Malcolm Adrian	i		Print Name:		$\sim$	ovid .				Temperature Recieved at:	Recieved	at:	(if applicable)	
Date & Time:	6/06/2012			Date & Time:	me: 7	112	16:30			F	ansported	by: Hand	ivered / o	ourier	
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Envirolab Services Pty Ltd ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 enquiries@envirolabservices.com.au www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS

74567-A

Client: David Lane Associates (Maitland) 42B Church St Maitland NSW 2320

Attention: Jay Coburn

# Sample log in details:

Your Reference:	DLH1067-Wallarah	
No. of samples:	4 Soils 3 Waters	-
Date samples received / completed instructions received	07/06/2012 /	14/06/2012

# Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data. Samples were analysed as received from the client. Results relate specifically to the samples as received. Results are reported on a dry weight basis for solids and on an as received basis for other matrices. *Please refer to the last page of this report for any comments relating to the results.* 

# **Report Details:**

 Date results requested by: / Issue Date:
 21/06/12
 /
 18/06/12

 Date of Preliminary Report:
 Not issued

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 Accredited for compliance with ISO/IEC 17025.

 Tests not covered by NATA are denoted with \*.

# **Results Approved By:**

hian Morgen

Rhian Morgan Reporting Supervisor

Envirolab Reference: 74567-A Revision No: R 00



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#### DLH1067-Wallarah **Client Reference:**

Acid Extractable metals in soil		
Our Reference:	UNITS	74567-A-4
Your Reference		T1
Type of sample		Soil
Date digested	-	08/06/2012
Date analysed	-	08/06/2012
Manganese	mg/kg	180

Envirolab Reference: 74567-A Revision No:

R 00

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# Client Reference: DLH1067-Wallarah

MethodID	MethodologySummary
Metals-020 ICP- AES	Determination of various metals by ICP-AES.

Envirolab Reference: 74567-A Revision No: R 00 Page 3 of 5



QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate	Duplicate results	Spike Sm#	Spike %
					Sm#			Recovery
Acid Extractable metals						Base II Duplicate II % RPD		
in soil								
Date digested	-			08/06/2	[NT]	[NT]	LCS-1	08/06/2012
				012				
Date analysed	-			08/06/2	[NT]	[NT]	LCS-1	08/06/2012
				012				
Manganese	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-1	99%
			ICP-AES					

#### **Client Reference:** DLH1067-Wallarah

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# Client Reference: DLH1067-Wallarah

Report Comments:

Asbestos ID was analysed by Approved Identifier: Not applicable for this job Asbestos ID was authorised by Approved Signatory: Not applicable for this job INS: Insufficient sample for this test PQL: Practical Quantitation Limit NT: Not te NA: Test not required RPD: Relative Percent Difference NA: Test r <: Less than >: Greater than LCS: Labo

NT: Not tested NA: Test not required LCS: Laboratory Control Sample

# **Quality Control Definitions**

**Blank**: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples. **Duplicate**: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist. LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

**Surrogate Spike:** Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

## Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

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

Envirolab Reference: 74567-A Revision No: R 00

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# **Jacinta Hurst**

From: Sent: To: Subject:

Hi Jacinta,

Thanks

Malcolm Adrien [dla.malcolm@bigpond.com] Thursday, 14 June 2012 10:14 Jacinta Hurst DLH1067 - Wallarah

Envirolab ref 74567-A. Stendard TIA due 21/6/12.

Regards

**Malcolm Adrien** 

**Environmental Consultant** 

0427 622 264



Just checked the COC and realized that B2 already has M8 on it.

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1

Please consider the environment, if you intend on printing this email.





# Jacinta Hurst

From:
Sent:
To:
Subject:

dla.hunter@bigpond.com Thursday, 14 June 2012 10:12 Jacinta Hurst DLH1067-Wallarah

Hi Jacinta, Could we please have some extra analysis on two samples for the job DLH1067 -- Wallarah

I require M8 analysis on the sample B2, and manganese on sample T1. Both on standard turnaround please.

Regards

-4.

**Malcolm Adrien** 

**Environmental Consultant** 

0427 622 264



DLA environmental

Sydney Unit 2B 30 Leighton Place, Hornsby NSW 2077

Phone: 9476 1765 9476 1557 Fax: Email: dlassociates@bigpond.com 42B Church Street, Maitland NSW 2320 Phone: 49330 001

Email: dla.hunter@bigpond.com

Maitland

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# Appendix B

Quality Assurance and Quality Control



# Appendix B1 – Field Quality Control

During the preliminary site assessment of contaminated sites the integrity of data collected is considered paramount. With the assessment of the Site, a number of measures were taken to ensure the quality of the data. These included:

# Sample Containers

DLA environmental

Soil samples collected during the investigation were placed immediately into laboratory prepared glass jars with Teflon lid inserts. Standard identification labels were adhered to each individual container and labelled according to depth, date, sampling team and media collected.

# Decontamination

All equipment used in the sampling program which includes a hand auger, spades and mixing bowl was decontaminated prior to use and between samples to prevent cross contamination. Decontamination of equipment involved the following procedures:

- Cleaning equipment in potable water to remove gross contamination;
- Cleaning in a solution of Decon 90;
- Rinsing in clean demineralised water then wiping with clean lint free cloths;

Water sampling equipment consisted of single use disposable bailer and Low Flow Peristaltic pump with replaceable Teflon tubing.

David Lane Associates also adopted a sampling gradient of lowest to highest potential contamination to minimise the impact of cross contamination. This gradient was determined from the historical review and the on-site inspection that was carried out prior to sampling.

Although DLA maintains consistent sampling procedures, a rinsate sample is obtained to ensure false positive samples are not generated and that decontamination procedures are effective in preventing cross contamination. The Rinsate water is collected after being in



contact generally with the trowel used for sampling. Analytical results that target the contaminants of concern are compared to a blank sample, which is taken directly from the rinsate water container supplied by the laboratory.

# Sample Tracking, Identification and Holding Times

All samples were forwarded to EnviroLab under recognised chain of custodies with clear identification outlining the date, location, sampler and sample ID. All samples were recorded by the laboratory as meeting their respective holding times. The sample tracking system is considered adequate for the purposes of sample collection.

# Sample Transport

All samples were packed into an esky with ice from the time of collection alongside a trip blank and trip spike. These were transported under chain of custody from the site to EnviroLab Services Pty Ltd a NATA registered laboratory located in Chatswood. During the project, the laboratory reported that all the samples arrived intact and were analysed within holding times for the respective analytes.

Samples were kept below 4°C at all times, soil samples submitted for asbestos analysis are not required to be kept below 4°C. All Trip Spike results were within acceptance criteria providing validation that the transport procedures were satisfactory.



# Appendix B2 – Laboratory Analytical and Quality Plan

The integrity of analytical data provides the second step in the QA/QC process for total data compliance. The data validation techniques adopted by DLA Environmental are based upon techniques published by the US EPA and in line with methods and guidelines adopted by the NSW EPA and outlined in the NEPM, 1999.

Descriptions are provided of the specific mechanisms used in the assessment of accuracy, precision and useability of analytical data within the Project.

Refer to Appendix A- Sample Log and NATA Accredited Analytical Results



# Appendix C

Historical Title Searches



Lot/DP	Date	Site Owner	Land Use/Occupation
	6/11/1981	The Commissioner for Main Roads (RTA NSW)	-
Lot 3/DP	3/8/1994	Terrance John Ashcroft	-
260217	22/2/1995	Lance Michael Ashcroft	-
	9/1/2003	Wyong Coal Pty. Limited	-
Lot 4/ DP 258584	13/4/1981	The Commissioner for Main Roads (RTA NSW)	-
	16/7/1971	John Henry Worrel	-
	9/11/1971	Edgar Francis Waldow	Farmer
Lot 1/DP 260217	26/9/1978	Jill Waldow	Widow
	11/6/1986	Phillip William Gnauck	-
	8/11/2001	Wyong Coal Pty. Limited	-
	17/4/1984	John Frederick Co	-
Lot 128/DP 658436	14/10/1987	Donald Roderick Macleod	-
000100	13/5/1998	Wyong Coal Pty. Limited	-
	17/8/1970	Cecil Bethel Manhire	-
25/5/1971		Nerissa Mabel Manhire	Widow
	25/5/1971	Jack Selig & Guiseppe Visintin	Farmers
Lot 124/DP 755245 3/4/1973		Batchen and Co. Limited	-
100210	14/11/1973	Lurline Trading Pty. Limited	-
2/4/1975		John Herbert Brennan	Panel beater
	9/9/2003	Wyong Coal Pty. Limited	-
Lot 126/DP	10/12/1981	Donald Wallace Macleod	-
755245	9/12/1997	Wyong Coal Pty. Limited	-
Lots 4 &5/ DP 260217	3/4/1981	The Commissioner for Main Roads (RTA NSW)	-
Lots 102,	29/2/1984	Kenneth Ray Drake & Peter Morris Foster	-
103/DP 755245	24/2/1998	Wyong Coal Pty. Limited	-
Lots 193, 194 & 195/DP 1032847		Crown Land	-

# Historical Title Summary for Tooheys Road Site

DLA environmental

 $\sim$  Search  $\sim$ , he Lots 193 194 195 in DP 1032847 The above parcels are Crown Land, Reserves within the Meaning 5 of The Crown Lands eno 89 29 W Ś 12 JETINETS Title & Bearching Co.









LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 193/1032847

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:37 AM	-	-

CERTIFICATE OF TITLE HAS NOT ISSUED

LAND

LOT 193 IN DEPOSITED PLAN 1032847 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP1032847

FIRST SCHEDULE

THE STATE OF NEW SOUTH WALES

SECOND SCHEDULE (2 NOTIFICATIONS)

- \* 1 LAND EXCLUDES MINERALS (S.171 CROWN LANDS ACT 1989)
- \* 2 THE LAND IS A RESERVE WITHIN THE MEANING OF PART 5 OF THE CROWN LANDS ACT 1989 AND THERE ARE RESTRICTIONS ON TRANSFER AND OTHER DEALINGS IN THE LAND UNDER THAT ACT, WHICH MAY REQUIRE CONSENT OF THE MINISTER.

NOTATIONS

UNREGISTERED DEALINGS: NIL

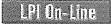
\*\*\* END OF SEARCH \*\*\*

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 194/1032847 \_ \_ \_ \_ \_

SEARCH DATE	TIME	EDITION NO	DATE
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29/5/2012	10:36 AM		-

CERTIFICATE OF TITLE HAS NOT ISSUED

LAND

LOT 194 IN DEPOSITED PLAN 1032847 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP1032847

FIRST SCHEDULE THE STATE OF NEW SOUTH WALES

SECOND SCHEDULE (2 NOTIFICATIONS)

\* 1 \*

LAND EXCLUDES MINERALS (S.171 CROWN LANDS ACT 1989) THE LAND IS A RESERVE WITHIN THE MEANING OF PART 5 OF THE CROWN LANDS ACT 1989 AND THERE ARE RESTRICTIONS ON TRANSFER AND OTHER 2 DEALINGS IN THE LAND UNDER THAT ACT, WHICH MAY REQUIRE CONSENT OF THE MINISTER.

NOTATIONS

UNREGISTERED DEALINGS: NIL

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

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 195/1032847

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:36 AM	1	20/2/2002

# LAND

LOT 195 IN DEPOSITED PLAN 1032847 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP1032847

#### FIRST SCHEDULE

DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL

(AP 8370326)

## SECOND SCHEDULE (2 NOTIFICATIONS)

- SUBJECT TO CONDITIONS IN MEMORANDUM AF395175. RESTRICTIONS ON DEALINGS AND PLANS - SEE PART 2, DIVISION 4 AND SECTION 42 ABORIGINAL LAND RIGHTS ACT 1983. APPROVED DETERMINATION OF NATIVE TITLE IS REQUIRED. ANY DEALING OR PLAN MUST ALSO BE ACCOMPANIED BY A REGISTRATION APPROVAL CERTIFICATE OR A STATEMENT OF NON REQUIREMENT.
- 2 8370326 EASEMENT FOR TRANSMISSION LINE 60 METRE(S) WIDE VIDE GOVERNMENT GAZETTE 10/9/1976 FOLIO 3877 AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

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.

REFER ALL DEALINGS AND PLANS TO SD31 AND THE LEGAL DIVISION UNREGISTERED DEALINGS: NIL

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

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH \_\_\_\_\_

FOLIO: AUTO CONSOL 15197-209

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:35 AM	3	23/11/2011

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM CROWN PLAN 8049.2111

FIRST SCHEDULE

# WYONG COAL PTY LIMITED

(т 3809433)

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1
- LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN SEE MEMORANDUM S700000B EXCEPTING THE LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES 2 BY THE CROWN GRANT
- 3 EASEMENT FOR TRANSMISSION LINE AFFECTING THE PART OF THE LAND WITHIN DESCRIBED SHOWN 60 METRES WIDE" IN w283366 DP636835
  - 2151361
- 61 EASEMENT NOW VESTED IN THE NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY 4 AG635105 ACT, 1900

## NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 102-103 IN DP755245.

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

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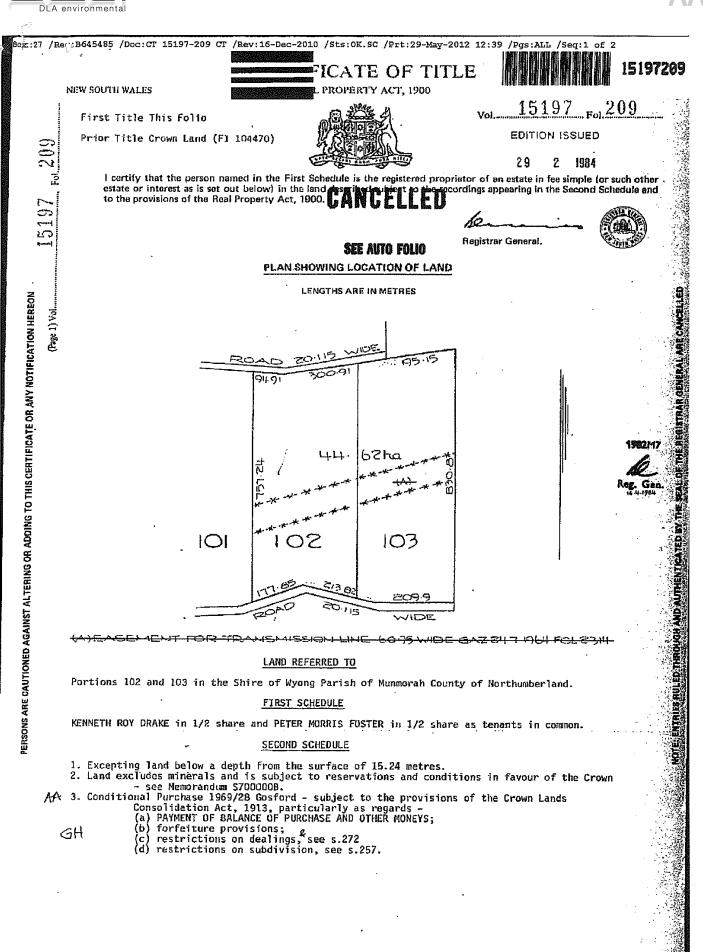
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FOLIO: AUTO CONSOL 15197-209

Recorded 19/2/1992	Number 	Type of Instrument CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 15197-209 PARCELS IN CONSOL ARE: 102-103/755245.	C.T. Issue
23/2/1993	I132027	MISC APPLICATION CROWN LAND	EDITION 1
13/5/1996	2151361	REQUEST	
10/1/1998	3721792	DEPARTMENTAL DEALING	
24/2/1998	3809433	TRANSFER	EDITION 2
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 3
	***	END OF SEARCH ***	

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 128/658436

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SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:34 AM	3	23/11/2011

LAND

LOT 128 IN DEPOSITED PLAN 658436 LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP658436

FIRST SCHEDULE

WYONG COAL PTY LIMITED

(T 3983903)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND

CONDITIONS IN FAVOUR OF THE CROWN - SEE MEMORANDUM S700000B

- 2 EXCEPTING THE LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES BY THE CROWN GRANT
- 3 AG635105 THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900

NOTATIONS

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UNREGISTERED DEALINGS: NIL

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

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SEARCH DATE 29/5/2012 3:17PM

FOLIO: 128/658436

First Title(s): VOL 15216 FOL 76 Prior Title(s): VOL 15216 FOL 76

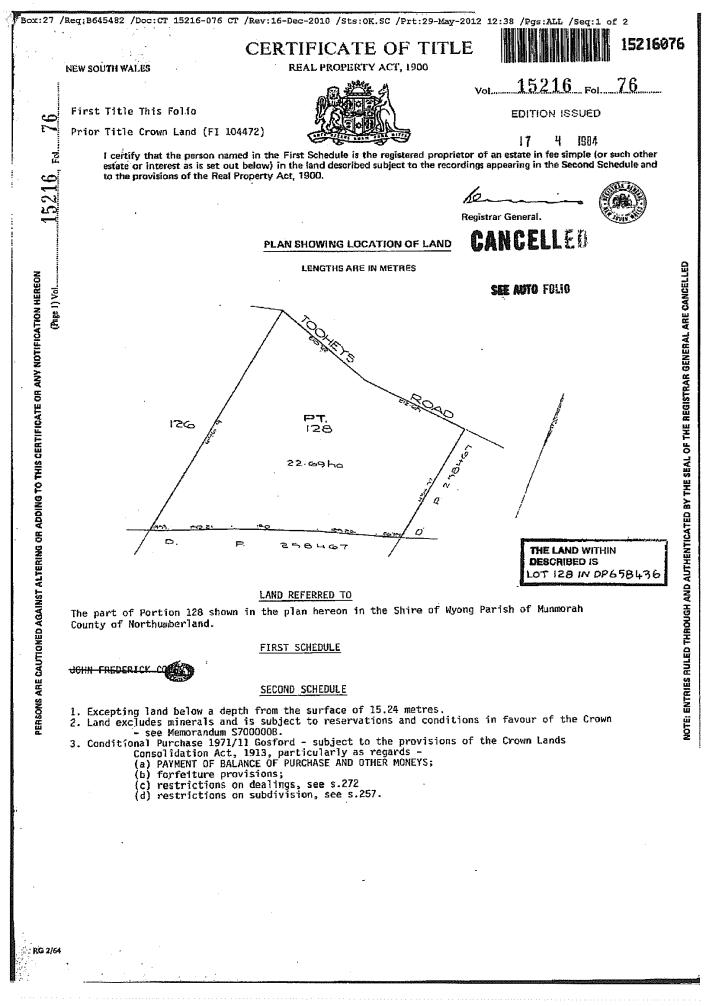
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5/6/1995		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
10/1/1998	3721792	DEPARTMENTAL DEALING	
9/3/1998	3838946	MISC APPLICATION CROWN LAND	EDITION 1
13/5/1998	3983903	TRANSFER	EDITION 2
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 3
	***	END OF SEARCH ***	

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\*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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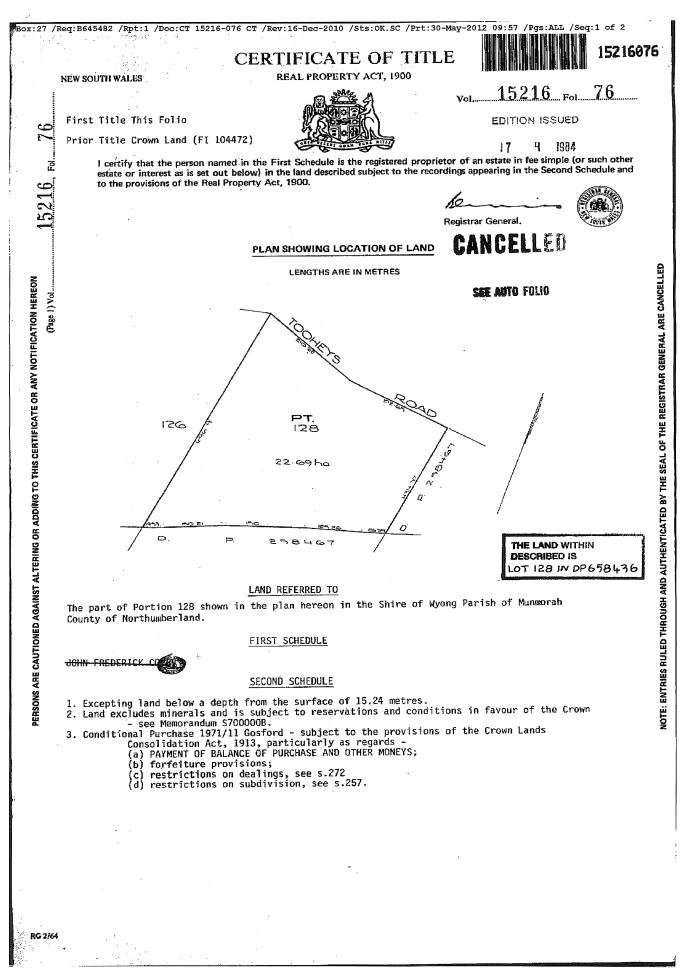


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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 126/755245

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:35 AM	2	23/11/2011

LAND

LOT 126 IN DEPOSITED PLAN 755245 LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND (FORMERLY KNOWN AS PORTION 126) TITLE DIAGRAM CROWN PLAN 8264.2111

FIRST SCHEDULE

WYONG COAL PTY LIMITED

(T 3651181)

SECOND SCHEDULE (3 NOTIFICATIONS)

1

LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE MEMORANDUM S700000B EXCEPTING LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES AG635105 THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY 2 3 ACT, 1900

NOTATIONS

UNREGISTERED DEALINGS: NIL

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

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SEARCH DATE 29/5/2012 3:41PM

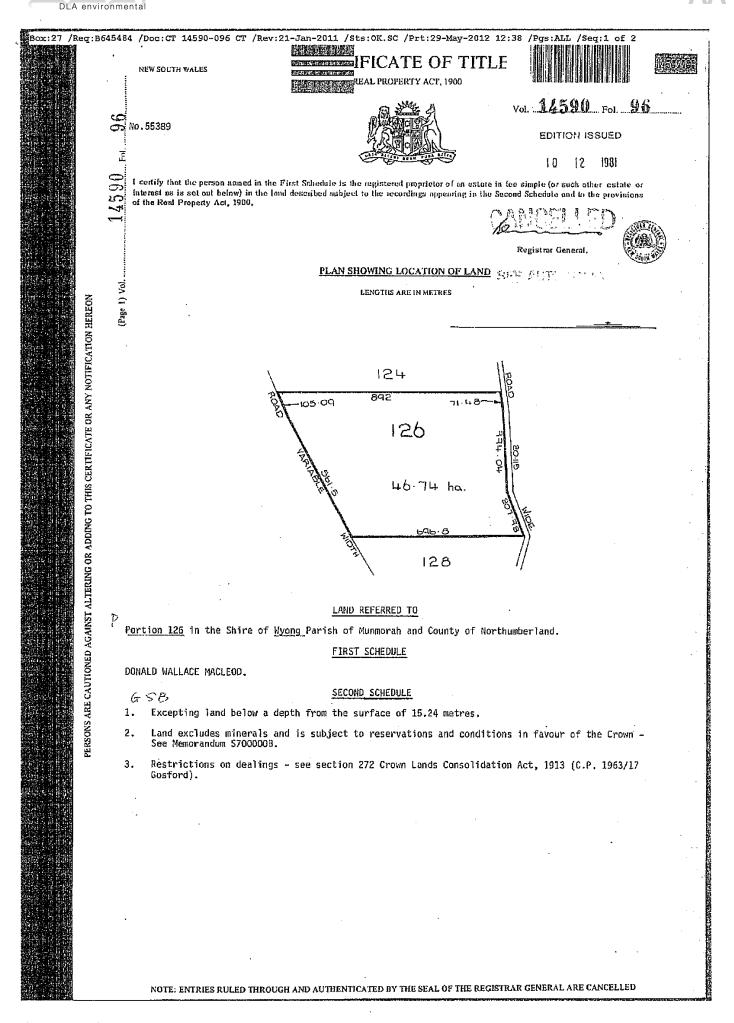
FOLIO: 126/755245

First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 14590 FOL 96

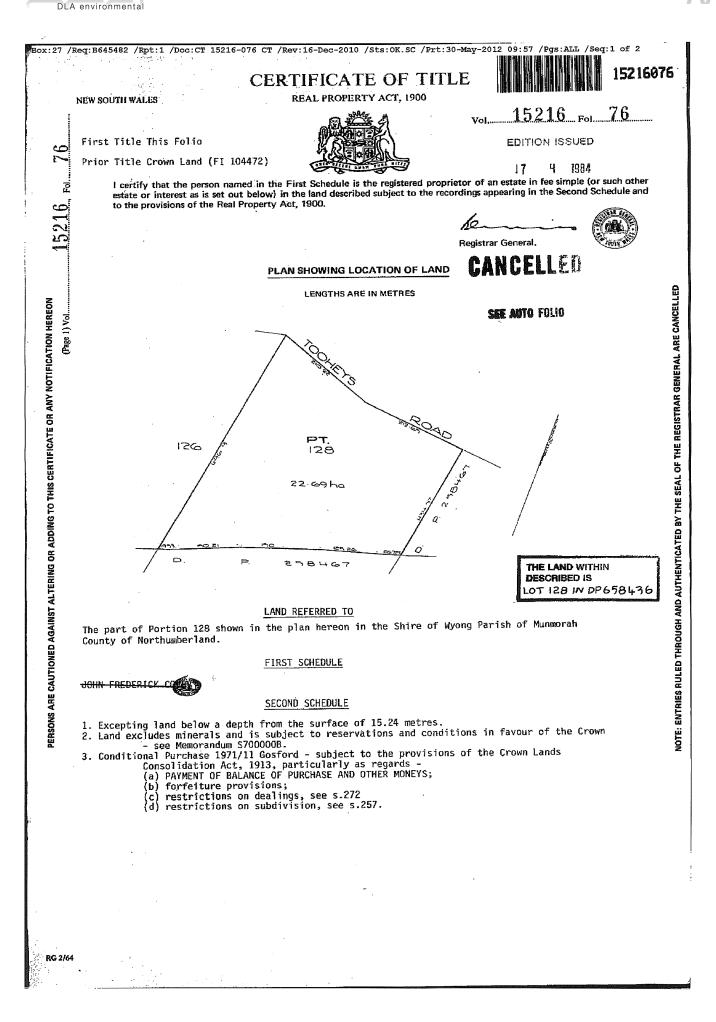
Recorded	Number	Type of Instrument	C.T. Issue
14/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
2/2/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/4/1991		AMENDMENT: TITLE DIAGRAM	
9/12/1997	3651181	TRANSFER	EDITION 1
10/3/1999	5667475	DEPARTMENTAL DEALING	
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 2
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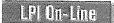
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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH ------

FOLIO: 124/755245

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:35 AM	3	23/11/2011

LAND

LOT 124 IN DEPOSITED PLAN 755245 LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND (FORMERLY KNOWN AS PORTION 124) TITLE DIAGRAM CROWN PLAN 8263.2111

FIRST SCHEDULE

WYONG COAL PTY LIMITED

(T 9908727)

### SECOND SCHEDULE (9 NOTIFICATIONS)

- LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN SEE CROWN GRANT(S) S901255 LAND EXCLUDES THE ROAD(S) BEING LOT 4 IN DP603941 & LOT 8 IN DP258584 (LIMITED IN DEPTH TO 15.24 METRES 1 2
- FROM THE SURFACE) NOTIFICATION IN GOV GAZ 24-7-1964 EASEMENT FOR TRASMISSION LINE 3
- AFFECTING PART OF THE LAND ABOVE DESCRIBED SHOWN SO BURDENED IN THE TITLE DIAGRAM 2151360
  - EASEMENT VESTS IN NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY PIPELINE EASEMENT (LIMITED IN DEPTH) AFFECTING THE
- 4 s434201 LAND SHOWN SO BURDENED IN DP499017 (SHT 9) 5
  - PIPELINE EASEMENT AFFECTING THE PART OF THE LAND WITHIN DESCRIBED SHOWN SO BURDENED IN DP499014 (SHTS S656811 53-54)
    - s984714 EASEMENT FOR PIPELINE IS HEREBY CANCELLED IN SO FAR AS IT AFFECTS THE PART SHOWN SO EXTINGUISHED IN SO SHEET 7 DP499018
- PIPELINE EASEMENT AFFECTING THE PART OF THE LAND WITHIN DESCRIBED SHOWN ON SHEET 7 IN DP499018 RESTRICTION(S) ON THE USE OF LAND 6 T24495 T518870
- 8 AC350070 EASEMENT FOR WATER SUPPLY AFFECTING THE PART g
- DESIGNATED (B) IN DP 1091681. THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY AG635105 ACT, 1900

NOTATIONS

Z25905 NOTE: LOT 4 DP603941 RESUMED	& PROCLAIMED RESTRICTED ACCESS
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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 124/755245

PAGE 2

NOTATIONS (CONTINUED)

ROAD-GAZ 16.3.1990 FOLS 2334-2337 UNREGISTERED DEALINGS: NIL

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

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SEARCH DATE 29/5/2012 3:35PM

FOLIO: 124/755245

First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 11390 FOL 125

Recorded	Number	Type of Instrument	C.T. Issue
3/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
1/5/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
23/5/1990	z25905	DEPARTMENTAL DEALING	
24/5/1996	2151360	REQUEST	
20/5/1999	5841321	DEPARTMENTAL DEALING	
1/8/2001	7821442	CAVEAT	
9/9/2003 9/9/2003	9953158 9908727	DEPARTMENTAL DEALING TRANSFER	EDITION 1
16/12/2005	DP1091681	DEPOSITED PLAN	
1/6/2006	AC350070	GRANT OF EASEMENT	EDITION 2
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 3

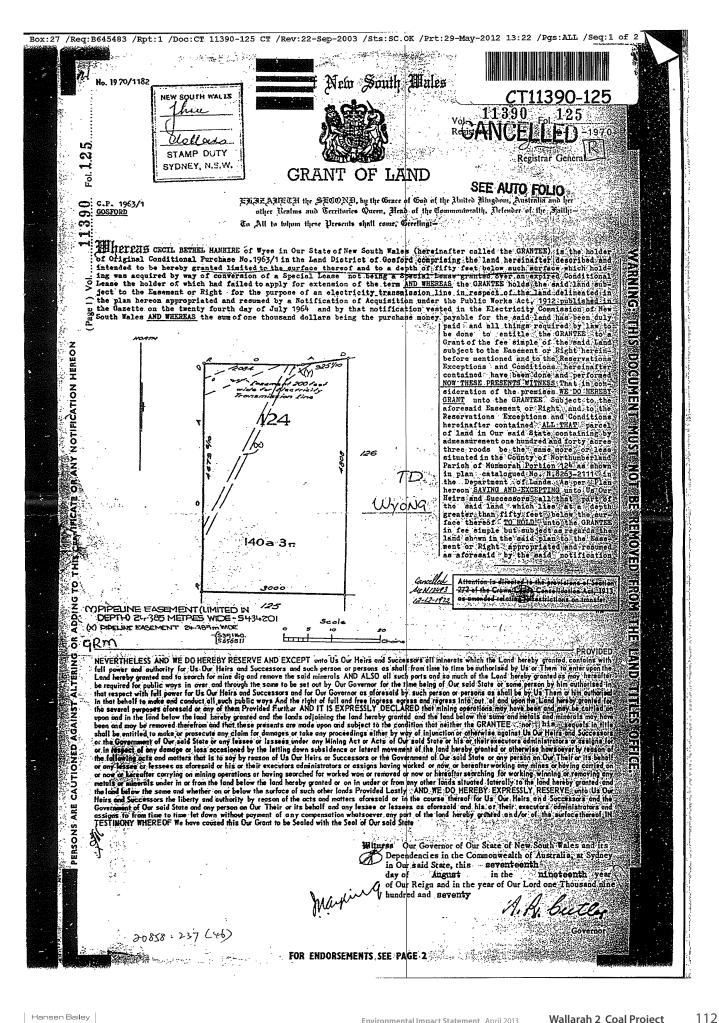
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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

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FOLIO: 4/260217

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:38 AM	2	10/10/1991

LAND

LOT 4 IN DEPOSITED PLAN 260217 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP260217

FIRST SCHEDULE THE COMMISSIONER FOR MAIN ROADS

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1
- EXCEPTING LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES GOV. GAZ DATED 22.2.1980 FOLIO 826 EASEMENT FOR PIPELINE AFFECTING 2
- 3
- 4
- GOV. GAZ DATED 22.2.1980 FOLIO 820 EASEMENT FOR PIPELINE AFTER THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM GOV GAZ DATED 16.11.1979 FOLIO 5733 EASEMENT FOR PIPELINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM GOV. GAZ. 24.7.1964 FOLIO 2314 EASEMENT FOR TRANSMISSION LINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM 2151361 EASEMENT NOW VESTED IN THE NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY

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 \*\*\*

JBS-Wyong

### PRINTED ON 29/5/2012

\*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.

Hansen Bailey







LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 5/260217

SEARCH DATE	TIME	EDITION NO	DATE
20/5/2012	10.20		
29/5/2012	10:38 AM	2	19/4/2006

LAND

LOT 5 IN DEPOSITED PLAN 260217 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP260217

FIRST SCHEDULE

THE COMMISSIONER FOR MAIN ROADS

(CA51499)

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1
- 2
- GOV. GAZ DATED 22.2.1980 FOLIO 826 EASEMENT FOR PIPELINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM GOV GAZ DATED 16.11.1979 FOLIO 5733 EASEMENT FOR PIPELINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM GOV. GAZ. 24.7.1964 FOLIO 2314 EASEMENT FOR TRANSMISSION LINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM 2151361 EASEMENT NOW VESTED IN THE NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY AC222801 EASEMENT FOR WATER SUPPLY AFFECTING THE PART SHOWN AS 3
- 4 AC222801 EASEMENT FOR WATER SUPPLY AFFECTING THE PART SHOWN AS EASEMENT FOR WATER SUPPLY 5 WIDE IN DP1091681

### NOTATIONS

UNREGISTERED DEALINGS: NIL

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

JBS-Wyong

### PRINTED ON 29/5/2012

### [3 APRIL, 1981

### IFE ACT, 1974.—

DWLAND, Knight Com-of the British Empire, e decoration of the Force Cross, Governor Force Cross, Governor s Dependencies, in the dvice of the Executive rs vested in me under ad Wildlife Act, 1974, e such of the lands ids within the meaning rks and Wildlife Act, ational Park. 1 day of March, 1981. VLAND, Governor. ımand. BEDFORD. g and Environment. EEN!

—Nymboida 110.7 hectarcs, being metres wide. NPWS metres wide. (8832)

IFE ACT, 1974.-

WLAND, Knight Com-f the British Empire, ceccross, Governor Dependencies, in the lvice of the Executive s vested in me under d Wildlife Act, 1974, tor of National Parks dedicate the Crown serve for the purposes

ure Reserve. day of March, 1981. /LAND, Governor. mand. BEDFORD, ; and Environment. EEN!

hire—Hastings 16.76 hectares, being NPWS P. 5964. (8830)

MATION WLAND, Governor of advice of the Execu-= 2 (1) of Schedule Proclamation, appoint rroclamation, appoint 7th March, 1981, in

day of March, 1981. LAND, Governor. nand, , Attorney-General,

EN!

IT) ACT, 1980 .---

WLAND, GOVERNOT of ependencies, with the pursuance of section nt) Act, 1980, do, by il, 1981, as the day excepted) shall com-

day of April, 1981. mand, ter for Agriculture. 'EN!

#### 3 April, 1981] NEW SOUTH WALES GOVERNMENT GAZETTE No. 51

### MARKETING OF PRIMARY PRODUCTS ACT, 1927-PROCLAMATION

Appointment of Ministerial Nominee to the Lemon Marketing Board for the State of New South Wales J. A. ROWLAND, Governor. (1.5.)

(L.S.) J. A. ROWLAND, Governor. I. Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council, in pursuance of the pro-visions of section 7 (1) of the Marketing of Primary Products Act, 1927, do hereby appoint Leslie Ernest Rippon to be Ministerial Nominee Member of the Lemon Marketing Board for the State of New South Wales, for a term of office com-mencing on 3rd April, 1981, following the resignation of Dennis Edwin Williams.

Signed and sealed at Sydney, this first day of April, 1981. By His Excellency's Command,

J. R. HALLAM, Minister for Agriculture. GOD SAVE THE QUEEN! (8543)

MAIN ROADS ACT, 1924.—PROCLAMATION ACOUISITION OF LAND AT WYEE IN THE SHIRE OF WYONG J. A. ROWLAND, Governor. (L.S.)

(L.S.) J. A. ROWLAND, Governor. I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the application of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Transport (Division of Func-tions) Act, 1932, do in pursuance of the provisions of the Main Roads Act, 1924, by this my Proclamation, declare that so much of the land hereunder described as is Crown land is hereby appropriated and so much thereof as is private property is hereby resumed under the provisions of the Public Works Act, 1912, for the purposes of the Main Roads Act, 1924, but that the land hereunder described to the depth aforesaid is hereby vested in The Commissioner for Main Roads. -Signed and sealed at Sydney, this 25th day of March, 1981.

Signed and sealed at Sydney, this 25th day of March, 1981. By His Excellency's Command,

H. F. JENSEN, Minister for Roads. GOD SAVE THE QUEEN!

DESCRIPTION OF THE LAND REFERRED TO Schedule

Schedule All those pieces or parcels of land situate in the Shire of Wyong, Parish of Munmorah and County of Northumberland, being lots 4, 7 and 9, Deposited Plan 260217, excepting the Easement for Transmission Line 60.95 metres wide affecting lot 4, Deposited Plan 260217, which is also numbered 6003.505.SS. 0125 at the Department of Main Roads. The land is said to be in the possession of G. A. and E. F. Drake and the Crown. (D.M.R. Papers F3/505.1644) (8809)

MAIN ROADS ACT, 1924 .--- PROCLAMATION Acquisition of Land at Bondi Junction in the Municipality of Waverley

J. A. ROWLAND, Governor. (L.S.)

(L.S.) J. A. ROWLAND, Governor. I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the application of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Transport (Division of Functions) Act, 1932, do in pursuance of the provisions of the Main Roads Act, 1924, by this my Proclamation, declare that so much of the Iand hereunder described as is Crown Iand is hereby appropriated and so much thereof as is private property is hereby resumed under the provisions of the Public Works Act, 1912, for the purposes of the Main Roads Act, 1924, and that the Iand hereunder described is hereby vested in The Com-missioner for Main Roads.

Signed and sealed at Sydney, this 25th day of March, 1981. By His Excellency's Command,

H. F. JENSEN, Minister for Roads.

GOD SAVE THE QUEEN!

DESCRIPTION OF THE LAND REFERRED TO Schedule

All that piece or parcel of land situate in the Municipality of Waverley, Parish of Alexandria and County of Cumberland, being lot B, Deposited Plan 398120, also shown on a plan numbered 5045.482.SS.0003 at the Department of Main Roads. The land is said to be in the possession of K. M. Clark. (D.M.R. Papers 482.1146) (8649)

No. 51, 3rd April, 1981-2

MAIN ROADS ACT, 1924.—PROCLAMATION Acquisition of Land at Campbelltown in the City of Campbelltown

J. A. ROWLAND, Governor. (L.S.)

(L.S.) J. A. ROWLAND, Governor.
I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the application of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Transport (Division of Func-tions) Act, 1932, do, in-pursuance of the provision of Func-tions) Act, 1932, do, in-pursuance of the provisions of the Main Roads Act, 1924, by this my Proclamation, declare that so much of the land hereunder described as is Crown land is hereby appropriated and so much thereof as is private property is hereby resumed under the provisions of the Public Works Act, 1912, for the purposes of the Main Roads Act, 1924, and that the land hereunder described is hereby vested in The Commissioner for Main Roads.

Signed and scaled at Sydney, this 25th day of March, 1981. By His Excellency's Command,

H. F. JENSEN, Minister for Roads. GOD SAVE THE QUEEN!

### DESCRIPTION OF THE LAND REFERRED TO

Schedule

All that piece or parcel of land situate in the City of Campbelltown, Parish of St Peter and County of Cumberland, being lot 13, Deposited Plan 259807, which is also numbered 0177.076.58.0166 at the Department of Main Roads. The land is said to be in the possession of the Council of the City of Comphetium Campbelltown.

And also all that piece or parcel of land situate in the City of Campbelltown, Parish of St Peter and County of Cumber-land, being lot 45, Deposited Plan 7496, also shown on plan numbered 177.S.116 at the Department of Main Roads. The land is said to be in the possession of the Council of the City of Campbelltown.

(D.M.R. Papers 76.186)

(L.S.)

### MAIN ROADS ACT, 1924.—PROCLAMATION MOTORWAY AT PADDYS RIVER IN THE SHIRES OF MULWAREE AND WINGECARRIBEE

J. A. ROWLAND, Governor.

(L.S.) J. A. ROWLAND, Governor. I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the recommendation of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Transport (Division of Func-tions) Act, 1932, do in pursuance of the provisions of sub-section (1) of section 49 of the Main Roads Act, 1924, by this my proclamation, declare the land described in Schedule 1 hereto, being vested in The Commissioner for Main Roads, to be a public road and in pursuance of Part III of the Main Roads Act, 1924, and by virtue of the Transport (Division of Functions) Act, 1932, do on the recommendation of The Commissioner for Main Roads, proclaim the said public road to be a main road and, in exercise of the power conferred by Part VAA of the Main Roads Act, 1924, do further, on the recommendation of The Commissioner for Main Roads, proclaim the said main road to be a Motorway and specify the means of access by which a person may enter or leave the said Motorway to be those set out in Schedule 2 hereto. Signed and sealed at Sydney, this 25th day of March, 1981. Signed and sealed at Sydney, this 25th day of March, 1981.

By His Excellency's Command,

H. F. JENSEN, Minister for Roads. GOD SAVE THE QUEEN!

#### DESCRIPTION OF THE LAND REFERRED TO Schedule 1

All those pieces or parcels of land situate in the Shires of Mulwaree and Wingecarribee, Parishes of Wingello and Urin-galla and County of Camden, being lots 24 to 36 inclusive, Deposited Plan 250694, together with the parts of former road having areas of 2.821 hectares, 6364 square metres, 1.717 hectares, 1892 square metres, 2504 square metres, \$568 square metres, 1544 square metres and 214,5 square metres shown on Deposited Plan 250694, which is also numbered 0002.495.SS.0928 at the Department of Main Roads. And also all those pieces or parcels of land situate in the

And also all those pieces or parcels of land situate in the Shire of Wingecarribee, Parish of Wingello and County of Camden, being lots 8 to 25 inclusive, Deposited Plan 250693, together with the parts of former road having areas of 2.877 hectares, 405.5 square metres and 1116 square metres shown on Deposited Plan 250693, which is also numbered 0002.495.SS.0929 at the Department of Main Roads.

(8605)

Contamination Impact Assessment



#### 5678

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#### NEW SOUTH WALES GOVERNMENT GAZETTE No. 170 [6 NOVEMBER, 1981

### MAIN ROADS ACT, 1924 .- PROCLAMATION

Acquistion of Land at Annandale in the Municipality of Leichhardt

J. A. ROWLAND, Governor. (L.S.)

(L.S.) J. A. ROWLAND, Governor.
I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the application of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Thansport (Division of Functions) Act, 1932, do, in pursuance of the provisions of the Main Roads Act, 1924, by this my Proclamation, declare that so much of the land hereunder described as is Crown land is hereby appropriated and so much thereof as is private property is hereby resumed under the provisions of the Public Works Act, 1912, for the purposes of the Main Roads Act, 1924, and that the land hereunder described is hereby vested in The Commissioner for Main Roads.

Signed and sealed at Sydney, this 28th day of October, 1981-By His Excellency's Command,

P. WHELAN, Minister for Consumer Affairs and Minister for Roads.

### GOD SAVE THE QUEEN!

DESCRIPTION OF THE LAND REFERRED TO Schedule

All those pieces or parcels of land situate in the Municipality of Leichhardt, Parish of Petersham and County of Cumberland, being lots 3, 12 to 18 inclusive and 20 Deposited Plan 261985, which is also numbered 2042.255.SS.0102 at the Department of Main Roads. The land is said to be in the possession of the Crown, the Council of the Municipality of Leichhardt, the Maritime Services Board of N.S.W. and the State Rail Authority of N.S.W. (D.M.R. Papers 255.1198) (3494)

MAIN ROADS ACT, 1924 .- PROCLAMATION MOTORWAY AT SANS SOUCI IN THE MUNICIPALITIES OF ROCKDALE AND KOGARAH

### J. A. ROWLAND, Governor.

(L.S.)

(L.S.) J. A. ROWLAND, Governor.
I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the recommendation of The Commissioner for Main Roads made by virtue of the powers conferred in him by the Transport (Division of Functions) Act, 1932, do, in pursuance of the provisions of subsection (1) of section 49 of the Main Roads Act, 1924, by this my Proclamation, declare the land described in Schedule 1 hereto, being vested in The Commissioner for Main Roads, to be a public road and in pursuance of Part III of the Main Roads Act, 1924, and by virtue of the Transport (Division of Functions) Act, 1932, do, on the recommendation of The Commissioner for Main Roads, proclaim the said public road to be a main road and, in exercise of the power conferred by Part VAA of the Main Roads Act, 1924, do further, on the recommendation of The Commissioner for Main Roads, proclaim the said main road to be a Motorway and specify the means of access by which a person may enter or leave the said Motorway to be those set out in Schedule 2 hereto.

Signed and sealed at Sydney, this 28th day of October, 1981. By His Excellency's Command,

P. WHELAN, Minister for Consumer Affairs and Minister for Roads. GOD SAVE THE OUEEN!

### DESCRIPTION OF THE LAND REFERRED TO

### Schedule 1

All those pieces or parcels of land situate in the Muni-cipalities of Rockdale and Kogarah, Parish of St George and County of Cumberland, being lots 2 and 3, Deposited Plan 562054, lots 1<sup>-</sup> and 2, Deposited Plan 534982, the whole of the land in Deposited Plan 342525, together with the part of former road having an area of 2 roods 19 perches, all shown on a plan registered as 6006.386.SS.0099A at the Department of Main Roads.

#### Schedule 2

Between the points N and H and over the Georges River by a concrete bridge all shown on a plan registered as 6006.386.SS.0099A at the Department of Main Roads. (4039) (D.M.R. Papers F6/386.1639)

MAIN ROADS ACT, 1924 .- PROCLAMATION ACOUISITION OF LAND AT WYEE IN THE SHIRE OF WYONG

(L.S.) J. A. ROWLAND, Governor.

(L.S.) J. A. ROWLAND, Governor. I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the application of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Transport [Division of Functions] Act, 1932, do, in pursuance of the provisions of the Main Roads Act, 1924, by this my Proclamation, declar-that so much of the land hereunder described in Scheduls I and 2 as is Crown Land is hereby appropriated and so much thereof as is private property is hereby resumed under the pro-visions of the Public Works Act, 1912, for the purposes of the Main Roads Act, 1924, and that the land described in Schedule 1 hereunder is hereby vested in the Commissioner for Main Roads and I hereby further declare the land described in Sched-ule 1 hereunder to be a public road and, in accordance with a aforesaid, the said land described in the said Schedule 1 is hereby placed under the control of the Council of the Shired hereby placed under the control of the Council of the Shired Wyong.

### Signed and sealed at Sydney, this 28th day of October, 1981. By His Excellency's Command,

P. WHELAN, Minister for Consumer Affairs and Minister for Roads. GOD SAVE THE QUEEN!

### DESCRIPTION OF THE LAND REFERRED TO SCHEDULE 1

All that piece or parcel of land situate in the Shire of Wyong, Parish of Munmorah and County of Northumberland being lot 8, Deposited Plan 260217, which is also numbered 6003.505.SS.0125 at the Department of Main Roads. The land is said to be in the possession of Kevin Leslie Normat and the Crown.

Schedule 2

And also all those pieces or parcels of land situate in the Shire of Wyong, Parish of Munmorah and County of Nor thumberland, being lots 3, 5 and 10, Deposited Plan 260217, excepting the Easement for Pipeline 24.385 metres wide and the Easement for Transmission Line 60.95 metres wide affect ing lots 3 and 5, Deposited Plan 260217, which is also num-bered 6003.505.SS.0125 at the Department of Main Roads The land is said to be in the possession of Kevin Leib Norman and the Crown. (D.M.R. Papers: F3/505.1633) (4044)

MAIN ROADS ACT, 1924.-PROCLAMATION Acquisition of Land at Sans Souci in the Municipalities of Rockdale and Kogarah

J. A. ROWLAND, Governor.

(L.S.) J. A. ROWLAND, Governor.
I, Air Marshal Sir JAMES ANTHONY ROWLAND, Governor of the State of New South Wales and its Dependencies, with the advice of the Executive Council and on the application of The Commissioner for Main Roads, made by virtue of the powers conferred in him by the Transport (Division of Functions) Act, 1932, do, in pursuance of the provisions of the Main Roads Act, 1924, by this my Proclamation, declare that so much of the land hereunder described as is Crown land the hereby appropriated and so much thereof as is private properly is hereby resumed under the provisions of the Public Works Act, 1912, for the purposes of the Main Roads Act, 1924, and that the land hereunder described is hereby vested in The Commissioner for Main Roads.

Signed and sealed at Sydney, this 28th day of October, 1981 By His Excellency's Command,

P. WHELAN, Minister for Consumer Affairs and Minister for Roads. GOD SAVE THE QUEEN!

### DESCRIPTION OF THE LAND REFERRED TO Schedule

All those pieces or parcels of land situate in the Municipalities of Rockdale and Kogarah, Parish of St George and County of Cumberland, being lots 2 and 3, Deposited Plan 562054, lots 1 and 2, Deposited Plan 542982, the whole of the land in Deposited Plan 342525 together with the part of road having an area of 2 roods 19 perches, all shown on a plan registered as 6006.386.SS.0099A at the Department of Main Roads. The land is said to be in the possison of the Municipalities of Rockdale and Kogarah and the Crown. (D.M.R. Paners F6/386.1632) (1980) (D.M.R. Papers F6/386.1639)

(3889)

# MAIN R ACQUISITION OF (L.S.) J. A. l Air Marshal Air Marshal the State of Ne advice of the The Commissic powers conferre tions) Act, 19: Main Roads Act, o much of th is hereby appr property is heri-Works Act, 19 1924, and that in The Commiss Singed and ex-

Signed and so

Minister

DE

All those p Gosford, Paris being lots 5, which is also of Main Roac the Departmen ture and the C Also all the of Gosford, P: being lots 11 excluding the 11, Deposited SS 0145 at th to be in the And also a City of Gosf unberland, be is also numbe Roads. The la ment of Land (D.M.R. Pap

> MAIN ACQUISITIC

(L.S.) I. / I, Air Marsh the State of . advice of the advice of the Commissione conferred in Act, 1932, d Roads Act, much of the hereby appro is hereby res Act, 1912, fc that the lan Commissione the land her the land he accordance v Main Roads under the co Signed and

Ministe

All those Tweed Head lots 1, 3, 4, numbered 1 land is said Council of t (D.M.R. Pa

AA



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 3/260217

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:34 AM	7	23/11/2011

LAND

LOT 3 IN DEPOSITED PLAN 260217 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP260217

FIRST SCHEDULE

WYONG COAL PTY LIMITED

(T 9277542)

SECOND SCHEDULE (5 NOTIFICATIONS)

- GOV. GAZ DATED 22.2.1980 FOLIO 826 EASEMENT FOR PIPELINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM GOV GAZ DATED 16.11.1979 FOLIO 5733 EASEMENT FOR PIPELINE AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM GOV. GAZ. 24.7.1964 FOLIO 2314 EASEMENT FOR TRANSMISSION LINE 1
- 2
- 3
  - AFFECTING THE LAND SHOWN SO BURDENED IN THE TITLE DIAGRAM 2151360 EASEMENT VESTS IN NEW SOUTH WALES ELECTRICITY TRANSMISSION AUTHORITY
- 4 AC350098 EASEMENT FOR WATER SUPPLY AFFECTING THE PART DESIGNATED 'B' IN DP1091681
- 5 THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900 AG635105

NOTATIONS DP1091681 NOTE: PLAN OF PROPOSED EASEMENT FOR WATER SUPPLY UNREGISTERED DEALINGS: NIL

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

JBS-Wyong

### PRINTED ON 29/5/2012









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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE 29/5/2012 3:10PM

FOLIO: 3/260217

	t Title(s): r Title(s):		
Recorded  9/9/1991	Number CA51499	Type of Instrument CONVERSION ACTION	C.T. Issue FOLIO CREATED EDITION 1
3/8/1994 3/8/1994 3/8/1994	U496000 U496001 U496002	TRANSFER REQUEST MORTGAGE	EDITION 2
22/2/1995 22/2/1995 22/2/1995 22/2/1995	036017 036018 036019	DISCHARGE OF MORTGAGE TRANSFER MORTGAGE	EDITION 3
30/10/1995	0644901	MORTGAGE	EDITION 4
24/5/1996	2151360	REQUEST	
3/8/1999	6058016	DEPARTMENTAL DEALING	
9/1/2003	9277539 9277540 9277541 9277542	DISCHARGE OF MORTGAGE DISCHARGE OF MORTGAGE NOTICE OF DEATH TRANSFER	EDITION 5
16/12/2005	DP1091681	DEPOSITED PLAN	
2/6/2006	AC350098	GRANT OF EASEMENT	EDITION 6
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 7
	مرت مرت مرت		

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

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\*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.

Hansen Bailey

DLA environmental

	S8944 /DOC:DL U496UUU /KeV:22-Mar- S-Wyong /Src:T .97-01T	2010 / STS:OK.SC / PFT: 29-MAY-2012 1 TRANSFER Real Property Act, 1900	5:12 /Pgs:ALL /Seq:1 of 1 U 496000 C		
		Office of Sta	te Revenue use only 2 . 04		
	\$5°00	£0/04£54£008 +0 \$0	53036¢ 07		
(A)	LAND TRANSFERRED Show no more than 20 References to Title. If appropriate, specify the share transferred.	Folio IDentifier 3/260 √	217 ✓		
(B)	LODGED BY	L.T.O. Box Name, Address or DX and TO SM REFERENCE (max. 15 char ROADS AND TRAFFIC AUTHORITY O	UDAAA acters): 2666 45567 BH		
(C)	TRANSFEROR		N.ROADS.)		
(D)	acknowledges receipt of the considerati	on of \$113,000.00 $$ transfers to the Transferee an estate in fee si	imple		
(E)	subject to the following ENCUMBRANC		3		
(F) (G)		of 187 Wyee Road, Wyee	GLORIA KATHLEEN ASHCROFT		
(H)	(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. DATED <u>12-4-94</u> Signed in my presence by the Transferor who is personally known to me.				
	Signature of Witness DEW SE MALLE Name of Witness (BLOCK LET 260. ELEMBETH ST. Address of Witness	TERS) - SURRY HILLS.	Hoose Signature of Transferor		
	Signed in my presence by the Transfere	800	CUTED PURŠUANT TO DELEGATION OK 4008 No. 809		
	Signature of Witness				
	Name of Witness (BLOCK LEI		Juan these		
	Address of Witness	M.A.	Signature of Transferrec NASH.—Selicitor for the Transferree(s)/44/1/ E CHECKED BY (office use only)		
Ā	INSTRUCTIONS FOR FILLING OUT THIS FORM usdoc Commercial and Law Stationers 1991	M ARE AVAILABLE FROM THE LAND TITLES OFFIC	······································		
<u>.</u>					



	55945 /boc:bl 0050018 /kev:l0-mar- S-Wyong /Src:T 97-01T	TRANSFER Real Property Act, 1900				
(A)	LAND TRANSFERRED	Certificate of Title				
	Show no more than 20 References to Title. If appropriate, specify the share transferred.	Folio Identifier 3/260217				
(B)	LODGED BY	LT.O. Box Name, Address or DX and Telephone				
		374 WBL				
al an		REFERENCE (max. 15 characters): 2666 63201 -75				
(C)	TRANSFEROR	TERRENCE JOHN ASHCROFT & GLORIA KATHLEEN ASHCROFT				
(D)	A DEFICE DE	on of				
(E)	subject to the following ENC	TION NOTED SUR Physical Survey of the second statement				
(F) (G)	to the tenants	AICHAFL ASHCROFT and JULIE ANNE ASHCROFT as joint tenants to one half share a intent that Terrence John Ashcroft and Gloria Kathleen Ashcroft as joint to half share with Lance Michael Ashcroft and Julie Anne Ashcroft as joint to half share as tenants in common)				
(H)	We certify this dealing correct for the pu	Inposes of the Real Property Act, 1900. DATED				
	Signed in his presence by the Transferon KAREN Signature of Witness	r willo is personally known to me. MICHELLE SEIBT BUDGEWOI TENOGRAPHER				
I	Name of Witness (BLOCK LET)	TERS)				
	Address of Witness	Stepature of Transferor				
	Signed in my presence by the Transferee who is personally known to					
	Signature of Witness					
	Name of Witness (BLOCK LETT	TERS) Micher Mark				
è	Address of Witness	Signature of Transferoe				
	INSTRUCTIONS FOR FILLING OUT THIS FORM	M. A. NASH.—Selicitor for the Transferee(s) if ARE AVAILABLE FROM THE LAND TITLES OFFICE CHECKED BY (office use only)				
Au	sdoc Commercial and Law Stationers 1991					

DLA environmenta

 $\sim$  Search  $\sim$ 8 Xet 1 re in DR260217 (lel C MO TON U Wonnell hown y Y J.11627 56 orrell rear lyon ree /6 pen Waldow 1. Den-1 MH8872L aa me le F. 156 hesu 1162 aldon ND 0876297 Ľ De rase Q 26 /Q 56 ı Âl. s William Smanck fr W229226 Å 13/86 any fuluc -/1  $\mathcal{S}$ ian, St ted 6691 oal. Qı . Xm Dool G.S 11 2602 29 2 Title & arching Co. ଞ









LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/260217 SEARCH DATE TIME EDITION NO DATE 10:34 AM 29/5/2012 4 23/11/2011 LAND LOT 1 IN DEPOSITED PLAN 260217 AT WYEE LOCAL GOVERNMENT AREA WYONG PARISH OF MUNMORAH COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP260217 FIRST SCHEDULE WYONG COAL PTY LIMITED (T 8096691) SECOND SCHEDULE (8 NOTIFICATIONS) 1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S) NOTIFICATION IN GOV GAZ 24.7.1964-EASEMENT FOR TRANSMISSION LINE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM 2151360 EASEMENT VESTS IN NEW SOUTH WALES ELECTRICITY 2 TRANSMISSION AUTHORITY 3 S177602 EASEMENT FOR PIPELINE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM EASEMENT FOR PIPELINE AFFECTING THE PART(S) SHOWN SO 4 s383382 BURDENED IN THE TITLE DIAGRAM \$630846 5 COVENANT 6 EXCEPTING LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES EASEMENT FOR WATER SUPPLY AFFECTING THE PART 7 AC350090 DESIGNATED (B) IN DP1091681. THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900 8 AG635105 NOTATIONS

UNREGISTERED DEALINGS: NIL

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

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

## SEARCH DATE 29/5/2012 3:14PM

FOLIO: 1/260217

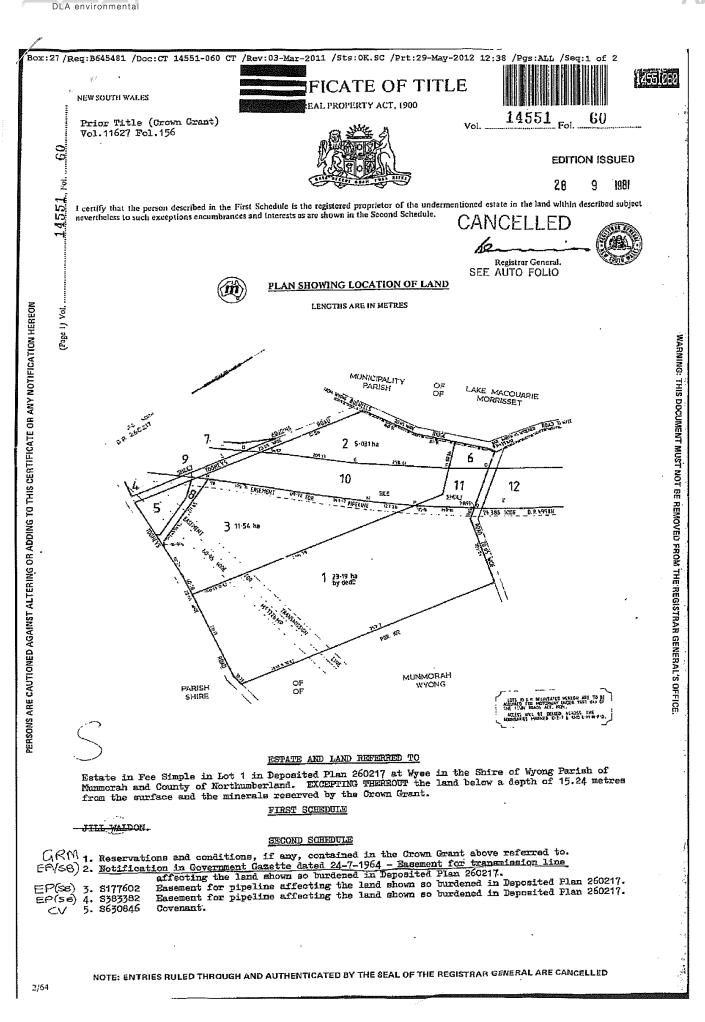
First Title(s): SEE PRIOR TITLE(S) Prior Title(s): VOL 14551 FOL 60

Recorded 5/6/1987	Number	Type of Instrument	C.T. Issue LOT RECORDED FOLIO NOT CREATED
19/8/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
3/10/1995	0576097	DISCHARGE OF MORTGAGE	EDITION 1
24/5/1996	2151360	REQUEST	
8/11/2001	8096691	TRANSFER	EDITION 2
16/12/2005	DP1091681	DEPOSITED PLAN	
1/6/2006	AC350090	GRANT OF EASEMENT	EDITION 3
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 4

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

JBS-Wyong

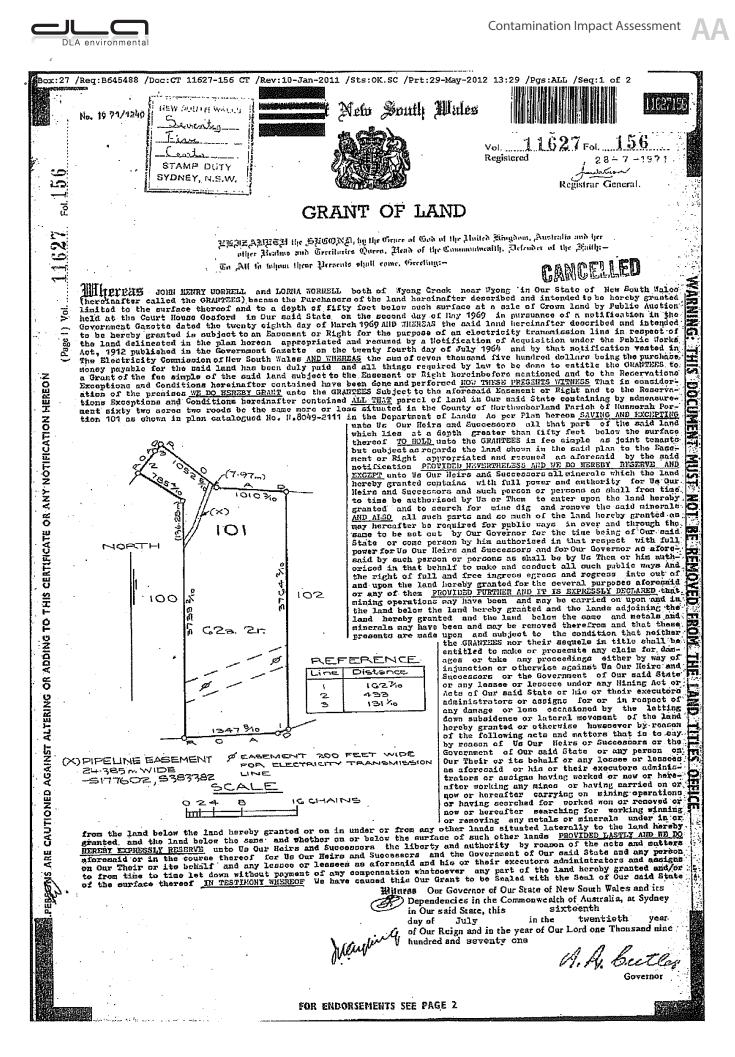
PRINTED ON 29/5/2012



Contamination Impact Assessment



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	(Page 2 of 2 pages) Vol.	
ni in N	14 <sup>4</sup>	
	FIRST SCHEDULE (continued)	
	REGISTERED PROPRIETOR	Registrar General
	Phillip William Gnauck and Sidonie Ann Gnauck as joint tenants by Transfer W229226. Registered	2 an 18 an 1 19 an 1
	11-3-1986.	
	11-12-12-04	
-		
N.	SECOND SCHEDULE (continued)	
	PARTICULARS Registrar General	CANCELLATION
	W229227 Mortgage to United Permanent Building Society Ltd. Registered 11-3-1986.	
		-
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	NOTATIONS AND UNREGISTERED DEALINGS	· · · · · · · · · · · · · · · · · · ·
1	- 1 TW-	
	22 NOTE 2 JO Z: BOS CL 14221-000 CL /864:03-War-2011 /262:0K.SC /PT:29-May-2012 12:38 /Pgs:ALL /264:2 of 2 HON	icet I FD
<u>ن</u> :	NOLE 0 70 CT /Rev: 03-Mar-2011 /Sts: SK SC /Prt: 29-Mav-2012 12:38 /Pre: Nor 0 12/2012 12:38	A:27 /Reg:B



Hansen Bailey

Register-General P2 9 2 12 2 Register-General P2 9 2 17 2	1222-55 1222-55 12 1222-55 12 1222-55 122-55 122-55 122-55 122-55 122-55 120-55 10	C.1. 20.7.5,	
емтекер 	Cancellation	2295212	2. comprises
11 12 13-11 13 13-11 13-		Discharged	and. In this i.i.
THAT ALL THA	Stanture of Regutario	E Marine	Kestdue of a
	ENTERED	9-11-1471 14-2 19-20 14-10-1471	
SCHEDULE OF REGISTERED PROPRIETOR REGISTERED PROPRIETOR Landon Francis Wallon of Belach Farmer on Fight Utullan to when a grant the Landon of Belines, Widow of Belach Farmer on the Commissioner to Min. Koods a equilation III Hallon as regards lats 1 and low 21 and Mr. Commissioner to Min. Koods a equilation	SCHEDULE OF ENCUMA-	Aprilection 2017 1918. 14.5-1971. To votion trans Worrent of Wyong Leeck, Aprilection 2017603. 14.5.1971. To votion the rank with Worrent Are with Aprilection 2017603 Essenwith En and in the local aprilected 21 5387382. Theory Aprile causing the land to the rank of the year here and aprilected 22 Second Vis Covernent of the land to the second in the year here and 27-198	Inis deed is convent of the lower with the lower wi

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Lot/DP	Date	Site Owner	Land Use/Occupation
	25/6/1912	The Australian Joint Stock Bank Limited	-
	25/7/1912	Albert Hamlyn Warner	Esquire
	8/4/1934	Charles Fairfax Waterloo Loyd	-
Lot 1/DP	10/7/1947	Robert David Mayne	-
791157	10/7/1947	William Thomas Cornford	Farmer
	28/4/1952	Herbert Hector Cornford	Secretary
	4/12/1991	Phyllis Ada Cornford	Widow
	27/9/2001	Wyong Coal Pty. Limited	-
	25/6/1912	The Australian Joint Stock Bank Limited	-
	25/7/1912	Albert Hamlyn Warner	Esquire
	8/4/1934	Charles Fairfax Waterloo Loyd	-
Lot 2/DP	10/7/1947	Robert David Mayne	-
791157	10/7/1947	William Thomas Cornford	Farmer
	28/4/1952	Herbert Hector Cornford	Secretary
	23/4/1992	Douglass Gary Cornford	Executor
	27/9/2001	Wyong Coal Pty. Limited	-

### Historical Title Summary for Buttonderry Site

DLA environmental

 $\sim$  Search  $\sim$ 2 ots DP 791157 1 2 2 m 20, 2gestered A lons 0 australian pint aun 40 200 V2263 7.225 25/6/1912 670454 Man lyn Warner 912 of Sydner 25 אל 0 sln\_ 18, Cal a ,d ·Х 28/1434 165272A  $\bigcirc$ 10 1 and 1 ml W ĥλ Kr 2652727 Wel leam shomas ( prol Orn Poin ains hent Alector F6555 7D ow <u>r</u> Cl 10 AS 0 29 Jenhers Title Searching Co. F&TABLIAHED 1949



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	re Let Iin DP 791157
	Achechile of Rega Puoprietors Conta
TA E 102839 Reg 4/12/91	Phyllis ada Comford of Speers Point Widow
(1/79/1157)	Widen
Afr 7981332 Reg 27/9/2000	Wyeng Coal Aty Ximited
$(\frac{1}{791157})$	
	MQ 29/5/2012
	JENDETS Title Searching Co. ESTABLIGHED 1949

DLA environmental

 $\sim$  Search  $\sim$ , ¢ re Let zin DP 9115 ,90l ieter ont DAL U TA E 404991 ford of with ollangon oudars Corn  $\mathcal{O}$ 1an 10 23, 14 192 00M ord in 115 0 0 0 oal We 81336 Pty. Xini te ol ren 9/200 27 5 29 5 12 U. Jehners' Title Searching Co. E&TABLI&HED 1949







> LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/791157 \_\_\_\_

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:38 AM	4	23/11/2011

LAND

LOT 1 IN DEPOSITED PLAN 791157 AT WARNERVALE LOCAL GOVERNMENT AREA WYONG PARISH OF WYONG COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP791157

FIRST SCHEDULE

WYONG COAL PTY LIMITED

(T 7981332)

SECOND SCHEDULE (3 NOTIFICATIONS)

1

- LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN SEE CROWN GRANT(S) EASEMENT(S) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM CREATED BY: 2 H432981
  - -FOR TRANSMISSION LINE 30.48 WIDE Z944756
  - TRANSFER OF EASEMENT TO SYDNEY ELECTRICITY AS REGARDS THE EASEMENT IN H432981
- THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900 3 AG635105

NOTATIONS UNREGISTERED DEALINGS: NIL

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

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 2/791157

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:39 AM		23/11/2011

LAND

LOT 2 IN DEPOSITED PLAN 791157 AT WARNERVALE LOCAL GOVERNMENT AREA WYONG PARISH OF WYONG COUN TITLE DIAGRAM DP791157 COUNTY OF NORTHUMBERLAND

FIRST SCHEDULE

WYONG COAL PTY LIMITED

(T 7981336)

SECOND SCHEDULE (3 NOTIFICATIONS)

- LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN SEE CROWN GRANT(S) 1
- 2 EASEMENT(S) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM CREATED BY: H432981 -FOR -FOR TRANSMISSION LINE 30.48 WIDE Z944756
  - TRANSFER OF EASEMENT TO SYDNEY ELECTRICITY AS REGARDS THE EASEMENT IN H432981
- THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900 3 AG635105

NOTATIONS

UNREGISTERED DEALINGS: NIL

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

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE 29/5/2012 1:42PM

FOLIO: 1/791157

First Title(s): VOL 2263 FOL 225 Prior Title(s): VOL 2263 FOL 225

Recorded 14/8/1989	Number  DP791157	Type of Instrument DEPOSITED PLAN	C.T. Issue FOLIO CREATED EDITION 1
4/12/1991	E102839	TRANSMISSION APPLICATION	EDITION 2
16/2/1993	Z944756	REQUEST	
27/9/2001	7981332	TRANSFER	EDITION 3
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 4

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

JBS-Wyong

PRINTED ON 29/5/2012



Ref:JBS-Wyong /		/Sts:OK.SC /Prt:29-May-20		29
RP3				i 139 R
	54 C TDANCH		· · · · · · · · · · · · · · · · · · ·	
<u> </u>		ТА	lo	
		1 93, REAL PROPERTY ACT, 1900 tions for Completian on back of form)	\$	
		LAND of which deceased is registered proprietor		
DESCRIPTION OF LAND	Torrens Title reference	It Part Only, Delete Whole and Give Details	Location	
Note (#)	Folio Identifier No. 1/791157	WHOLE	At: Warnervale	
	LEASE, MORT	GAGE, OR CHARGE of which deceased is registered	d proprietor	
	Type of Dealing Registered Number	Torrens Title Reference	Location	10 10 10 10 10
Nole (b)				ধন্থ
	· · ·			16
				/ˈr/#
DECEASED REGISTERED PROPRIETOR Note (C)	HERBERT HECTOR CORNFORD			0D #
*	(the abovenamed DECEASED) is registered as proprietor of	Ind above described.		q
Note (d)	(IDB ADOVENAMED DECEASED) IS INGISTATED as proprietor of	the failt above described. The APPLIC shovementioned registered dealing.		4
Note (e)		Oliverate Orange Designate	1	JSE ONLY
	PHYLLIS ADA CORNFORD C/- 108 La	(eview Street, Speers Point, V	VLOOW.	Ē
			5	rehumed
<b>-</b>	being enlitted as Beneficiary		of the will/estate of the abovenamed	б <b>Г</b>
Nole (I) and (j)	Probate No.	of whose will was		deceased I
4	Letters-el-Administration-No. 106034/91		granted on 7th May, 1991	พี้
	to DOUGLAS GARY CORNFORD and KEVIN			bates
Note (d)	hereby applies to be registered as proprietor of the estate or	interest of the said deceased in the land above desc abovementioned	rnbød. <del>1 registered døs</del> ling <del>: "</del>	5
	DATE 4/9/91			bre
	I hereby certify this application to be correct for the purpose Signed in my presence by the applicant who is personally kn			
wITNESS,				
×	Signature of Witness	ang		
	Lucy I. M. C. Mur Signature of Wilness LUCY REALE M. C. MUR, Name of Wilness (BLOCK LETTERS)	ën-p		
Note (g)	111 LAKEUISU ST SPIER	S PT	v P Parl	ما
4	III LAKE WISSEN ST STITE	SEWI FE	Signature of Applicant	<u>or</u>
TO BE COMPLETED BY LODGING PARTY	LODGED BY	PROBATE		·
Notes (g) and (h)	L J. NANE & CO	J		
	RCO Box SOP	102054	4 14.2.91 Herewith.	
			In L.T.O. with	
	Delivery Box Number TH - CORNFO	RO	Produced by	
OFFICE USE ONLY		19 Secondary		
	Signed Extre Fee	Directions		
	Signed Extra Fee	Delivery Directions		
	•			







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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

## SEARCH DATE 29/5/2012 2:45PM

FOLIO: 2/791157

First Title(s): VOL 2263 FOL 225 Prior Title(s): VOL 2263 FOL 225

Recorded 14/8/1989	Number DP791157	Type of Instrument DEPOSITED PLAN	C.T. Issue FOLIO CREATED EDITION 1
23/4/1992	E404991	TRANSMISSION APPLICATION	EDITION 2
16/2/1993	Z944756	REQUEST	
27/9/2001	7981336	TRANSFER	EDITION 3
23/11/2011	AG635105	APPLN FOR REPLACEMENT CT	EDITION 4

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

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### PRINTED ON 29/5/2012



RP3 '	Src: T		0 /Sts:OK.OK /Pr	t:29-May-20		L
						404991 B
		TRANS	MISSION APPLIC		of	
			ION 93, REAL PROPERTY ACT uctions for Completion on bac	°, 1900	\$	
	<b></b>	·····	LAND of which decessed is reg	stered proprietor		
DESCRIPTION	Tomen	s Title reference	If Part Only, Delete Whole a	and Give Details		Location
OF LAND Note (a)	Identifie	r <b>2/</b> 791157	WHOLE		• At: Wa	rnervale
		LEASE. MO	RTGAGE, OR CHARGE of which o	iecessed is registered	proprietor	
REGISTERED DEALING Note (b)	Type of Dealing	Registered Number	Torrens Title Ref			Location
DECEASED REGISTERED PROPRIETOR Note (c)	HERBERT H	LECTOR CORNFORD	-			
Note (d) APPLICANT Note (e)	DOUGLAS G		5 Mountview Str	eet, North		
	Executors		D of 108 Lakevie	w Street, :	Speers Point	JT2
ENTITLEMENT Note (1) and (j)	Executors being entitled as Exe Probate No. Letters of Administratio	ecutors 106034/91	D of 108 Lakevie d Kevin Raymon C	of whose will was of whose estate we	of the will/estat	e of the abovenamed deceased
Note (f) and (j)	Executors boing entitled as Exce Probate No. Letters of Administratio to Douglas C	ecutors 106034/91 Gary Cornford an	d Kevin Raymon C	of whose will was of whose estate we ornford.	of the will/estat	e of the abovenamed deceased
	Executors being entitled as Exce Probate No. Letters of Administratio to Douglas C hereby applies to be re- DATE /4/4/ t hereby certify this app Signed in my presence	Ecutors 106034/91 Sary Cornford an gistered as proprietor of the estat Afair, /992 Dilection to be correct for the purp by the applicant who is personal	d Kevin Raymon C e or interest of the said deceased i poses of the real Property Act, 1900 by known to me.	of whose will was of whose estate w ornford. n the land above descr abovemaplioned	of the will/estat	e of the abovenamed deceased
Note (f) and (j)	Executors being entitled as Exec Probate No. Letters of Administratio to Douglas C hereby applies to be re- DATE /4/M , t hereby certify this app Signed in my presence <u>Nicolo</u> Signed in My presence	Ecutors 106034/91 Sary Cornford an gistered as proprietor of the estat Afan, /992 biteation to be correct for the purp by the applicant who is personall Rona	d Kevin Raymon C e or interest of the said deceased i poses of the real Property Act, 1900 by known to me. MARADANK .	of whose will was of whose estate w ornford. In the land above descr abovemagilonest	of the will/estat	e of the abovenamed deceased
Note (f) and (j) Nota (d) EXECUTION Note (g)	Executors being entitled as Exec Probate No. Letters of Administratio to Douglas C hereby applies to be re- DATE /4/M / I hereby certify this app Signed in my presence NiCOLA Name of W 13 NIOK	S. Cutors 106034/91 Sary Cornford an gistered as proprietor of the estat Afair, /992 Stleation to be correct for the purp by the applicant who is personall protocol witness Roman Roman Raness (BLOCK LETTERS) A AVE. KEIRAVIL medocupation of Witness	d Kevin Raymon C e or interest of the said deceased i poses of the real Property Act, 1900 by known to me. MARADANK .	of whose will was of whose estate w ornford. In the land above descr abovemantionest c. c. c. c. c. c. c. c. c. c. c. c. c.	of the will/estat are granted on 7 th M ibed. accidence dealing.	e of the abovenamed deceased fay, 1991.
Note (f) and (j) Note (d) EXECUTION	Executors being entitled as Exec Probate No. Letters of Administratio to Douglas C hereby applies to be re- DATE ///// I hereby certify this app Signed in my presence Nicolo Signed in My presence Signed in My presence Nicolo Signed in My presence Signed in My presence S	S. Cutors 106034/91 Sary Cornford an gistered as proprietor of the estat Afair, /992 Stleation to be correct for the purp by the applicant who is personall protocol witness Roman Roman Raness (BLOCK LETTERS) A AVE. KEIRAVIL medocupation of Witness	d Kevin Raymon C e or interest of the said deceased i poses of the real Property Act, 1900 by known to me. MARIAWINE MARIAWINE LE IS WAKENI	of whose will was of whose estate wi ornford. In the land above descr abovemaplioned		e of the abovenamed deceased fay, 1991. Signature of Applicant DCUMENTS Herewith.
Note (f) and (j) Note (d) EXECUTION Note (g) TO SE COMPLETED BY LOGGING PART	Executors boling entitled as Exce Probate No. Letters of Administratio to Douglas C hereby applies to be re- DATE /4/4/ I hereby certify this app Signed in my presence Nicolo Nicolo Nicolo Signed in My presence Nicolo Signed in My presence Nicolo Nicolo Nicolo Signed in My presence Nicolo Signed in My presence Nicolo Nicolo Signed in My presence Nicolo Signed in My presence Nicolo Signed in My presence Nicolo Signed in My presence Nicolo Nicolo Signed in My presence Nicolo Signed in My pr	acutors 106034/91 Sary Cornford an gistered as proprietor of the estat Afrow, 1992 Solution to be correct for the purp by the applicant who is personal Control Roman Ro	d Kevin Raymon C e or interest of the said deceased i poses of the real Property Act, 1900 by known to me. MARIAWINE MARIAWINE LE IS WAKENI	of whose will was of whose estate will ornford. In the land above descr abovemanilopest		e of the abovenamed deceased Aay, 1991.
Note (f) and (j) Note (d) EXECUTION Note (g) TO SE COMPLETED BY LOGGING PART	Executors being entitled as Exce Probate No. Letters of Administratio to Douglas C hereby applies to be re- DATE /4/M / I hereby certify this app Signed in my presence Nicolo Nicolo Sig Nicolo Sig Nicolo Sig Nicolo Colo Sig Nicolo Sig Nicolo Colo Sig Nicolo Sig Sig Sig Sig Sig Sig Sig Sig	S. Cutors 106034/91 Sary Cornford an gistered as proprietor of the estat Afan, 1992 Silection to be correct for the purp by the applicant who is personall Roman	d Kevin Raymon C e or interest of the said deceased i poses of the real Property Act, 1900 by known to me. MEK MARIAWINK LE IZ NAKENI ARTIST.	of whose will was of whose estate will ornford. In the land above descr abovemanilopest		a of the abovenamed deceased lay, 1991. Signature of Applicant DCUMENTS Herewith. In L.T.O. with



Lot/DP	Date	Site Owner	Land Use/Occupation
	27/9/1910	George Smith	
	22/11/1917	William Armstrong	Farmer
Lot 1/DP 581339	22/9/1926	Mary Jane Kohler & William Charles Armstrong	Married Woman/Civil Servant
	4/9/1939	Margeret Helene Isabella Francis	Dairy Farmer
	11/7/1977	Her Most Gracious Majesty Queen Elizabeth the Second	

### Historical Title Summary - Western Ventilation Shaft Site



 $\sim$  Search  $\sim$ re Lot 1 in DP 581339 Registered Propretors leave Xmith ant F.27 uggera 1910 <u>2</u>7 × A348161 Coms there m 22 '191 OK mo BK09890 ler of Wyeng Ma liam Charles Ene Keg 25/9 Will 9 On of Woold U Q. d0S on .d + C 822334 rances Margaret Allene Isal ncy Than K, A Wai ×Q179603 most Guaciere Ma Ň ilsti 010 ne 1.246 29 2 CIIICI'S Title Searching Co. J ESTABLISHED 1949









Jenners Title Searching Co. 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 LPINSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/581339

----

SEARCH DATE	TIME	EDITION NO	DATE
29/5/2012	10:39 AM	-	-

VOL 13358 FOL 246 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 1 IN DEPOSITED PLAN 581339 LOCAL GOVERNMENT AREA WYONG PARISH OF WYONG COUNTY OF NORTHUMBERLAND TITLE DIAGRAM DP581339

FIRST SCHEDULE

HER MOST GRACIOUS MAJESTY QUEEN ELIZABETH THE SECOND (T Q179603)

SECOND SCHEDULE (1 NOTIFICATION)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

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

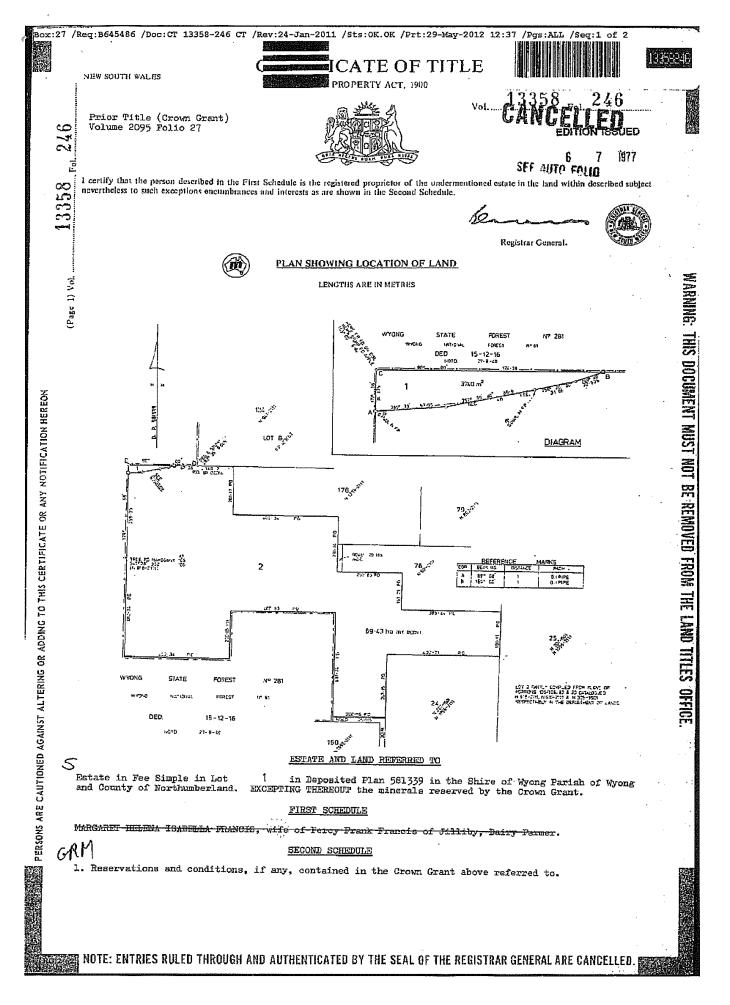
JBS-Wyong

PRINTED ON 29/5/2012

\*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.







	Signature of Registror General	State of the state											•
	ENTERED	-11-7-1977	•			CANCELLATION							
	DATE					Ū							
	INSTRUMENT NUMBER	60367.10				Signature al Registrar General					· · ·		<u>.</u>
	NATURE	Transfer				ENTERED Regi							
FIRST SCHEDULE (continued)	REGISTERED PROPRIETOR	th the Second.			SECOND SCHEDULE (continued)	PARTICULÀRS			SEE AUTO FOLIO				
	REC	Her Nost Gradiana Majesty Queen Elizabeth the Second				DATE							
		cacima Najes			(LIC44618161)	NUMBER	 			 			

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# Appendix D

Groundwater Bore Search Information

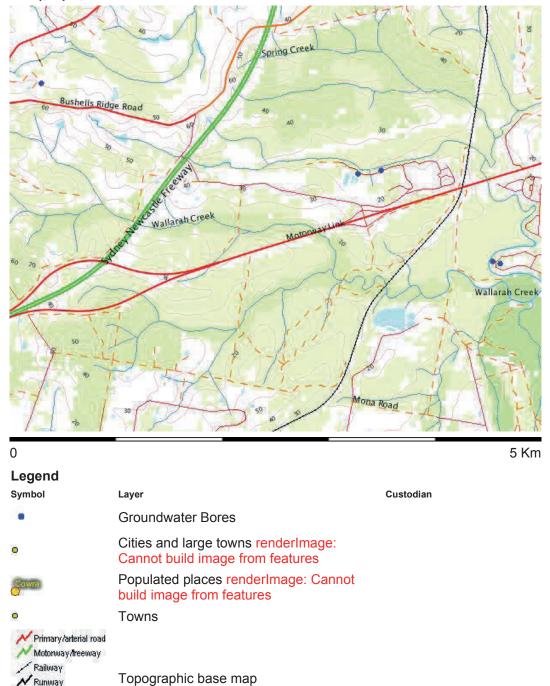


#### Print Map

Page 1 of 1

### Map from the NSW Natural Resource Atlas

Map created with NSW Natural Resource Atlas - http://www.nratlas.nsw.gov.au Tuesday, May 29, 2012



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http://www.nratlas.nsw.gov.au/wmc/custom/widgets/printlink/popup/printmap.jsp? 29/05/2012

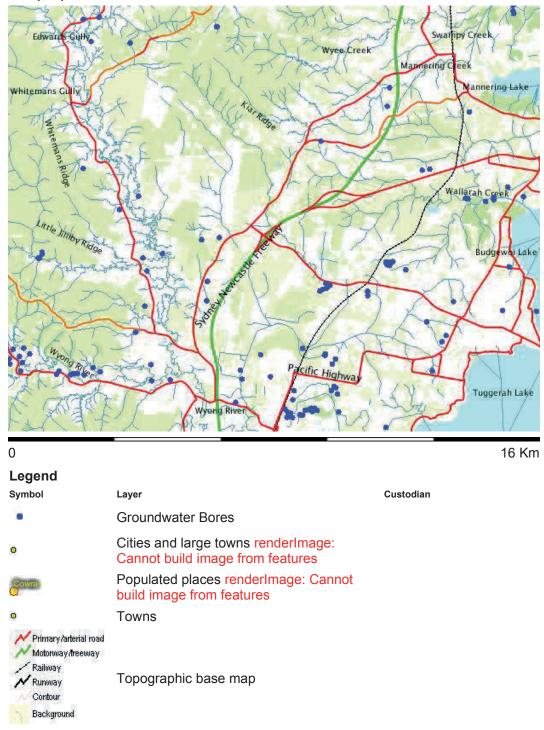
Contour Background

#### Print Map



### Map from the NSW Natural Resource Atlas

Map created with NSW Natural Resource Atlas - http://www.nratlas.nsw.gov.au Tuesday, May 29, 2012



Copyright © 2012 New South Wales Government. Map has been compiled from various sources and may contain errors or omissions. No representation is made as to its accuracy or suitability.

http://www.nratlas.nsw.gov.au/wmc/custom/widgets/printlink/popup/printmap.jsp? 29/05/2012

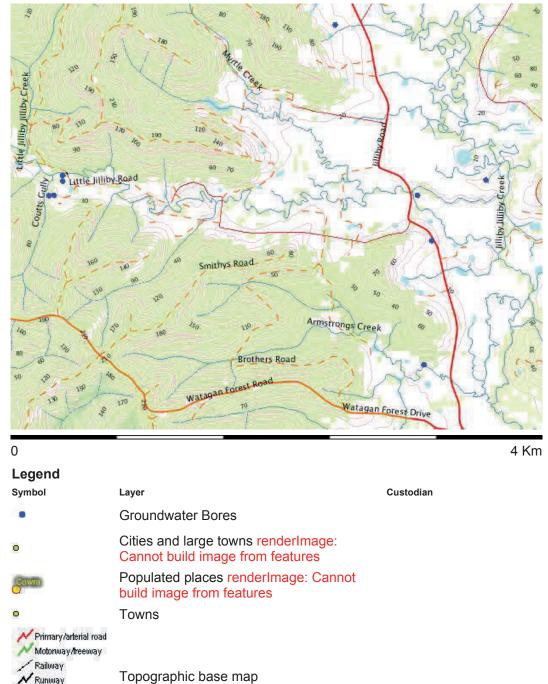


#### Print Map

Page 1 of 1

## Map from the NSW Natural Resource Atlas

Map created with NSW Natural Resource Atlas - http://www.nratlas.nsw.gov.au Tuesday, May 29, 2012



Copyright © 2012 New South Wales Government. Map has been compiled from various sources and may contain errors or omissions. No representation is made as to its accuracy or suitability.

http://www.nratlas.nsw.gov.au/wmc/custom/widgets/printlink/popup/printmap.jsp? 29/05/2012

Hansen Bailey

Contour Background



Page 1 of 3

## **Groundwater Works Summary**

For information on the meaning of fields please see <u>Glossary</u> Document Generated on Tuesday, May 29, 2012

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

### Work Requested -- GW201704

#### Works Details (top)

GROUNDWATER NUMBER	GW201704
LIC-NUM	20BL172760
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	Equipped - bore used for obs
CONSTRUCTION-METHOD	Auger - Solid Flight
OWNER-TYPE	Mines
COMMENCE-DATE	
COMPLETION-DATE	2011-07-04
FINAL-DEPTH (metres)	7.20
DRILLED-DEPTH (metres)	7.20
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
GWMA	017 - HUNTER
GW-ZONE	-
STANDING-WATER-LEVEL	1.90
SALINITY	
YIELD	

#### Site Details (top)

REGION	20 - HUNTER
<b>RIVER-BASIN</b>	211 - MACQUARIE - TUGGERAH LAKES
AREA-DISTRICT	
CMA-MAP	9131-1S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6325840.00
EASTING	354686.00
LATITUDE	33 11' 48"
LONGITUDE	151 26' 28"
GS-MAP	

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW201704



Page 2 of 3

AMG-ZONE56COORD-SOURCEGPS - Global Positioning SystemREMARK

#### Form-A (top)

COUNTY	NORTHUMBERLAND
PARISH	MUNMORAH
PORTION-LOT-DP	49//755245

#### Licensed (top)

COUNTY	NORTHUMBERLAND
PARISH	MUNMORAH
PORTION-LOT-DP	49 755245

#### 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

	PIPE- NO	COMPONENT- CODE	COMPONENT- TYPE	FROM	DEPTH- TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	7.20	125			Auger - Sol Flight
1	1	Casing	PVC Class 18	-0.75	4.20	60			Screwed; Seated on Bottom; Ca
1	1	Opening	Slots - Horizontal	4.20	7.20	60			PVC Class 18; Mechanica Slotted; A: .5mm; Screwed
1		Annulus	Bentonite	0.00	2.80	125	60		
1		Annulus	Waterworn/Rounded	2.80	7.20	125	60		Graded; G 1-2mm

#### Water Bearing Zones (top)

FROM- DEPTH (metres)	TO-DEPTH (metres)	I THICKNESS (metres)	ROCK- CAT- DESC	S- W-L	D- D- L	YIELD	TEST-HOLE- DEPTH (metres)	DURATION	SALINITY
4.50	6.70	2.20		1.90					

#### Drillers Log (top)

FROM	то	THICKNESS	DESC	GEO-MATERIAL COI	MMENT
0.00	0.50	0.50	Topsoil		
0.50	4.50	4.00	Silty Clay, light brown		
4.50	6.70	2.20	Sandy Clay, grey		

#### http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW201704



Page 3 of 3

6.70 7.20 0.50 Sandstone, weathered, yellow

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.

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW201704



Page 1 of 2

## **Groundwater Works Summary**

For information on the meaning of fields please see <u>Glossary</u> Document Generated on Tuesday, May 29, 2012

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

## Work Requested -- GW200380

#### Works Details (top)

GROUNDWATER NUMBER	GW200380
LIC-NUM	20BL169930
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	Rotary Air
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2005-11-07
FINAL-DEPTH (metres)	6.00
DRILLED-DEPTH (metres)	6.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	5.00
SALINITY	
YIELD	

#### Site Details (top)

REGION	20 - HUNTER
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6324782.00
EASTING	357960.00
LATITUDE	33 12' 24"
LONGITUDE	151 28' 34"
GS-MAP	

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW200380



Page 2 of 2

AMG-ZONE	56
COORD-SOURCE	Map Interpretation
REMARK	

#### Form-A (top)

COUNTY	NORTHUMBERLAND
PARISH	MUNMORAH
PORTION-LOT-DP	168/705480

#### Licensed (top)

COUNTY	NORTHUMBERLAND
PARISH	MUNMORAH
PORTION-LOT-DP	168 705480

#### 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 ID (mm) (mm) INTERVAL	DETAIL
1		Hole	Hole	0.00	6.00	152	Rotary Air
1	1	Casing	PVC Class 18	-1.00	3.00	60	C:1-0m; Screwed; Other; Cap
1	1	Opening	Screen - Gauze/Mesh	3.00	6.00	60	(Unknown); PVC Class 18; A: .5mm; Screwed

#### Water Bearing Zones (top)

no details

#### Drillers Log (top)

 FROM
 TO
 THICKNESS
 DESC
 GEO-MATERIAL
 COMMENT

 0.00
 6.00
 6.00
 clay

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.

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW200380



Page 1 of 2

## **Groundwater Works Summary**

For information on the meaning of fields please see <u>Glossary</u> Document Generated on Tuesday, May 29, 2012

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

## Work Requested -- GW078390

#### Works Details (top)



#### Site Details (top)

REGION	20 - HUNTER
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6323730.00
EASTING	359361.00
LATITUDE	33 12' 58"
LONGITUDE	151 29' 27"
GS-MAP	

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW078390



Page 2 of 2

AMG-ZONE 56 COORD-SOURCE REMARK

#### Form-A (top)

COUNTY	NORTHUMBERLAND
PARISH	MUNMORAH
PORTION-LOT-DP	(PART PORTION 60)

#### Licensed (top)

COUNTY	NORTHUMBERLAND
PARISH	MUNMORAH
PORTION-LOT-DP	142 218002

#### Water Bearing Zones (top)

no details

Drillers Log (top)

no details

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.

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW078390



Page 1 of 3

## **Groundwater Works Summary**

For information on the meaning of fields please see <u>Glossary</u> Document Generated on Tuesday, May 29, 2012

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

## Work Requested -- GW200938

#### Works Details (top)

GW200938
20BL167846
DOMESTIC STOCK
DOMESTIC STOCK
Bore
Down Hole Hammer
Private
2000-08-08
36.00
36.00
N/A
-
-
14.00
0.50

#### Site Details (top)

REGION	20 - HUNTER
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6322112.00
EASTING	351483.00
LATITUDE	33 13' 47"
LONGITUDE	151 24' 22"
GS-MAP	

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW200938



Page 2 of 3

AMG-ZONE 56 COORD-SOURCE REMARK

#### Form-A (top)

COUNTY	NORTHUMBERLAND
PARISH	WYONG
PORTION-LOT-DP	4//864374

#### Licensed (top)

COUNTY	NORTHUMBERLAND
PARISH	WYONG
PORTION-LOT-DP	4 864374

#### 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	36.00	210			Down Hole Hammer
1	1	Casing	PVC Class 9	-0.30	36.00	160	146.6		Screwed and Glued; Seated on Bottom; Cap
1	1	Casing	Concrete	-0.20	2.00	210			
1	1	Opening	Slots - Vertical	12.00	36.00	160			PVC Class 9; Sawn; SL: .15mm; A: 2mm

#### 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
17.80	18.10	0.30		14.00	20.00	0.10		0.50	Fresh
30.90	31.30	0.40		14.00	36.00	0.50		3.00	Fresh

#### Drillers Log (top)

FROM	то	THICKNESS	DESC	GEO-MATERIAL COMMEN	Т
0.00	1.80	1.80	CLAY BROWN		
1.80	2.90	1.10	SANDY CLAY YELLOW		
2.90	17.80	14.90	CLAY BROWN		

#### http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW200938



Page 3 of 3

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17.80	18.10 0.30	CONGLOMERATE W.B
18.10	24.20 6.10	CLAY GREY
24.20	30.90 6.70	CONGLOMERATE GREY
30.90	31.30 0.40	CONGLOMERATE W.B
31.30	35.50 4.20	CONGLOMERATE
35.50	36.00 0.50	CLAY BROWN

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.

http://is2.dnr.nsw.gov.au/proxy/dipnr/gwworks?GWWID=GW200938



# Appendix E

Dangerous Goods Search

92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

WorkCover NSW





Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 443 Hue Rd Jilliby NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

**Yours Sincerely** 

Brent Jones Senior Licensing Officer Dangerous Goods Team





WorkCover NSW 92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au





Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 303 Hue Rd Jilliby NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

Brent Jones Senior Licensing Officer Dangerous Goods Team



92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

WorkCover NSW





WORKCOVER Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 670 Hue Rd Jilliby NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

Brent Jones Senior Licensing Officer Dangerous Goods Team



Hansen Bailey





Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 672 Hue Rd Jilliby NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

and the second second

**Yours Sincerely** 

Brent Jones Senior Licensing Officer Dangerous Goods Team



WorkCover NSW 92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

DLA environmental

92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

WorkCover NSW





Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 4 Amberwood Close Jilliby NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

Brent Jones Senior Licensing Officer Dangerous Goods Team







Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 3 Amberwood Close Jilliby NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

**Yours Sincerely** 

Brent Johes Senior Licensing Officer Dangerous Goods Team

WC03116 0611

Wallarah 2 Coal Project



HOME

SAFE

WORK

SAFE

WorkCover NSW 92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145

WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

DLA environmental





Hansen Bailey

165

92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

WorkCover NSW





WORKCOVER Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 9 Kiar Ridge Rd Kiar NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

Brent Jones Senior Licensing Officer Dangerous Goods Team

Hansen Bailey





Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 776 Tooheys Rd Bushells Ridge NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

WC03116 0611

Brent Jones Senior Licensing Officer Dangerous Goods Team

WorkCover NSW 92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

DLA environmental

92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

WorkCover NSW







Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 106 Tooheys Rd Bushells Ridge NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

Yours Sincerely

Brent Jones Senior Licensing Officer Dangerous Goods Team







DLA environmental

WorkCover NSW 92-100 Donnison Street, Gosford, NSW 2250 Locked Bag 2906, Lisarow, NSW 2252 T 02 4321 5000 F 02 4325 4145 WorkCover Assistance Service 13 10 50 DX 731 Sydney workcover.nsw.gov.au

Our Ref: D12/076151 Your Ref: Malcolm Adrien

20 June 2012

Attention: Malcolm Adrien David Lane Associates Unit 2B, 30 Leighton Place Hornsby NSW 2077

Dear Mr Adrien,

#### RE SITE: 84 Tooheys Rd Bushells Ridge NSW

I refer to your site search request received by WorkCover NSW on 15 June 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

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

**Yours Sincerely** 

Brent Jones Senior Licensing Officer Dangerous Goods Team

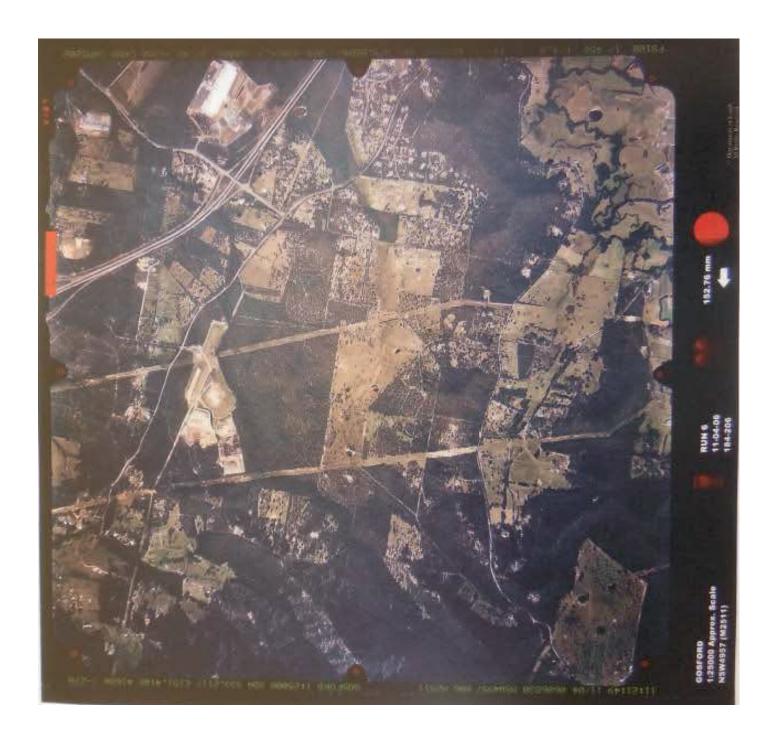




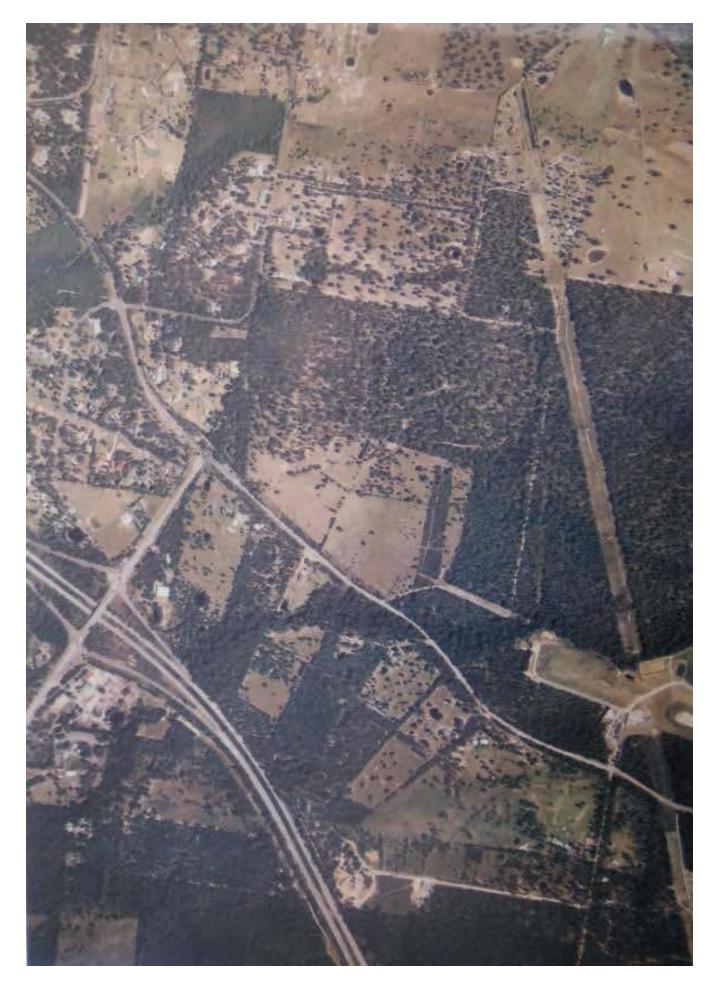
# Appendix F

Aerial Photography













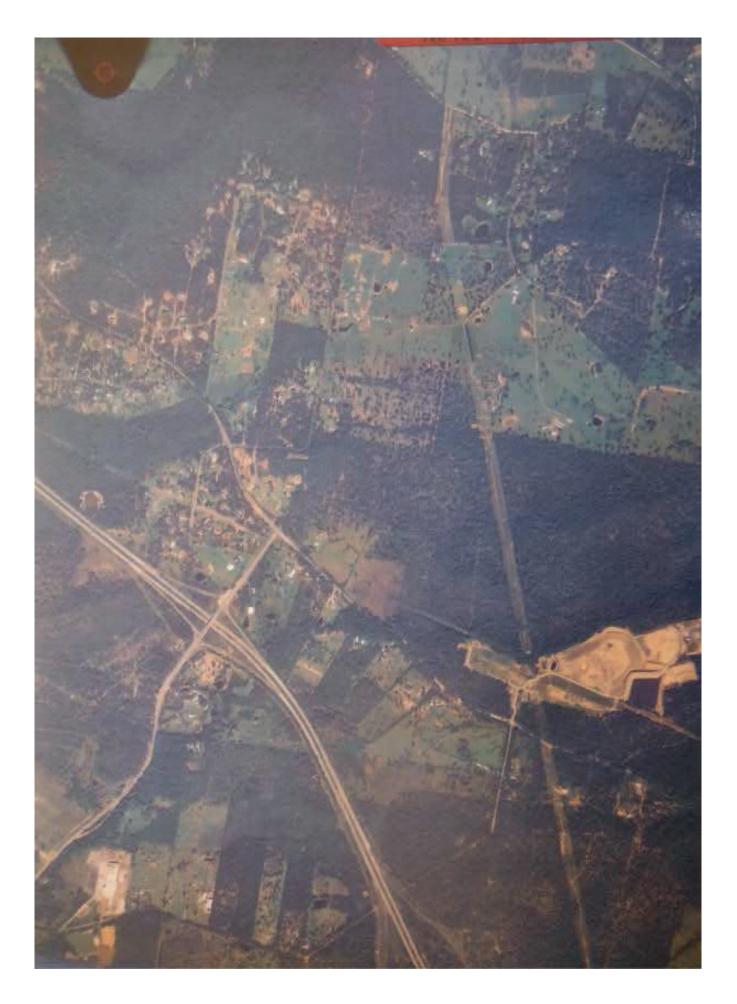








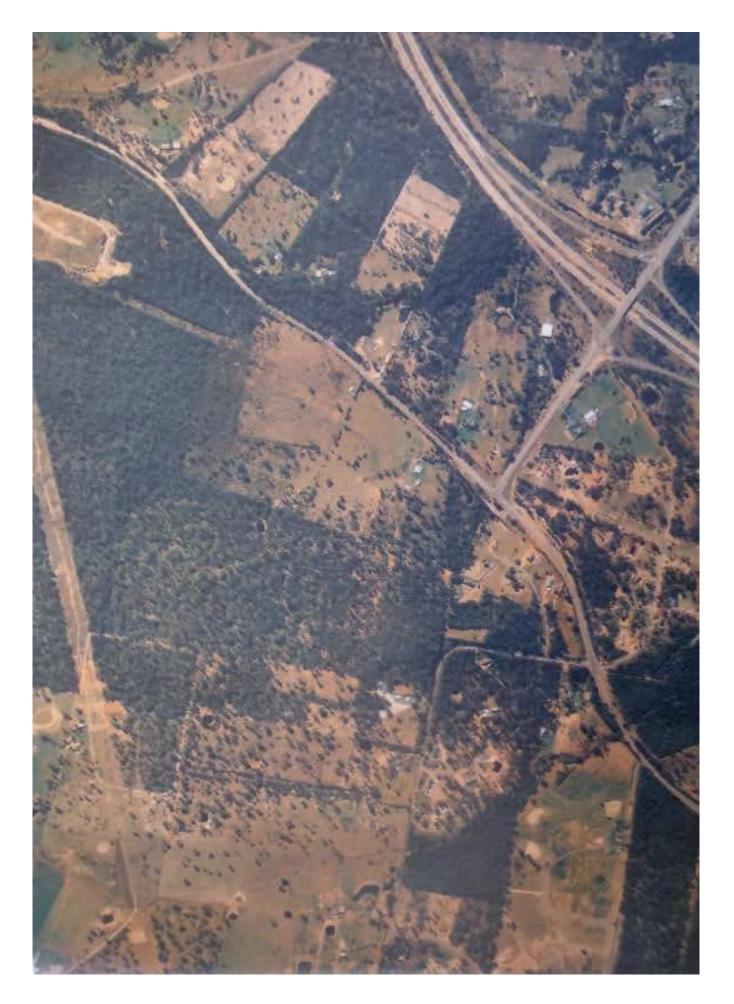












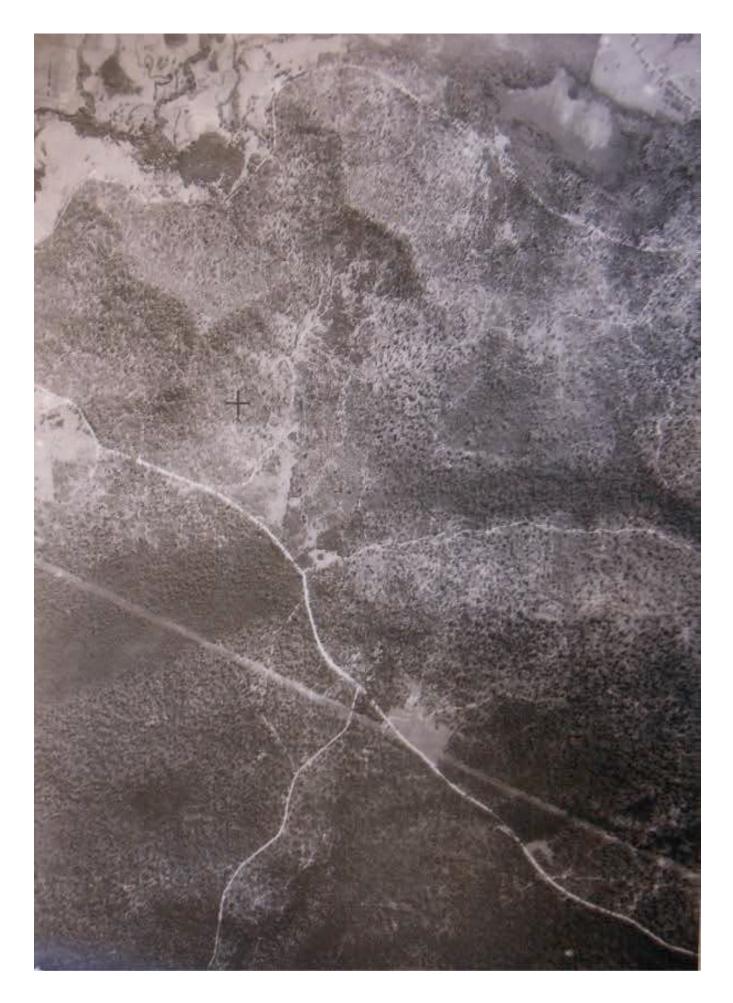




























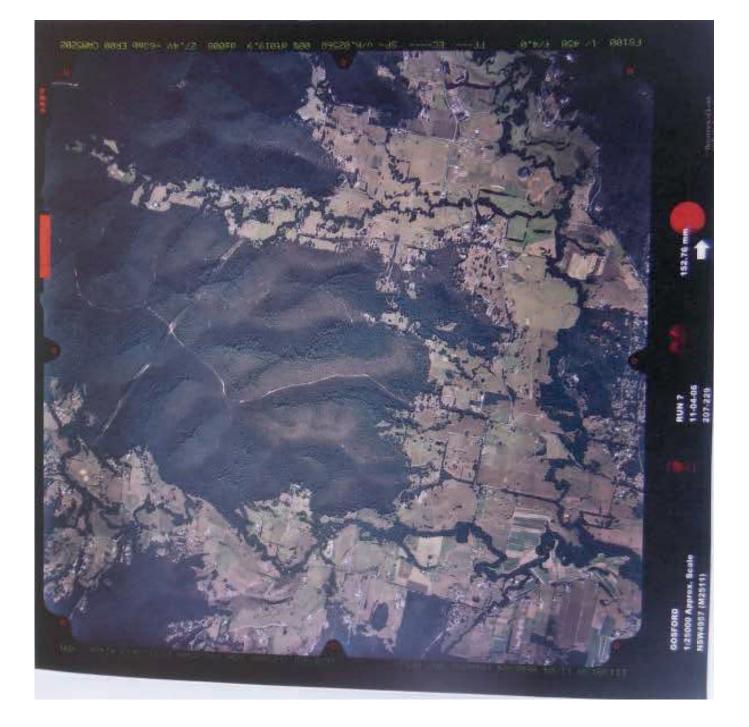








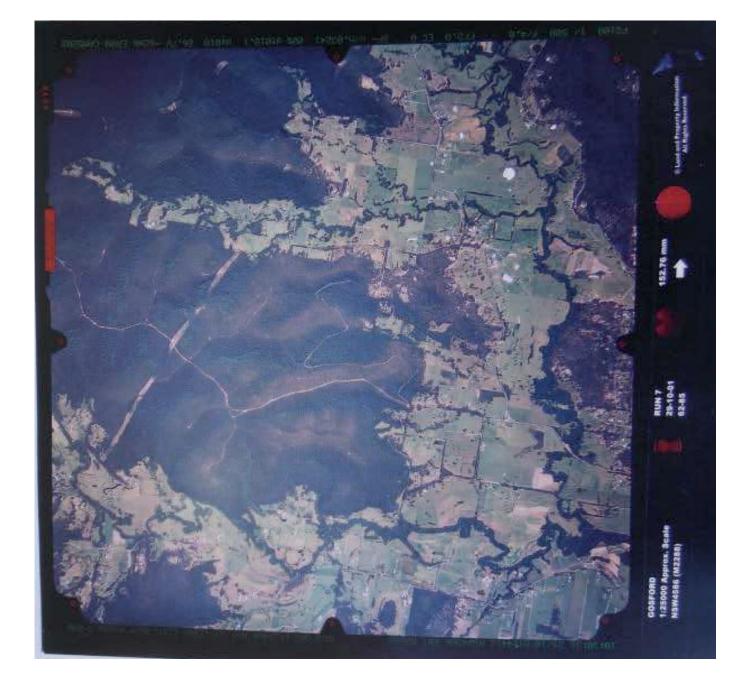




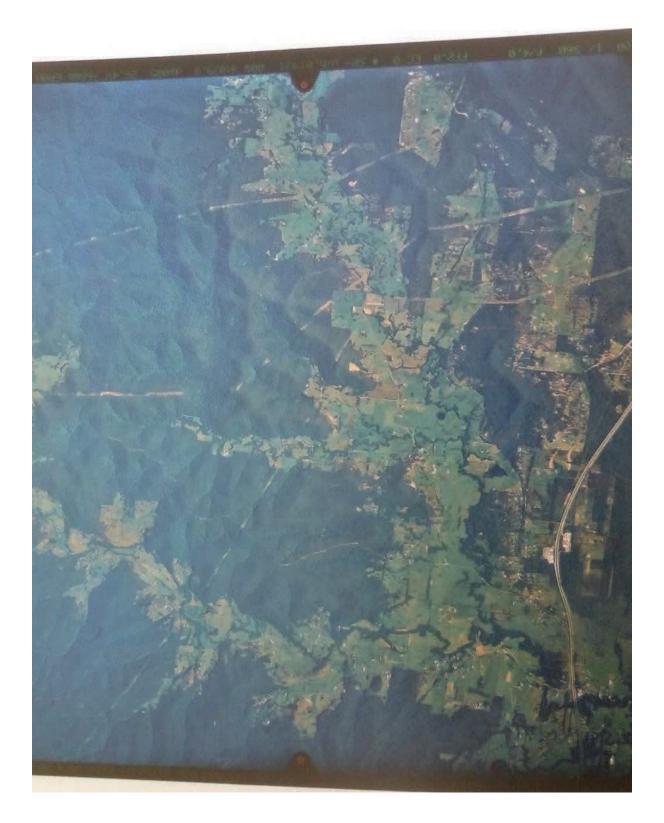








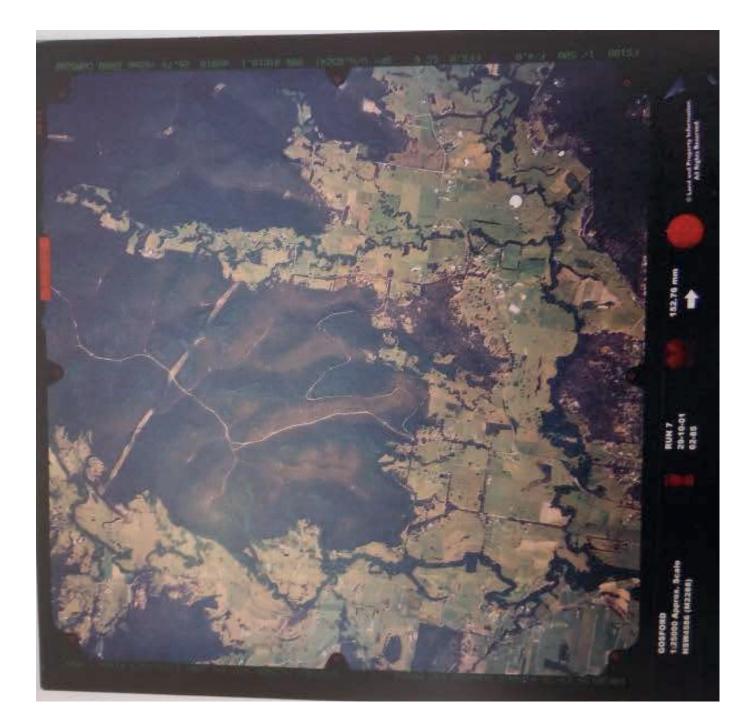




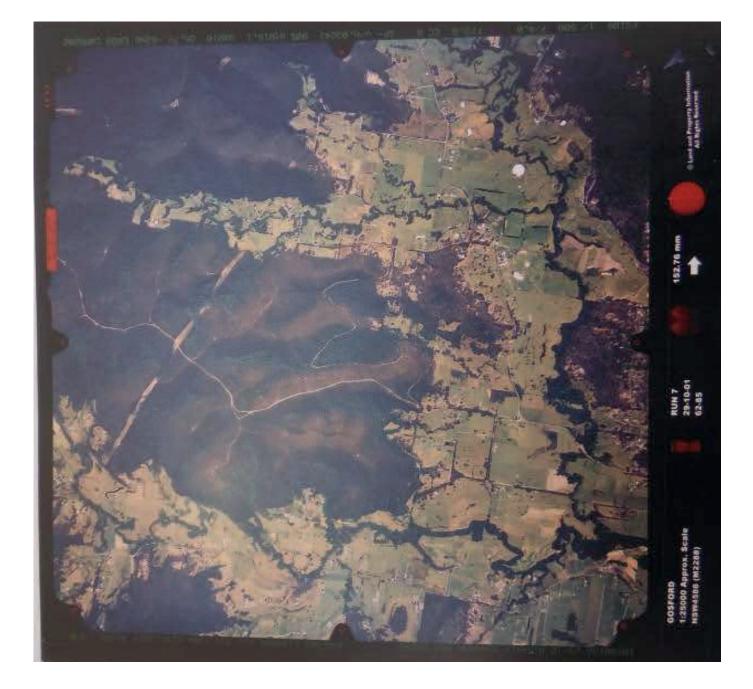




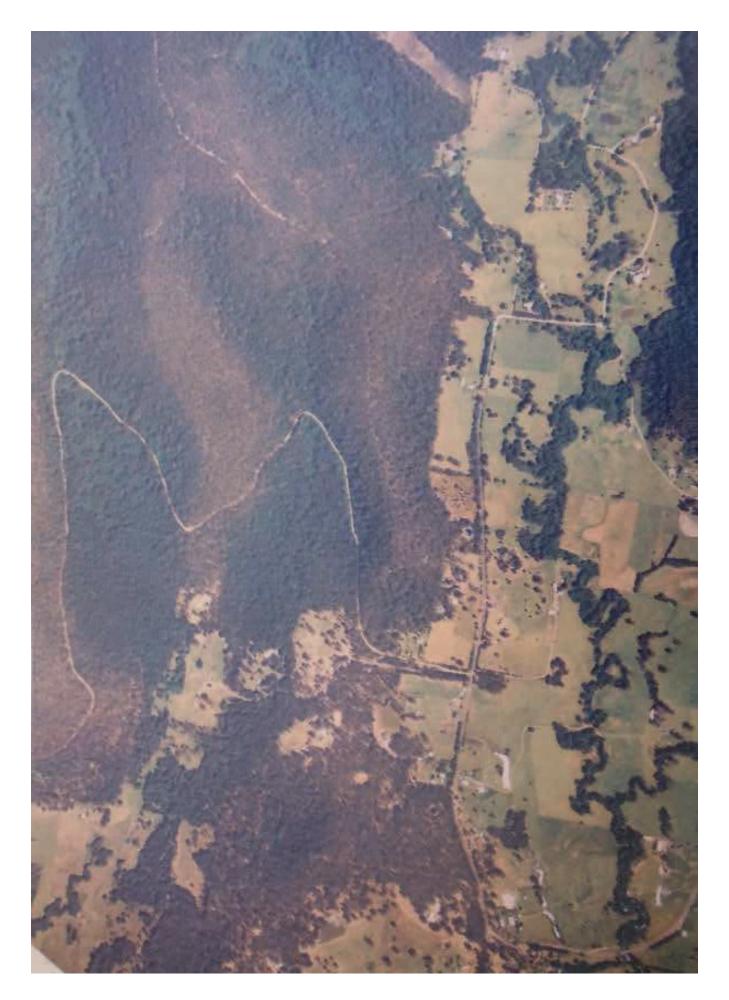




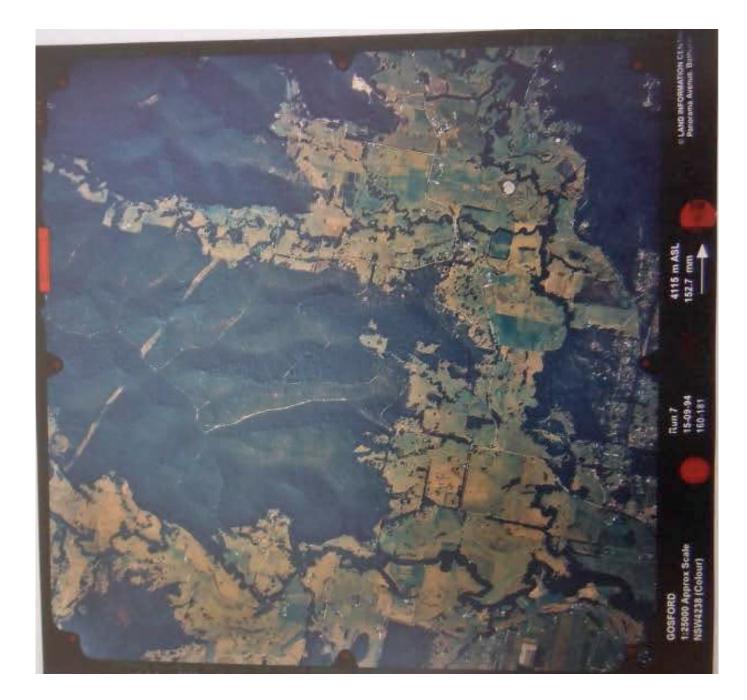




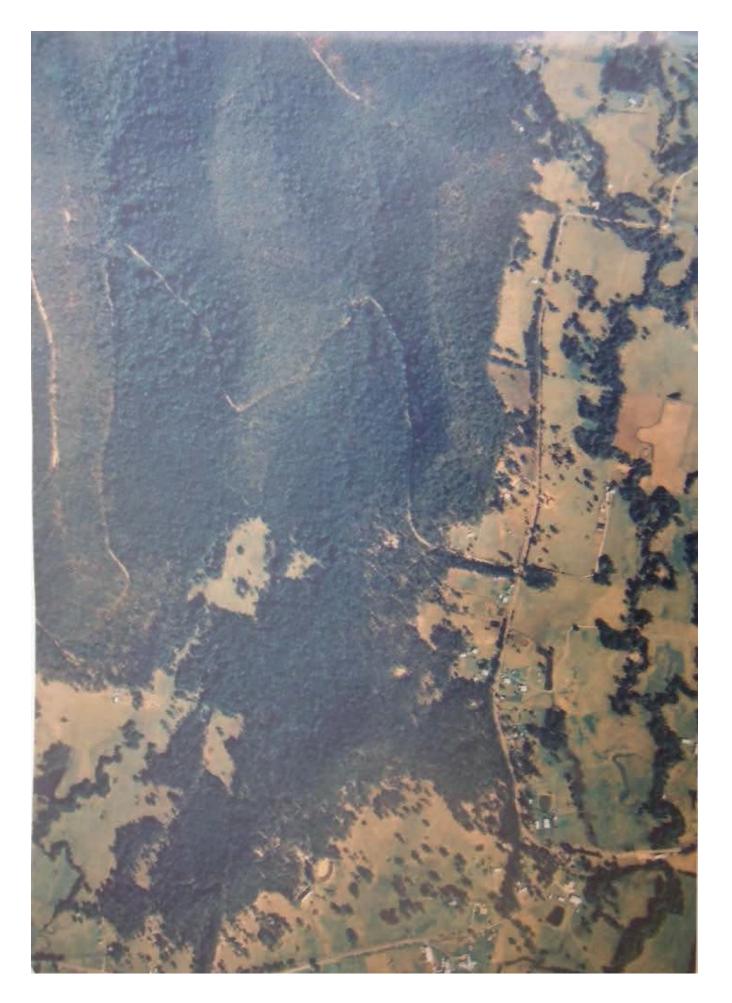




















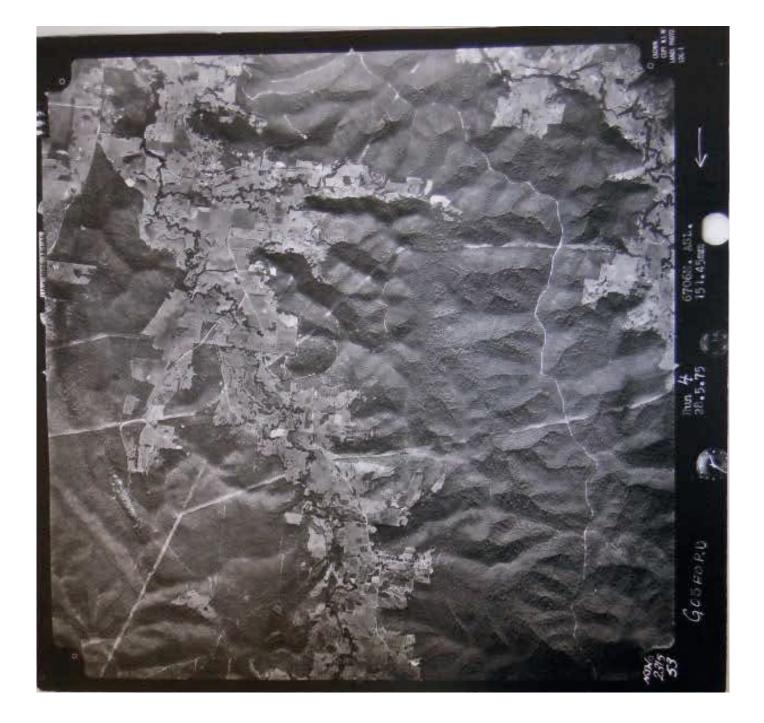




















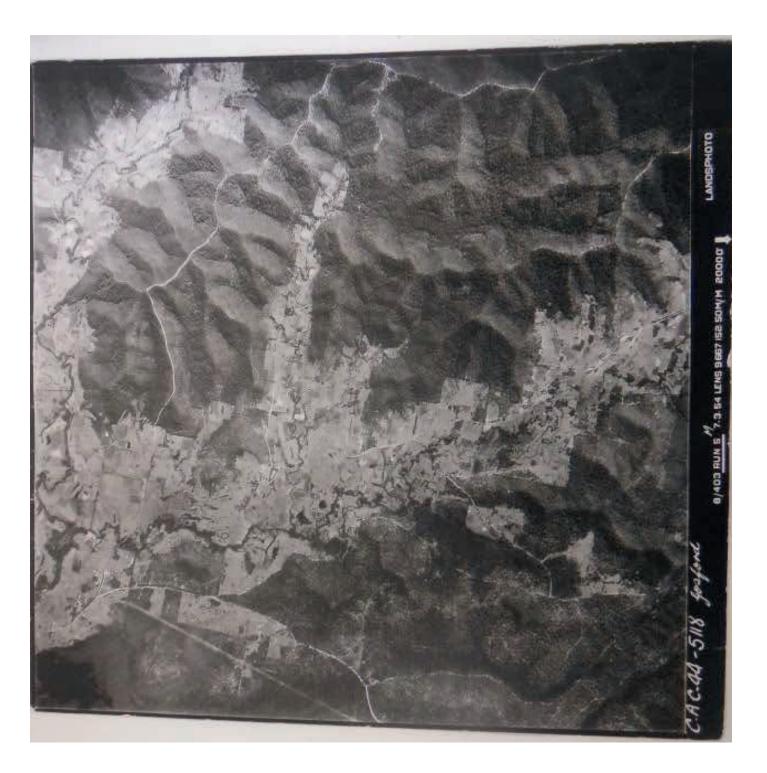








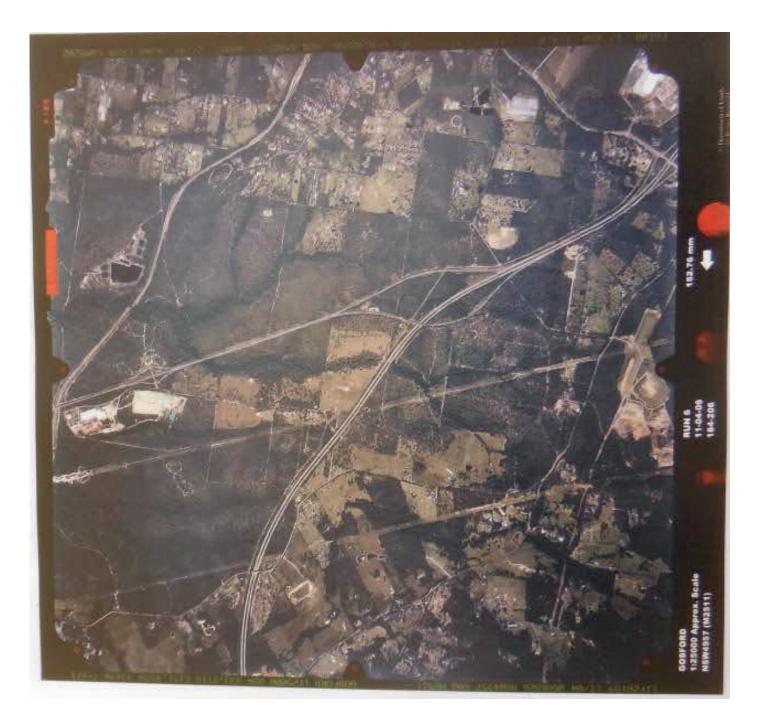




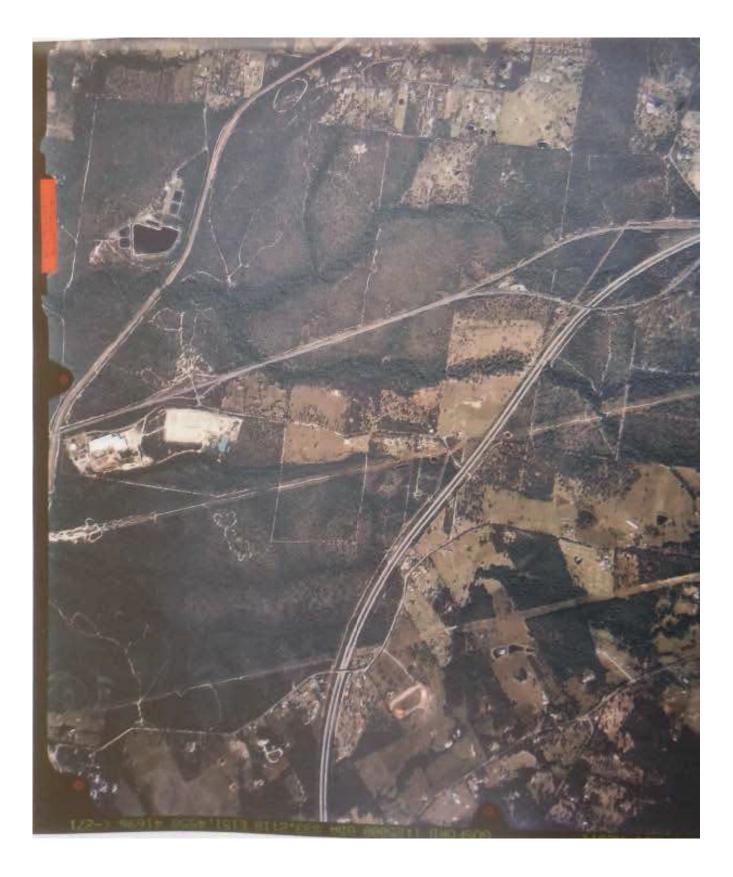








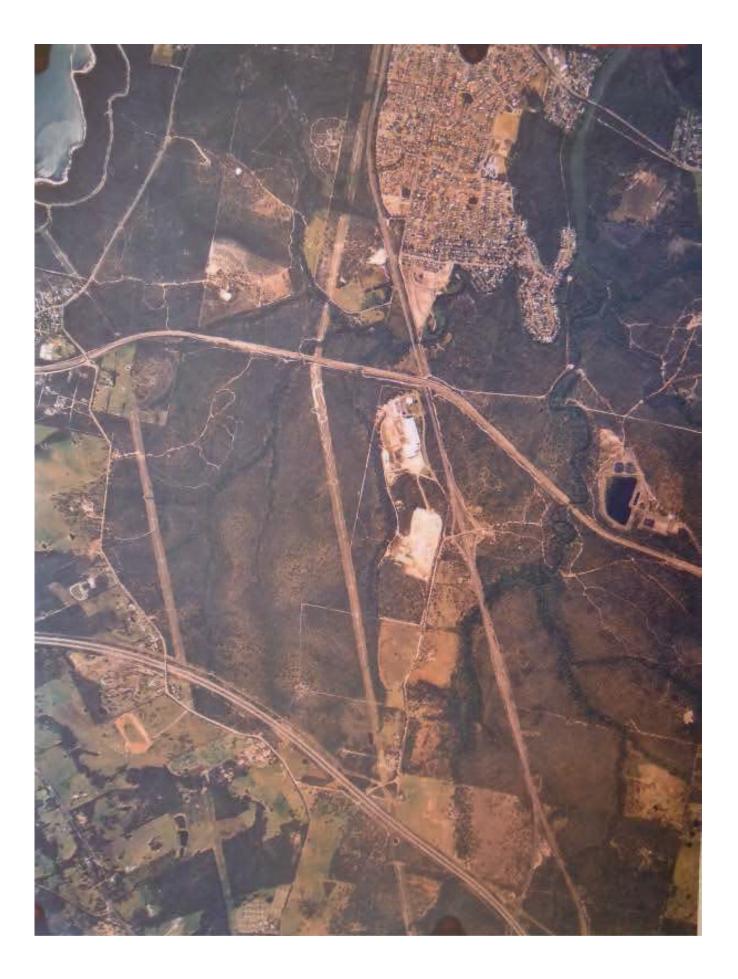




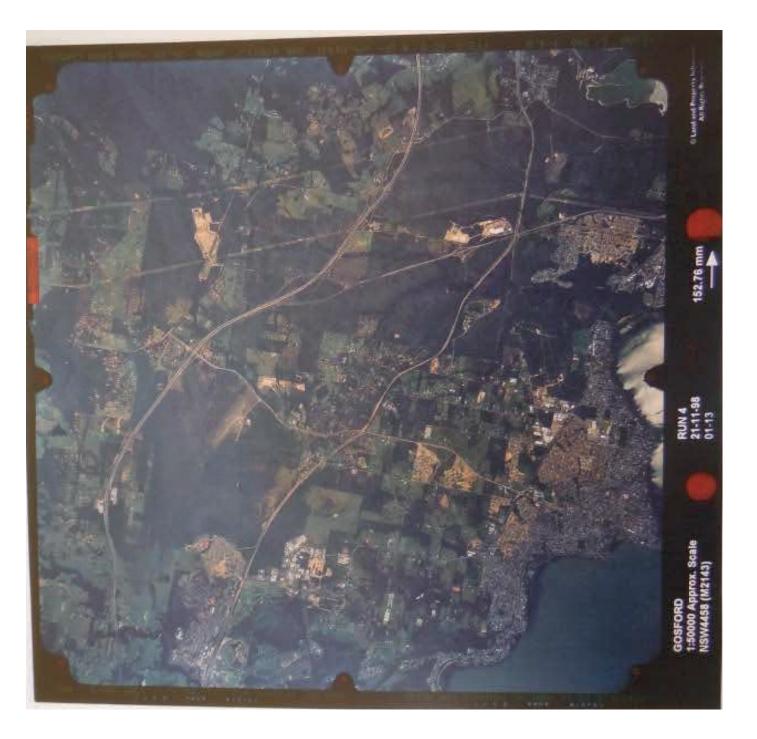




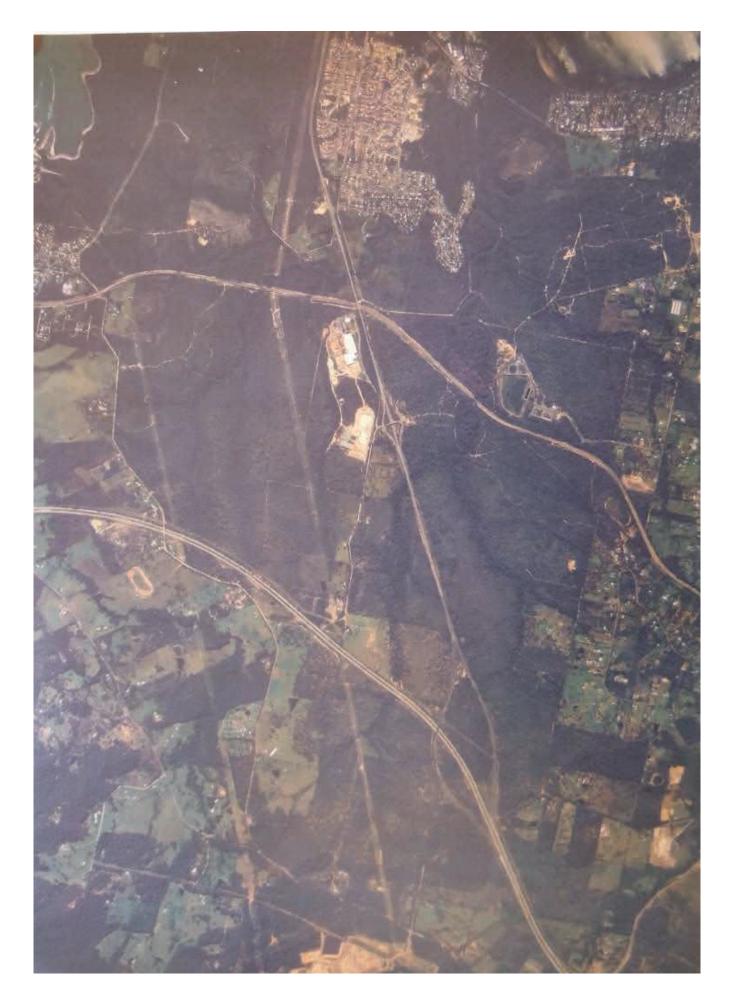








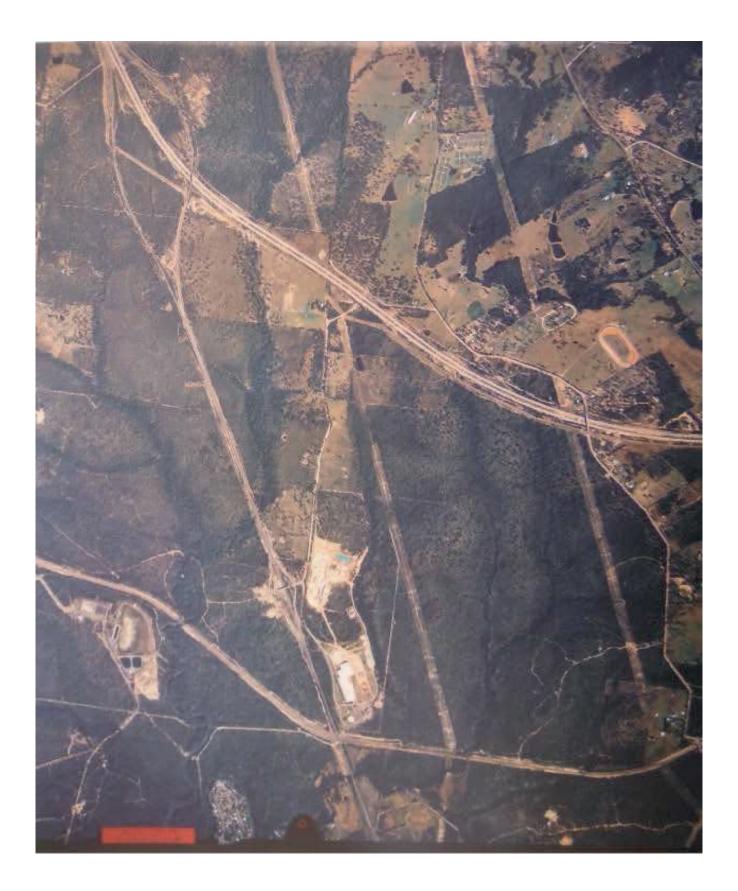








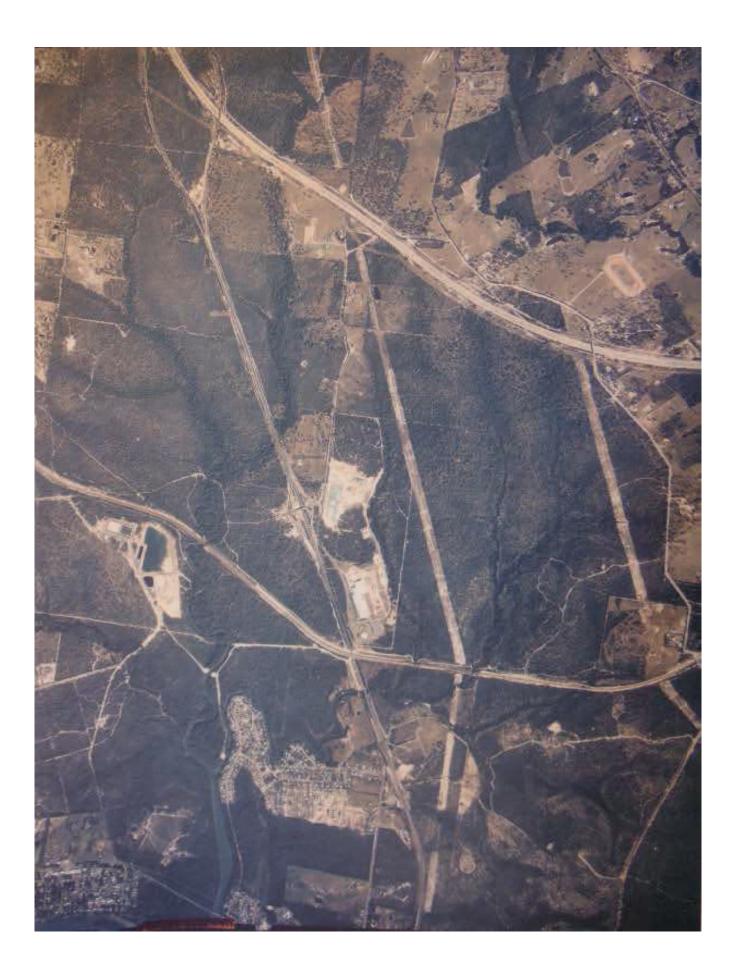


















































# Appendix G

Print Gallery





Print T1 Tooheys Road – Chicken Shed Area



Print T2 Tooheys Road – Chicken Shed Area





Print T3 Tooheys Road – Chicken Shed Area



Print T4 Tooheys Road – Former House and Shed Foot Prints





Print T5 Tooheys Road – Waste Adjacent Creek



Print T6 Tooheys Road – Concrete Blocks



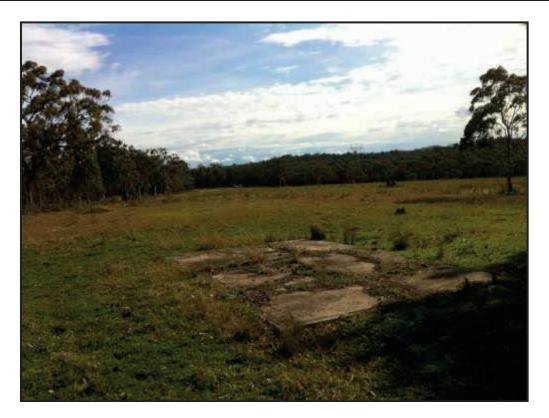


Print T7 Tooheys Road – Shed with Asbestos Cement Roof



Print T8 Tooheys Road – Manure Pile





Print T9 Tooheys Road – House Footprint Area





Print B1 Buttonderry – Dumped Waste



Print B2 Buttonderry – Dumped Waste





Print B3 Buttonderry – Orchard Area



Print B4 Buttonderry – Oil Drum





Print B5 Buttonderry – Motor Oil Drum and Creosote Fencing



Print B6 Buttonderry – Shipping Container





Print B7 Buttonderry – Former House Footprint Area



Print B8 Buttonderry – Former Shed Footprint Area