AG

Contamination Impact Assessment

BYLONG COAL PROJECT
Environmental Impact Statement

Hansen Bailey
ENVIRONMENTAL CONSULTANTS

Contamination Impact Assessment

Bylong Coal Project

Prepared for

Hansen Bailey Pty Ltd

6/127-129 John Street
Singleton NSW 2330

Prepared by

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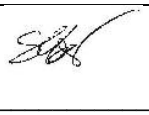
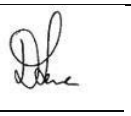
Prepared by	Stephen Challinor Author	
Reviewed by	David Lane DLA Reviewer	

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ABBREVIATIONS

ADWG	Australian Drinking Water Guidelines
AGST	Above Ground Storage Tank
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment Conservation Council
ASS	Acid Sulfate Soil
B(a)P	Benzo(a)Pyrene
BH	Borehole
BTEX	Benzene, Toluene, Ethyl Benzene, Xylene
CIA	Contamination Investigation Assessment
COC	Chain of Custody documentation
CLM	Contaminated Land Management
DA	Development Application
DECC	Department of Environment and Climate Change (formerly DEC and EPA)
DLA	DLA Environmental
DNR	NSW Department of Natural Resources (now split between DWE and DECC)
DWE	NSW Department of Water and Energy
DP	Deposited Plan
DQO	Data Quality Objective
EC	Electrical Conductivity
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
HIL	Health Based Investigation Level
HM	Heavy Metals
LOR	Limit of Reporting
MW	Monitoring Well
MWRC	Mid-Western Regional Council
NATA	National Association of Testing Authorities, Australia
NEPM.	National Environmental Protection Measure
NHMRC	National Health and Medical Research Council
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
OH&S	Occupational Health and Safety
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PID	Photo-ionisation Detector
PPIL	Provisional Phyto-toxicity Investigation Levels
RAP	Remedial Action Plan
QA/QC	Quality Assurance and Quality Control
RPD	Relative Percentage Difference
SAC	Site Acceptance Criteria
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SWL	Standing Water Level
TCLP	Toxicity Characteristic Leaching Procedure
The Project	The Bylong Coal Project
TPH	Total Petroleum Hydrocarbons
USEPA	United States Environmental Protection Agency
UCL	Upper Confidence Limit
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

1.1 General

DLA Environmental (DLA) was commissioned by Hansen Bailey Pty Ltd (Hansen Bailey) to prepare a Contamination Impact Assessment (CIA) for the Bylong Coal Project (the Project). The CIA was undertaken to include within an Environmental Impact Statement (EIS) being prepared by Hansen Bailey to support a Development Application under Division 4.1 in Part 4 of the *Environmental Planning and Assessment Act, 1979* (EP&A Act).

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 Secretary's Environmental Assessment Requirements (SEARs) issued for the Project on the 23 June 2014 in accordance with the requirements in Part 2 of Schedule 2 to the *Environmental Planning and Assessment Regulation, 2000*.

1.2 Background

In December 2010 KEPCO Bylong Australia Pty Ltd (KEPCO) acquired Authorisations (A) 287 and 342. Since this time, extensive exploration and mine planning work has been undertaken to determine the most socially responsible and economically viable mine plan to recover the known coal resources within the two Authorisations.

In August 2014 KEPCO commissioned WorleyParsons Services Pty Ltd (WorleyParsons) to manage the Project exploration activities, mine feasibility study planning, environmental approvals and ongoing environmental monitoring for the Bylong Coal Project (the Project).

The Project is located wholly within A287 and A342 which are located within the Mid-Western Regional Council (MWRC) Local Government Area (LGA). The closest regional centre is Mudgee, located approximately 55 km south-west of the Project Boundary. The Project is approximately 230 km by rail from the Port of Newcastle. Figure 1 illustrates the locality of the Project within New South Wales (NSW). Figure 2 shows the regional locality of the Project in relation to the neighbouring town centres, mining authorities, major transport routes and reserves.

KEPCO is seeking State Significant Development Consent under Division 4.1 of Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the development and operation of the Project. The State Significant Development Application will be supported by an Environmental Impact Statement (EIS) which is being prepared by Hansen Bailey.

1.3 Project Overview

The Project life is anticipated to be approximately 25 years, comprising a two year construction period and a 23 year operational period, with underground mining operations commencing in Year 7. Various rehabilitation and decommissioning activities will be undertaken during both the course of, and

following the 25 years of the Project. It is noted that further mineable coal resources exist within both A287 and A342.

The Project is to be developed on land within the Project Boundary as illustrated on **Figure 3**. Key features of the Project are conceptually shown on **Figure 3** and include:

- The initial development of two open cut mining areas with associated haul roads and Overburden Emplacement Areas (OEAs), utilising a mining fleet of excavators and trucks and supporting ancillary equipment;
- The two open cut mining areas will be developed and operated 24 hours a day, 7 days a week over an approximate 10 year period and will ultimately provide for the storage of coal processing reject materials from the longer term underground mining activities;
- Construction and operation of administration, workshop, bathhouse, explosives magazine and other open cut mining related facilities;
- Construction and operation of an underground coal mine operating 24 hours a day, 7 days a week for a 20 year period, commencing mining in around year 7 of the Project;
- A combined maximum extraction rate of up to 6.5 Million tonnes per annum (Mtpa) Run of Mine (ROM) coal;
- A workforce of up to approximately 800 during the initial construction phase and a peak of 470 full-time equivalent operations employees at full production;
- Underground mining operations utilising longwall mining techniques with primary access provided via drifts constructed adjacent to the rail loop and Coal Handling and Preparation Plant (CHPP);
- The construction and operation of facilities to support underground mining operations including personnel and materials access to the underground mining area, ventilation shafts, workshop, offices and employee amenities, fuel and gas management facilities;
- Construction and operation of a CHPP with a designed throughput of approximately 6 Mtpa of ROM coal, with capacity for peak fluctuations beyond this;
- The dewatering of fine reject materials through belt press filters within the CHPP and the co-disposal of dewatered fine and coarse reject materials within OEAs and final open cut voids (avoiding the need for a tailings dam);
- Construction and operation of a rail loop and associated rail load out facility and connection to the Sandy Hollow to Gulgong Railway Line to facilitate the transport of product coal;
- The construction and operation of surface and groundwater management and water reticulation infrastructure including diversion drains, dams (clean, dirty and raw water), pipelines and pumping stations;
- The installation of communications and electricity reticulation infrastructure;

- Construction and operation of a Workforce Accommodation Facility (WAF) and associated access road from the Bylong Valley Way;
- The upgrade of Upper Bylong Road and the construction and operation of a Mine Access Road to provide access to the site facilities;
- Relocation of sections of some existing public roads to enable alternate access routes for private landholders surrounding the Project; and
- Infilling of mining voids, progressive rehabilitation of disturbed areas, decommissioning of Project infrastructure and rehabilitation of the land progressively following mining operations.

Figure 3 illustrates the Conceptual Project Layout.

1.4 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 was to be assessed for potential contamination as a result of anthropogenic influences.

Issues raised in preliminary investigations included;

- The type, extent and level of contamination;
- 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 SEARs indicates that a Preliminary Site Environmental Investigation should include:

- 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 Planning and Environment (DP&E) and the Mid-Western Regional Council (MWRC). In particular the document meets the requirements of SEPP55.

1.5 Data Quality Objectives

The National Environment Protection (Assessment of Site Contamination) Measure 2013 (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.

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 EP&A Act. This includes researching previous Site investigations, historical searches (titles, land use 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 and/or environmental receptors, and concerns with the potential clean up and desired future land use of the property.

Investigations into the Site need to determine if contamination has the 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 desktop 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;
- Undertake a review of historical aerial photographs to identify previous land use activities on Site; and
- 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 OEH Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites 2011;*
- *Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 2013 Table 1(A)1 – Column D 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 2nd 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; and*
- *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 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	Sampling carried out in accordance with Procedure B of the NSW EPA *Contaminated Sites: Sampling Design Guidelines*, 1995;
	Use of analytical laboratories with adequately trained and experienced testing staff experienced in the analyses undertaken, with appropriate NATA certification.
Acceptable field and laboratory Relative Percentage Difference (RPD) for duplicate comparison	>10 x LOR: 30% inorganics; 50% organics (Field) <10 x LOR: Assessed on individual basis (Field) >5 x LOR: 50% (laboratory) <5 x LOR: No Limit (laboratory)
In accordance with AS4482.1 – 2005 field duplicate RPD criteria is increased with organic analytes and for low concentrations. These criteria cannot reasonably exceed the laboratory's precision; therefore laboratory criteria have been adopted.	
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
	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 Data Quality Plan See Appendix I for further information.
	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 Analysis and Data Quality Plan in **Appendix I** 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.

The DQO's reflect the content of the Sampling Analysis and Data Quality Plan previously provided by DLA Environmental to Hansen Bailey. However in some circumstances more appropriate sampling locations were chosen in the field and may not reflect the exact locations stated in the Sampling Analysis and Data Quality Plan. Samples were not collected from the roadside locations as these locations were not identified as being within the disturbance area.

1.6 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 (POEO Act);*
- *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 (EP&A Act) 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 POEO 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 EP&A Act gives State 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 to be obtained from Council for certain works/activities.

1.7 Scope of Works

The specific scope of work included for the preparation of this CIA to meet the SEARs 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 areas;*
- *Complete required soil testing in line with regulatory requirements for contamination assessment; and,*
- *Provision of a detailed technical report suitable as an appendix to the EIS being prepared by Hansen Bailey.*

The investigation and assessment was conducted using the following methodology:

- *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 and Property Information Centre;*
- *Review all environmental conditions of the Site including the geology and hydrogeology;*
- *Provide a comprehensive overview of the Sites past and current land uses and potential contamination issues; and,*

- *Investigate soil chemical concentrations relative to the NEPM 2013 Health Investigation Levels for Land Use suitability.*

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 2013 ;*
- *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;*
- *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.*

2.0 SITE DESCRIPTION

2.1 Site Identification

The Project is located wholly within A287 and A342, which are located within the MWRC Local Government Area. The closest regional centre is Mudgee, located approximately 55 km southwest from the Project. The small settlement of Bylong Village is located within the central portion of the Project Boundary. The Project is approximately 230km by rail from the Port of Newcastle.

Figure 1 illustrates the locality of the Project within New South Wales (NSW), and **Figure 2** provides the location of the Project in relation to the neighbouring regional town centres, mining tenements, major transport routes and reserves.

The scope of this CIA has focused upon the proposed disturbance areas and locations assigned for associated infrastructure for the Project, as opposed to natural forested areas which have not been affected by anthropogenic influences and private properties not located within the Project disturbance area.

There are several rural properties which are associated with the Project disturbance area. These are listed in **Table 2a.**

For the purpose of this assessment the Project disturbance area has been split into four areas. The eastern open cut mining area, secondly the western open cut mining area (including the south-western and north-western overburden emplacement areas), thirdly the amenities and infrastructure development area (including the rail loop) and finally the accommodation facilities to the north-west of the aforementioned disturbance areas.

The Eastern Open Cut Mining Area incorporates part of the former Wallings Property, Tarwyn Park and 327 Woolleys Road. This area also includes the Bylong Upper Public School (no.543 and no. 545), former Catholic Church (no.444) and dwellings within a stretch of Upper Bylong Road adjacent to the Public School.

The western open cut mining area, South-Western Overburden Emplacement Area (OEA) and North-Western OEA incorporates part of the former Wallings Property, Glen View (no. 772) and Valley View (no. 664) Properties along Upper Bylong Road.

The amenities and infrastructure development area incorporates the former Wallings Property, Tarwyn Park and Renfrew Park.

The accommodation facilities development area incorporates 7961 Bylong Valley Way.

Table 2a - DP/Lot and Street Address Information

Eastern Open Cut Mining Area	
DP	Lot
DP1094509	1
DP1094509	2
DP755420	67
DP755438	42
DP755438	74
DP755438	52
DP755438	79
DP755438	55
DP1146893	3
DP1146893	4
DP755438	61
DP704724	99
Western Open Cut Mining Area, South-Western and North-Western OEAs	
DP	Lot
DP755438	59
DP755438	30
DP618119	1
DP1146893	4
DP755438	61
DP704724	99
DP1100343	2
DP607945	2
DP755438	43
DP755438	44
DP755438	45
DP755417	86
DP755417	86
DP755438	52

Table 2a - DP/Lot and Street Address Information- Continued

Mine Administration, Amenities and Rail Loop	
DP	Lot
DP1094509	1
DP755420	10
DP755420	9
DP755438	67
DP1146893	1
DP1146893	2
DP1100343	2
DP1146893	3
Accommodation Facility	
DP	Lot
DP222796	3

2.2 Proposed Future Land Use

The Project will involve the demolition of buildings and disturbance of the soil surface layer. The vegetation and soil resources from the Project Disturbance Boundary will be recovered before material emplacement in the OEA's.

The Eastern Open Cut comprises the former Wallings Property, Tarwyn Park, 327 Woolleys Road, the former church, Bylong Upper Public School and the dwellings immediately surrounding this area.

The Western Open Cut, South-Western and North-Western OEAs comprise the former Wallings Property, Valley View Property, and Glen View Property on the western side of Lee Creek.

The Amenities and Rail Loop Area is comprised of Tarwyn Park, Renfrew Park and 327 Woolleys Road. This includes the water storage area.

The Accommodation Facility is located at Bylong Station, 7961 Bylong Valley Way.

Refer to **Section 2.3.1** for property descriptions and refer to **Figure 3** – Conceptual Project Layout for Project component descriptions.

2.3 Environmental Setting

2.3.1 Boundaries and Surrounding Land Use

Renfrew Property

Property boundaries at the Renfrew Property consist of post and wire fencing and gates maintained by representatives of Worley Parsons. To the east of Renfrew Property is Tarwyn Park. It is understood that this area forms part of the proposed upgrade of administration and amenities. To the south is the proposed Open Cut Mining Area. To the west are rural properties including Tinka Tonk Property and the Bylong Village Area. To the north is the railway line, more improved pasture and open woodland. This area to the north will include infrastructure for the proposed rail loop.

Tarwyn Park Site

Property boundaries at Tarwyn Park consist of post and wire fencing and gates maintained by representatives of Worley Parsons. The Site is located south of the existing railway and surrounded by the former Wallings Property to the south, and east, and further rural properties to the west.

Former Wallings Property

Property boundaries at the former Wallings Property Site consist of post and wire fencing and gates maintained by representatives of Worley Parsons. Former Wallings Property is extensive and traverses east-west across the Project Disturbance Area. The former Wallings Property extends past the western extent of the proposed disturbance area to Bylong Valley Way. It includes dwellings with frontage to Upper Bylong Road. To the east of the former Wallings Property is 327 Woolleys Road which is a rural property. To the south is improved pasture and open woodland. To the north is the railway line, 327 Woolleys Road, Tarwyn Park and Renfrew Property.

Glen View

Property boundaries at the Glen View Site consist of post and wire fencing and gates maintained by representatives of Worley Parsons. It is a rural property with open paddocks and Lee Creek as a low point within the landscape. Glen View is part of the Western Open Cut and the South-Western OEA. It includes dwellings with frontage to Upper Bylong Road.

Valley View
Property boundaries at the Valley View Site consist of post and wire fencing and gates maintained by representatives of WorleyParsons. It is a rural property with open paddocks and Lee Creek as a low point within the landscape. The Valley View is within the Western Open Cut and the South-Western OEA. It includes dwellings with frontage to Upper Bylong Road.

Bylong Station - 7861 Bylong Valley Way
Property boundaries at this Site consist of post and wire fencing and gates maintained by representatives of WorleyParsons. The property is surrounded by rural properties. It is understood that this area forms the Accommodation Facility Area.

2.3.2 Site Hydrogeology

A search of the NSW OEH groundwater works database indicated there are fifty-five (55) registered bores within two (2) kilometres of the Project Boundary. The database indicated that there were thirty-four (34) registered bores within the Project Boundary which are primarily extracted from the Quaternary Alluvium and used for agricultural purposes. A further seventy-one (71) groundwater monitoring bores have been installed across the site by AGE and Douglas Partners between August 2011 and October 2013.

Refer to **Appendix D** – Groundwater Bore Search Information

An environmental monitoring program has been established to investigate environmental baseline conditions in the Bylong Valley Area. The purpose of the baseline monitoring is to facilitate the planning, development and ongoing operational monitoring of the Project. The monitoring program collects, surface water, groundwater, air quality, noise and meteorological data on a regular basis.

AGE included a copy of the Douglas Partners Report on Hydrogeological Investigation and Monitoring, August 2011 October 2013 as part of their assessment. The Douglas Partners report recorded that on a regional scale there were elevated concentrations of copper, zinc and NOx. Based on this information there were no other analyte concentration exceedances detected that may possibly pose a significant risk to human health or the environment.

A more detailed groundwater investigation has been conducted by AGE as part of the EIS.

2.3.3 Site Geology and Soils

The Late Permian Shoalhaven Group forms the sedimentary basement within the Project Boundary consisting primarily of conglomerate, pebbly sandstone and sandstone. The Shoalhaven Group outcrops along the lower slopes of the Growee River catchment and in the upper reaches of Lee Creek.

The Permian Illawarra Coal Measures (ICM) overlies the Shoalhaven Group and contains the economic seams proposed to be mined. The dominant lithologies include mudstone, laminated siltstone, medium-grained quartz-lithic sandstone, lenses of polymictic conglomerate, coal, carbonaceous mudstone, rhyolitic tuff and sporadic torbanite. Thickness of the ICM varies across the Project Boundary from 100 m to 200 m, thickening toward the east into the Sydney Basin trough.

Quaternary and Tertiary age alluvial sediments associated with local rivers and creeks infill the valley floors within and surrounding the Project Boundary. Investigative drilling has shown that these sediments consist of an upper layer sand/silt/clay with a basal layer of gravelly sand.

Reference: Bylong Coal Project Gateway Groundwater Study for Hansen Bailey Pty Limited, prepared by Australasian Groundwater & Environmental Consultants Pty Ltd, December 2013.

The topography of the Bylong Valley area fluctuates greatly between the valley floors (approximately RL 250m Australian Height Datum (AHD) up to the escarpments and steeper slopes on the eastern margins (approximately RL 430m AHD). Tal Tal Mountain (655m AHD) is located within the south-eastern portion of the Project Boundary. Mount Penny (570m AHD) is located to the north-west of the Project Boundary.

The soil types within the Project Boundary have been mapped at a regional scale within the 'Soil Landscapes of the Singleton 1:250 000 Sheet' (Kovac and Lawrie, 1991). The mapping demonstrates that the soil types are highly variable over short distances within the Project Boundary. The following soil types were identified to be present within the Project Boundary:

- *Bald Hill;*
- *Benjang;*
- *Bylong;*
- *Growee;*
- *Lees Pinch;*
- *Ogilvie; and*
- *Sandy Hollow.*

The broad scale mapping shows that the major soil landscape units in the Project Boundary are Growee, Lees Pinch and Bylong units.

The geology and the topography of the Bylong Valley have greatly influenced the soils within the Project Boundary. The steeper slopes within the elevated areas of the Project Boundary contain

limited topsoil and soil resources. Areas in the lower parts of the valley comprise of deeper soil resources that may be utilised for rehabilitation.

Reference: Bylong Coal Project Background Document for Cockatoo Coal Limited, prepared by Hansen Bailey, January 2014.

2.3.4 Acid Sulphate Soils

Acid Sulphate Soil (ASS) is the common name given to sediment and soil containing iron sulphides (iron pyrite or iron disulfide). The exposure of pyrite in these soils to oxygen by drainage or excavation leads to the generation of sulphuric acid. Acidic leachate can dissolve clay and release toxic concentrations of aluminium, iron or other metals into water bodies. Drainage waters from areas of acid sulphate soils will affect water quality and can lead to death or disease of aquatic organisms.

A search of the NSW Natural Resources Atlas indicated that there are no known Acid Sulphate Soils or Potential Acid Sulfate Soils present in the vicinity of the Site.

2.3.5 Site Meteorology

Site specific climatic data has been recorded at the Bylong Meteorological Monitoring Station within the Site since 2011. The Bureau of Meteorology (BoM) has collected longer term climatic information in the vicinity of the Project at Nullo Mountain AWS (located approximately 20 km south-east of the Project).

Temperatures within the Bylong Region range from an average maximum of 24°C in summer to an average minimum of 2.5°C in the winter months. Meteorological monitoring within the Project Boundary has confirmed that temperature inversions are common during the winter months, generally forming in the late afternoon and reaching maximum resistance at dawn.

For the majority of the year, winds predominantly occur from the east-south-east, except during the winter and spring months when winds from the west and north-west prevail. The mean annual rainfall for the region is approximately 950mm.

Reference: Bylong Coal Project Background Document for Cockatoo Coal Limited, prepared by Hansen Bailey, January 2014.

2.4 Regulatory Controls

2.4.1 Mid-Western Regional Council Section 149 Certificates

Planning Certificates were obtained from MWRC under Section 149 of the EP&A Act for Lots comprising Renfrew Park Property, Tarwyn Park Property, and Sunnyside Property and is summarised in **Table 2b**. This information provides a general indication of contamination status and the environmental controls of the area.

Table 2b - s149 Certificate Summary Table

Site	Zoning under MWR LEP 2012	Permissibility of open cut mining	Bushfire prone	Subject to Flood Management Plan
Renfrew Park	RU1 Primary Production	Yes with consent	Yes	N/A
Tarwyn Park	RU1 Primary Production	Yes with consent	Yes	N/A
Sunnyside	RU1 Primary Production	Yes with consent	No	Yes
7690 Bylong Valley Way	RU1 Primary Production	Yes with consent	Yes	Yes
Bylong Hall	RU1 Primary Production	Yes with consent	Yes	Yes
8364 Bylong Valley Way	RU1 Primary Production	Yes with consent	Yes	Yes

No matters apply to any of the properties under the *Contaminated Land Management Act, 1997*.

2.4.2 WorkCover Dangerous Goods Search

A search of the NSW WorkCover Stored Chemical Information Database (SCID) was undertaken for the Site and indicated that only one Dangerous Goods License has been issued within the Project Boundary.

The Dangerous Goods Licence is held for 7690 Bylong Valley Way, Bylong NSW. This property is also known as Bylong General Store.

The following dangerous goods are currently listed as being present at the premises;

- Two (2) 4,500L Underground Storage Tanks (USTs) for unleaded petrol
- One (1) 2000L UST for Diesel
- One (1) 450kg Roof Stored Cylinder for LPG
- One (1) 100kg Cylinder Store for LPG

In January 2003 the Diesel storage tank was listed as Above Ground while the current Diesel UST was listed a Leaded Petrol UST.

No other properties within the overall Project Boundary were listed in the WorkCover SCID.

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 Secretary's Environmental Assessment Requirements

KEPCO Bylong Australia Pty Ltd seeks a Development Consent under Division 4.1 in Part 4 of the EP&A Act for the Project. The following requirements relevant to Contaminated Site Assessment and Remediation are outlined below in **Table 2c**.

Table 2c - Secretary's Environmental Assessment Requirements

Secretary's Environmental Assessment Requirements	Relevant Sections of Reports
The EIS for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* should include an assessment of the contaminated Site that is conducted in accordance with the guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*, for example: Guidelines for Consultants Reporting on Contaminated Sites (OEH, 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 2013.	Refer to Section 1.5 *Statutory Framework*, Section 2.4 *Regulatory Controls*, Section 4.0 *Results*, Section 5.0 *Discussion* and Section 6.0 *Conclusions*
The EIS should include a detailed assessment of key issues and any other significant issues identified which includes a description of the existing environment, using sufficient baseline data.	Refer to Section 4.0 *Results*, Section 5.0 *Discussion* and Section 6.0 *Conclusions*
The EIS should include specific issues – Land Resources- including soils and land capability (including salinisation and contamination).	Refer to Section 5.0 *Discussion* and 6.0 *Conclusions*

2.5 Site History

2.5.1 Aerial Photograph Review

Aerial photographs from 1958 to 2007, available from NSW Land and Property Information were reviewed by DLA Environmental with relevant observations being summarised below for the three (3) areas. Copies of the photographs have been included within **Appendix F**.

Table 2c – Aerial Photograph Review – Proposed Western Open Cut and Overburden Emplacement Areas (OEA)

Aerial Photograph	Description
Merriwa **November 1958** **215/5050** **Run 8**	South-Western OEA The southern half of the Site area appears to have been stripped in preparation for agriculture. The northern area appears only lightly vegetated. The clarity of the photograph is relatively poor in this location. Adjacent to the western boundary of the area exists a steeply elevated undisturbed woodland area. To the east is agricultural land including a homestead. Lee Creek runs north south through the agricultural property. Woodland also borders a portion of both the northern and southern boundaries, with the eastern portions of these areas being agricultural land including what appears to be homesteads. North-Western OEA and Western Open Cut The North Western OEA and Western Open Cut areas appear to be sparsely vegetated with no apparent evidence of agricultural or residential land use. Lee Creek is present to the east of the North Western OEA and Western Open Cut with agricultural properties existing on the eastern side of Lee Creek. The land adjoining the north-eastern and southern boundaries appears to be similar to this area.
Merriwa **May 1970** **1663/5233 and 1663/5235** **Run 10**	South-Western OEA A significant portion of the whole Site area appears to have been stripped in preparation for agriculture. The areas which haven't been stripped appear only lightly vegetated, with a few large remnant trees. Agricultural land use to the east and north appears to have increased. No other significant changes in surrounding land uses were noted. North-Western OEA and Western Open Cut

Aerial Photograph	Description
	The entire Site area is now used for agricultural purposes consistent with those noted adjacent to Lee Creek in the 1950 photograph. Only a small portion of the western section of the North-Western OEA has not been utilised for agriculture. Agricultural land use now adjoins the northern, southern and eastern boundaries of this area. The western boundary remains vegetated.
Merriwa **Nov 1998** **9801878** **Run 13** **Merriwa** **Nov 1998** **9801948** **Run 12**	South-Western OEA The areas which were stripped in the 1970 photograph are now vegetated. The area is not being used for agricultural purposes and appears to be covered with grass like vegetation. A small dam and residence are now visible. The surrounding land uses and property boundaries have not changed significantly since the previous photographs. North-Western OEA and Western Open Cut Given the colour photograph it appears that the area would be used for agricultural purposes (same shapes as the 1970 black and white photo). The surrounding land uses and property boundaries appear not to have changed since the previous photographs.

Table 2d - Aerial Photograph Review – Proposed Eastern Open Cut, Overburden Area and Mine Infrastructure

Aerial Photograph	Description
Merriwa **November 1958** **215/5050** **Run 8**	Open Cut and Overburden Area The layout of the Site area is very similar to the current layout, with the majority of land cleared for pastoral/agricultural purposes. A small patch of uncleared woodland exists within the most southern portion of the Site. The Site area to the east of Upper Bylong Road appears to be sparsely vegetated and it is not clear whether this area was used for agricultural purposes. If it was, it would likely be for pastoral purposes. Fencing boundaries appear to somewhat match the present day layout of area. A residential property appears to be present on the west side of Upper Bylong Road within the centre of the Site. The exact layout of the building structures is unclear; however it appears slightly smaller than the present day residential buildings. No other building structures were evident in the photograph,

Aerial Photograph	Description
Merriwa **November 1958** **217/5013** **Run 7**	however given the agricultural land use it would be likely that other building structures are present. Upper Bylong Road is present within the Site adjacent to the western boundary, running North-South. The road appears to be unsealed. A number of small tributaries of Bylong river are also present within the Site area. The Bylong River is present immediately adjacent to the north eastern portion of this area. This area appears to be well vegetated and is clearly defined. What appears to be the rail line is present on the eastern side of the river. The areas adjacent to the south and south-eastern Site boundary is a mixture of cleared/sparsely vegetated land and woodland. Areas to the west and north appear to be a mixture of cleared land used for agricultural purposes and scattered remnant forest vegetation. Lee Creek is also present between the proposed two OEAs and the main open cut area. Mine Infrastructure Area The area appears vacant and is sparsely vegetated. The only visible feature is a road which runs east west across the area. No development or anthropogenic influences were noted apart from the road.
Merriwa **May 1970** **1663/5233 and 1663/5235** **Run 10**	Open Cut and Overburden Area Photographs show more detail than the 1958 versions. Slight increase in cropping density, layout of area is essentially unchanged, no significant additional structures present. Mine Infrastructure Area (Merriwa 1970 Run 10) Photographs show more detail than the 1958 versions. The area is heavily vegetated to the north. A corridor runs north-west to south-east which contains agricultural and pastoral land surrounded by open paddocks. Very little development is visible in the area outside of the agricultural land. There has been a significant increase in the area of cropping and agricultural land. New roads are visible and vegetation cover has decreased around developed areas.
Merriwa **Nov 1998** **9801878** **Run 13**	Open Cut and Overburden Area Slight change in cropping density, layout of area is essentially unchanged, no significant additional structures visible.

Aerial Photograph	Description
Merriwa **Nov 1998** **9802048** **Run 10**	Mine Infrastructure Area Very little observable change to the layout of the area. Many of the same structures are present in their earlier configuration. No changes in surrounding land uses

Table 2e - Aerial Photograph Review – Proposed Accommodation Facility and Underground Extraction Area

Aerial Photograph	Description
11/1958 **217/5013** **Run 7**	Very little development is visible in the area. The images are of a lower quality; however the Bylong Valley Way is clearly visible. The rail line is visible following the base of the tree line of the Bylong State Forest to the north. Cropping areas exist south of the rail line. No structures are visible in the proposed underground extraction area or accommodation area. Some agricultural activity is visible in the north-east corner of the image. The proposed underground extraction area is open woodland that appears untouched. Bylong River runs north south adjacent to the eastern boundary of the accommodation and underground areas.
11/1970 **1633/5247** **1663/6231** **Run 9**	Significant increase in cropping density from 1958 aerial image. The proposed accommodation area is now being used for agricultural/cropping purposes. There seems to be a slight increase in residential density; however the layout of the area remains relatively unchanged.
11/1998 **9802048** **Run 10**	No significant difference from previous image. Layout of area is essentially unchanged. Proposed underground extraction area remains untouched. Agricultural development and use continues in the same areas as previously.

2.5.2 Historical Title Search

In general the Historical Title Searches conducted within the Project Boundary indicate that the allotments came into private ownership in 1919 and 1951. The properties within the Project Boundary have generally been owned by farmers, pastoralists, and graziers. There have been no indications of contaminating activities highlighted due to ownership. Refer to **Appendix C** – Historical Title Search.

Renfrew Property
The historical title search indicates that the properties have been in private ownership since 1919. The two (2) lots, Lot 1 and 2 in DP 1146893 have been owned by farmers, pastoralists and graziers until present. A former cheese factory located at the north-eastern corner of the homestead operated within the property from 1910 to 1926. The factory was the first large scale commercial operation in Bylong. The remnants of the cheese factory include an air flow vent or outlet flue, broken pieces of worked sandstone and two trenches with subsurface deposits of concrete and tile. No other information is available regarding land use in the historical title information.

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

Former Wallings Property
The historical title search indicates that the allotments associated with this property have been in private ownership since 1919 and 1951. The majority of lots associated with the former Wallings Holdings have been acquired over the years. The allotments have been owned by farmers, pastoralists and graziers until present. No other information is available regarding land use in the historical title information.

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

Tarwyn Park
The historical title search indicates that the properties have been in private ownership since 1919. The two (2) lots, Lot 1 and 2 in DP 1094509 have been owned by graziers until present. No other information is available regarding land use in the historical title information.

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

2.5.3 Heritage / Archaeological Items

Indigenous Heritage:
An Aboriginal Heritage Information Management System (AHIMS) database search was undertaken for the area within the Project Boundary and a 1 km buffer for the Bylong Coal Project Background Document (Hansen Bailey, 2014). These searches revealed 117 registered sites in the vicinity of the Project Boundary.

A desktop review of all available previous archaeological survey reports for areas within and immediately surrounding the Project Boundary revealed 61 recorded sites. The 61 sites consist of 46 artefact sites (artefact scatters and potential archaeological deposits), 14 isolated finds, 1 scar tree and 1 grinding groove.

An Aboriginal Archaeology and Cultural Heritage Impact Assessment for the Project has been completed by RPS Australia Asia Pacific (RPS) for the Project and is included within the Bylong Coal Project EIS.

Historic Heritage:
A Historic Heritage Impact Assessment has been completed by AECOM which details the sites located within the vicinity of the Project, any predicted impacts, proposed mitigation and management measures for the Project.

2.5.4 Site History Summary

2.5.4.1 Eastern Open Cut Mining Area

The historical use of the properties which comprise the Eastern Open Cut Mining Area have previously been utilised for small and medium scale farming practices since 1919, with a large portion of the Site being cleared of vegetation and sown with improved pasture. Properties therefore have a potential for contamination due to past agricultural land use activities, including impacts from herbicides and pesticides.

Site observations and aerial photography evidence suggests the potential for pesticide contamination is relatively low, as farming practices mainly included small scale cattle grazing and pastures as opposed to large scale horticultural and agricultural practices requiring extensive chemical use.

Aerial photography suggests that construction of the buildings commenced during the 1950's with additional buildings constructed within a period when the use of asbestos containing building materials is possible. Asbestos containing materials were observed within building structures associated with farming activity. Asbestos containing material used in construction was observed on the former Wallings Property, Tarwyn Park, and the building adjoining the school.

2.5.4.2 South-Western OEA, North-Western OEA and Western Open Cut Mining Area

The historical use of the properties which make up the South-Western OEA, North-Western OEA and Western Open Cut Mining Area have been utilised for small to medium scale farming practices since 1919, with a large portion of the Site being cleared of vegetation, sown with improved pasture and containing a cheese factory. Properties therefore have a potential for contamination due to past agricultural land use activities, including impacts from herbicides and pesticides.

Site observations and aerial photography evidence suggests the potential for pesticide contamination is relatively low, as farming practices mainly included small scale cattle grazing and pastures as opposed to large scale horticultural and agricultural practices requiring extensive chemical use.

Aerial photography suggests that construction of the buildings onsite commenced during the 1960's and 1970's, and therefore the use of asbestos containing building materials is possible. Asbestos containing materials were observed within building structures associated with farming activity.

2.5.4.3 Administration, Amenities and Rail Loop Areas

The historical use of the properties which comprise the Administration, Amenities and Rail Loop Areas have been utilised for small to medium scale farming practices since 1919, with a large portion of the Site being cleared of vegetation and sown with improved pasture. Properties therefore have a potential for contamination due to past agricultural land use activities, including impacts from herbicides and pesticides.

Site observations and aerial photography evidence suggests the potential for pesticide contamination is relatively low, as farming practices mainly included small scale cattle grazing and pastures as opposed to large scale horticultural and agricultural practices requiring extensive chemical use.

Aerial photography suggests that construction of the buildings onsite commenced during the 1960's and therefore the use of asbestos containing building materials is possible.

This area contains the rail corridor. There is potential contamination within the ballast material and surface soils within the rail corridor due to the historical use of asbestos brake linings on the trains and hydrocarbons from fuel and lubrication. The low volume of trains utilising the railway line lowers the potential for asbestos and hydrocarbons to be present within the surface soils. However there is still potential for asbestos and hydrocarbons to be present within the soils.

2.5.4.4 Accommodation Facility

The historical use of the allotments which make up the Accommodation Facility Area have been utilised for small to medium scale farming practices, with a large portion of the Site being cleared of vegetation and sown with improved pasture. Properties therefore have a potential for contamination due to past agricultural land use activities, including impacts from herbicides and pesticides. There are several buildings on the Site including a cottage clad with asbestos containing material.

3.0 SITE INVESTIGATION PLAN

3.1 Field Investigation Procedure

Field investigations at Site were undertaken during May 2014 and comprised the following:

- *Initial Site Inspection and conducting a review of Site history and aerial photographs to identify potential contaminant locations prior to the commencement of field work;*
- *A targeted sampling program focusing on potential contaminants of concern; and*
- *Collection and laboratory analysis of fifty (50) soil samples collected from the proposed area of disturbance.*

Refer to **Figures 9, 10** and **11 –** 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 soil samples utilising a decontaminated trowel or hand auger to avoid cross contamination; and*
- *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 Sampling Design Guidelines 1995* that targeted identified areas of potential contamination.

3.1.2 Soil Collection

Samples were obtained by using a decontaminated trowel from surface soils or 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 Sampling Design Guidelines 1995, NEPM 2013 and AS4482.1-2005 *Guide to the investigation and sampling of sites with potentially contaminated soil.*

Samples were collected from the soil surface through to natural ground which was located no further than 1m deep. Natural undisturbed ground was found at shallow depths within the Project Boundary.

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 NEPM 2013.

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. herbicide and pesticide use. Soil samples were analysed by Envirolab Services Pty Ltd located in Chatswood NSW, and duplicate samples analysed by SGS Pty Ltd located in Botany NSW. Refer to **Appendix B** which describes the Quality Assurance and Quality Control standards.

The soils collected within the Project Boundary were analysed for Organochlorine Pesticides (OCP), Organophosphorus Pesticides (OPP), PCBs, Total Recoverable Hydrocarbons (TRH), Polycyclic Aromatic Hydrocarbons and Heavy Metals (Arsenic, Copper, Chromium, Cadmium, Mercury, Manganese, Lead, Nickel and Zinc).

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 Health Investigation Levels (HIL's), prior to reporting and providing 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 2013 Table 1(A)1 Column D – Commercial/Industrial and Column A - Residential.*
- *NSW EPA Guidelines for the NSW Site Auditor Scheme, second edition 2006.*

The areas of disturbance for Commercial/Industrial purposes will be assessed against NEPM 2013 Table 1(A)1 Column D. The area of disturbance for the Accommodation Facility will be assessed against NEPM 2013 Column A- Residential.

A summary of the selected Soil Assessment Criteria relevant to the Site are included within **Tables 3a – 3e** below.

Table 3a - Soil Assessment Criteria - Health Investigation Levels (HIL) (mg/kg)

Analytes	Residential A (mg/kg)	Commercial/ Industrial D (mg/kg)
Arsenic	100	3,000
Cadmium	20	900
Chromium (VI)	100	3,600
Copper	6,000	240,000
Lead	300	1,500
Mercury	40	730
Nickel	400	6,000
Zinc	7,400	400,000
BaP TEQ	3	40
Total PAHs	300	4000
Aldrin + Dieldrin	6	45
Chlordane	50	530
DDT+DDE+DDD	240	3,600
Endosulfan	270	2,000
Endrin	10	100
Heptachlor	6	50
HCB	10	80
Methoxychlor	300	2,500
Mirex	10	100
Toxaphene	20	160
PCBs	1	7
Bonded ACM	0.01%	0.05%
AF and FA (fibrous asbestos)	0.001%	0.001%
All Asbestos	No visible asbestos at surface	No visible asbestos at surface

Note: Table derived from Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 2013 Table 1A (1)

Table 3b - Soil Assessment Criteria for TRH BTEX in Soil – Soil Health Screening Levels (HSL) for vapour intrusion (mg/kg).

	HSL A and HSL B Low – high density residential (mg/kg)				HSL D Commercial / Industrial (mg/kg)			
Chemical	**0m to <1m**	**1m to <2m**	**2m to <4m**	**4m +**	**0m to <1m**	**1m to <2m**	**2m to <4m**	**4m +**
Toluene	160	220	310	540	NL	NL	NL	NL
Ethylbenzene	55	NL	NL	NL	NL	NL	NL	NL
Xylene (total)	40	60	95	170	230	NL	NL	NL
Naphthalene	3	NL	NL	NL	NL	NL	NL	NL
Benzene	0.5	0.5	0.5	0.5	3	3	3	3
F1 – C_6-C_{10}	45	70	110	200	260	370	630	NL
F2 – C_{10}-C_{16}	110	240	440	NL	NL	NL	NL	NL

Note: Table derived from Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 2013 Table 1B (3)

Table 3c - Soil Assessment Criteria for TRH BTEX - Soil Management Limits for TPH fractions F1 – F4 in soil.

TRH Fraction	Soil Texture	Management Limits (mg/kg dry soil)	
		Residential, parkland and public open space	Commercial and Industrial
F1 C_6 – C_{10}	Course	700	700
	Fine	800	800
F2 >C_{10}-C_{16}	Course	1,000	1,000
	Fine	1,000	1,000
F3 >C_{16}-C_{34}	Course	2,500	3,500
	Fine	3,500	5,000
F4 >C_{34}-C_{40}	Course	10,000	10,000
	Fine	10,000	10,000

Note: Table derived from Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 2013 Table 1B (7)

Table 3d - Soil Assessment Criteria for TRH BTEX - Soil Ecological Screening Levels (ESL)

Chemical	Soil Texture	ESLs (mg/kg dry soil)		
		Areas of Ecological Significance	Urban Residential and Public Open Space	Commercial and Industrial
F1 $C_6 – C_{10}$	Coarse/	125	180	215
F2 $>C_{10}$-C_{16}	Fine	25	120	170
F3 $>C_{16}$-C_{34}	Coarse	-	300	1700
	Fine	-	1300	2500
F4 $>C_{34}$-C_{40}	Coarse	-	2800	3300
	Fine	-	5600	6600
Benzene	Coarse	10	50	75
	Fine	10	65	95
Ethylbenzene	Coarse	10	85	135
	Fine	65	105	135
Toluene	Coarse	1.5	70	165
	Fine	40	125	185
Xylenes	Coarse	10	105	180
	Fine	1.6	45	95
Benzo(a)pyrene	Coarse	0.7	0.7	0.7
	Fine	0.7	0.7	0.7

Note: Table derived from Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 2013 Table 1B(6)

Table 3e - Soil Assessment Criteria for TRH BTEX – CRC CARE Direct Contact Criteria

Chemical	HSL-A Residential (mg/kg)	Commercial/ Industrial D (mg/kg)	Maintenance worker (mg/kg)
Toluene	14,000	99,000	120,000
Ethylbenzene	4,500	27,000	85,000
Xylenes	12,000	81,000	130,000
Naphthalene	1,400	11,000	29,000
Benzene	100	430	1,100
$C_6 – C_{10}$	4,400	26,000	82,000
$>C_{10} – C_{16}$	3,300	20,000	62,000
$>C_{16} – C_{34}$	4,500	27,000	85,000
$>C_{34} – C_{40}$	6,300	38,000	120,00

Note: Table derived from *CRC CARE Technical Report no. 10 Health screening levels for petroleum hydrocarbons in soil and groundwater. Part 1: Technical development document*

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 within the Project Boundary on 14th and 15th May 2014.

Photographs of relevant Site features have been included in the print gallery in **Appendix G**.

4.1.1 General Observations

4.1.1.1 Renfrew Park

The Renfrew Park Site is the location of the Bylong Coal Project Site Compound and Sign-In Office. The property extends from Upper Bylong Road to the woodland area on the northern side of the railway line. The grounds of Renfrew Park are still utilised as improved pasture.

The Site Compound area has a portable above ground Diesel storage tank, a wash down bay, several sheds (including core shed and hayshed), a cottage which is the sign-in office, the Old Homestead which has been converted into a main office, and cheese factory adjacent to the Homestead.

4.1.1.2 Tarwyn Park

The Tarwyn Park Site is also known as 401 Upper Bylong Road, Upper Bylong 2849. The Site is a rural property with four (4) dwellings which includes the Homestead of sandstone construction with a tile roof. There are stables and former stables, a covered enclosure, sheds (including hay shed, machinery shed and garage) and two above ground diesel storage tanks. Flat fibrous cement Asbestos sheeting was observed on one (1) of the sheds and is likely to occur within the dwellings on the Site, specifically within the wet areas of the dwellings.

Minor hydrocarbon staining was observed below each of the diesel storage tanks. A soil sample was collected in the vicinity of a machinery shed, the former stables, cattle yards, and potential former horse/cattle dip area.

The Site is divided by the railway line which runs in an east-west direction. Additionally there is a creek which runs south-east to north-west through the Site. There are three (3) dams on the Site including a large dam on the eastern portion of the Site. On the north side of the railway line below the large dam is a small gully with discarded scrap metal. This is located approximately 350m from a substantial dump site located on 327 Woolleys Road.

The Site continues to be utilised as improved pasture and farming purposes. There is a former horse racing track on the Site.

One (1) of the dwellings has its own frontage to Upper Bylong Road and is known as 461 Upper Bylong Road. It is a fibro-clad cottage with maintained lawns and gardens.

There is some open woodland vegetation on the hillside on the northern portion of the Site.

4.1.1.3 Bylong Upper Public School

This property consists of the Bylong Upper Public School also known as 543 Upper Bylong Road and a fibro-clad building known as 545 Upper Bylong Road. The school was built in 1912. The school has four (4) buildings and two (2) metal sheds with well-maintained lawns and gardens. The school is likely to have some Asbestos containing material through maintenance work or installation of switchboards and electrical backing boards during the time Asbestos was extensively used as a building product.

4.1.1.4 Former Wallings Property

The Walling Property Site is also known as 245 Woolleys Road, 486 Upper Bylong Road and 7668 Bylong Valley Way. The homestead consists of brick and metal roof, it is located on Woolleys Road, and there are a number of metal and wooden sheds surrounding the homestead. There is a fibro-clad cottage near the homestead.

There is one (1) old elevated wooden shed (former shearing shed) which contains herbicides and pesticides used on the property. On the eastern side of this shed were empty 44 gallon drums which previously contained diesel and oil. At the rear of this shed is the diesel storage area which also contains the former diesel storage vessels, a stack of used car/truck batteries, and empty herbicide containers. Two (2) soil surface samples were collected from this area. There was minor hydrocarbon staining around the two (2) active above ground diesel storage tanks.

There are approximately twelve (12) dams on the entire property and a low lying area to the north of the homestead. The Site is utilised for improved pasture and farming purposes.

There is some open woodland on the hillside on the northern and southern portions of the Site. The former Wallings property extends from the eastern portion of the Project disturbance area to beyond the western extent of the North-Western OEA.

4.1.1.5 327 Woolleys Road Property

The property known as 327 Woolleys Road has a dwelling and shed on the Site. The dwelling is likely to have asbestos containing material in the wet areas such as the bathroom, kitchen and laundry.

There is a creek running from the south east to the north-west. The property is used for farming and improved pasture.

The property is divided by the railway line. The property borders the Tarwyn Park property on the northern side of the railway. A storage/dump site was located within the northern portion of the Site. There were numerous vehicles including cars, tractors, trucks and other associated farm machinery. A stack of car and machinery batteries were observed and a soil sample was collected within close proximity and down gradient from the batteries.

4.1.1.6 Glenview

Glenview is also known as 772 Upper Bylong Road and is adjoined by 882 Upper Bylong Road. No access was granted for these properties. Observation from the public roadway reveals the houses construction era possibly coincide with the period in which asbestos was routinely used throughout homes, especially in wet areas, such as bathrooms, kitchens and laundries. Being farming properties with sheds and dwelling garages they are likely to have chemical storage and diesel storage within the Site boundaries.

4.1.1.7 Valley View

Valley View is also known as 664 Upper Bylong Road and is now part of the former Wallings Property. Valley View has a fibro-clad dwelling and is used for farming and improved pasture. The home appears to possibly contain asbestos sheeting in the external construction and is likely to contain asbestos sheeting in the wet areas. There are old sandstone ruins from a former cottage on the Site which were inspected for asbestos fragments on the ground. No asbestos was observed at the ruins and construction materials appeared to possibly pre-date the asbestos period.

4.1.1.8 556 Upper Bylong Road

The 556 Upper Bylong Road property is part of the former Wallings Property. It has a weatherboard and hardi-plank dwelling with an iron roof. There are several metal sheds on the Site and it is surrounded by maintained lawns and gardens. There is possibly asbestos in the wet areas of the dwelling. Adjoining this property and opposite the school is a former timber theatre, or shed which appears to be in disrepair.

4.1.1.9 486 Upper Bylong Road

Sunny Side property, 486 Upper Bylong Road is part of the former Wallings Property. There was a dwelling on the Site up until the last few years. However at the time of Site inspections there was no dwelling left standing. A hayshed still exists behind the former house.

4.1.1.10 Former Church

The former church and church grounds is known as 444 Upper Bylong Road. The church grounds are well-maintained with a small graveyard within the property boundaries. Asbestos may not be present within this timber clad building, as it may predate the asbestos era. However a hazardous material search should be conducted on this property prior to demolition.

4.1.2 Asbestos

4.1.2.1 Eastern Open Cut Area

A summary of asbestos observations is included within **Table 4a** below.

Table 4a- Asbestos Observations – Eastern Open Cut Area

Lot/DP	Address	Asbestos Observations
Lot 67 DP755420	245 Woolleys Road	Small cottage next to the homestead is fibro-clad. Asbestos containing material present. The Homestead is likely to have asbestos containing material in the wet areas including bathrooms, kitchens and laundries.
Lot 75 DP755438	543/545 Upper Bylong Road	The school is likely to have some asbestos containing material. The adjoining cottage is fibro-clad. Asbestos containing material is present.
Lot 61 DP755438	466 Upper Bylong Road	This house is likely to have asbestos containing material in the wet areas including the bathrooms, kitchens and laundries.
Lot 2 DP1094509	401 Upper Bylong Road	Tarwyn Park houses contain asbestos containing material. Asbestos containing material was also observed on a shed. Two of the dwellings are fibro-clad which possibly contains asbestos containing material.

4.1.2.2 Western OEA and Western Open Cut Areas

A summary of asbestos observations is included within **Table 4b** below.

Table 4b - Asbestos Observations – Western OEAs and Western Open Cut Area

Lot/DP	Address	Asbestos
Lot 30 DP755438	668 and 772 Upper Bylong Road	These houses possibly have asbestos containing material in the wet areas including the bathrooms, kitchens and laundries.
Lot 99 DP704794	664 Upper Bylong Road	The dwelling on this Site is fibro-clad and possibly contains asbestos containing material.

4.1.2.3 Administration, Amenities and Rail Loop Area

A summary of asbestos observations is included within **Table 4c** below.

Table 4c - Asbestos Observations – Administration, Amenities and Rail Loop Area

Lot/DP	Address	Asbestos
Lot 2 DP1146893	355 Upper Bylong Road	There is potential for asbestos containing material within the former homestead and cottage.
Lot 2 DP1094509	401 Upper Bylong Road	Tarwyn Park houses possibly contain asbestos containing material. Possible asbestos containing material was also observed on a shed. Two of the dwellings are fibro-clad with possible asbestos containing material.

There is potential for asbestos containing material to be present in the backing boards of the electrical switchboards that are located in all of the buildings within the Project Boundary.

4.1.3 Dangerous Goods

There are dangerous goods stored on some of the rural properties, such as above ground diesel storage tanks, which are not listed in the WorkCover Dangerous Goods Database. Refer to **Section 2.4.1:** which details WorkCover Dangerous Goods Storage Licenses for all properties within the Project Boundary.

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

4.2 Laboratory Results

4.2.1 Soil Analysis

All soils are analysed against the Site Criteria: Schedule B1 Guideline on the Investigation Levels for Soil and Groundwater from the National Environment Protection (Assessment of Site Contamination) Measure 2013 - Tables 1A (1), 1A (3), 1B (6), 1B (7), and the CRC CARE Technical Report no 10 – Table B4. The sampling regime involved the collection of representative surface samples and subsurface samples where possible, based upon the NSW EPA Sampling Design Guidelines 1995 for a judgemental sampling regime. This involved targeting areas of potential contamination.

In total fifty (50) 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)

There were no hydrocarbon detections above the Limit of Reporting (LOR) for any of the samples collected and submitted for analysis.

Polycyclic Aromatic Hydrocarbons (PAH)

A total of fifty (50) soil samples were submitted for analysis of PAH. One (1) sample returned a detection above the LOR for Total PAH. S39 (refer to **Figure 10**) in the north-western section of the project disturbance area close to Upper Bylong Road recorded an insignificant concentration (1.2mg/kg) of Total PAH. The source of this concentration of Total PAH is likely to be bitumen material. The concentration is well below the Industrial/Commercial criteria of 4,000mg/kg, and the Residential A criteria of 300mg/kg for total PAHs.

Pesticides

A total of fifty (50) soil samples were submitted for OCP, OPP and PCB analysis. No concentrations of OPP or OCP were detected above the LOR and are therefore within the Site assessment criteria. One (1) sample returned a detection above the LOR for PCB. S24 (refer to **Figure 9 and 10**) adjoining former horse stables, shed, and chemical storage area recorded a concentration (0.3mg/kg) of PCB. The concentration is well below the Commercial/Industrial criteria of 7.0mg/kg, and the Residential A criteria of 1.0mg/kg for PCB.

Heavy Metals

A total of fifty (50) soil samples were submitted for analysis for all eight (8) heavy metals as recommended by the NSW OEH. There were no exceedances of the Site acceptance criteria of the

NEPM 2013 Health Investigation Levels (HIL) for Commercial/Industrial for the heavy metals analysed. Refer to **Table 4d** below for the heavy metal analysis**.**

Table 4d – Heavy Metals in Soil (mg/kg).

Sample ID	Heavy Metals							
	As	Cd	Cr (VI)	Cu	Pb	Hg	Ni	Zn
S1	7	nd	12	11	16	Nd	32	50
S2	7	nd	24	12	17	nd	47	44
S3	5	nd	66	12	14	nd	65	36
S4	6	nd	42	22	15	nd	93	44
S5	nd	nd	38	6	8	nd	30	19
S6	nd	nd	42	6	10	nd	27	15
S7	4	nd	25	8	10	nd	51	30
S8	nd	nd	12	15	18	nd	11	16
S9	5	nd	32	13	14	nd	43	41
S10	nd	nd	23	8	11	nd	20	30
S11	5	nd	13	10	13	nd	28	40
S12	6	nd	12	6	14	nd	18	16
S13	7	nd	20	10	11	nd	35	43
S14	nd	nd	14	3	9	nd	14	9
S15	5	nd	16	5	11	nd	20	15
S16	8	nd	20	13	19	nd	39	48
S17	nd	nd	12	4	8	nd	10	16
S18	nd	nd	12	3	8	nd	7	10
S19	9	nd	15	11	16	nd	20	63
S20	5	nd	11	13	160	nd	16	1000
S21	6	nd	10	11	18	nd	20	39
S22	nd	nd	22	4	7	nd	27	17
S23	nd	nd	29	5	8	nd	33	23
S24	5	nd	22	28	46	0.1	10	120
S25	nd	nd	47	27	10	nd	51	47
S26	nd	nd	26	15	6	nd	30	33
S27	nd	nd	31	19	8	nd	39	42
S28	8	nd	12	14	18	nd	26	69
S29	8	nd	21	7	10	nd	33	26
S30	8	nd	15	12	18	nd	32	59
S31	nd	nd	12	8	11	nd	25	41
S32	10	nd	9	8	15	nd	20	39
S33	7	nd	11	9	14	nd	24	34
S34	6	nd	11	5	13	nd	16	18
S35	7	nd	8	7	13	nd	20	38
S36	7	nd	12	10	16	nd	28	39
S37	8	nd	10	12	18	nd	26	45
S38	6	nd	15	7	14	nd	27	35
S39	5	nd	15	10	12	nd	29	75
S40	nd	nd	17	3	4	nd	4	10
S41	nd	nd	6	2	2	nd	8	10
S42	nd	nd	19	10	6	nd	24	35
Criteria	**3000**	**900**	**3600**	**240,000**	**1500**	**730**	**6000**	**400,000**

Table 4d – Heavy Metals in Soil (mg/kg) Continued.

Sample ID	Heavy Metals							
	As	Cd	Cr (VI)	Cu	Pb	Hg	Ni	Zn
S43	4	nd	26	4	10	nd	61	20
S44	nd	nd	20	11	6	nd	23	32
S45	nd	nd	13	7	4	nd	16	21
S46	nd	nd	27	16	9	nd	35	63
S47	5	nd	16	5	7	nd	37	25
S48	nd	nd	9	4	4	nd	7	51
S49	nd	nd	23	5	7	nd	10	11
S50	nd	nd	20	5	9	nd	7	23
Criteria	**3000**	**900**	**3600**	**240,000**	**1500**	**730**	**6000**	**400,000**

4.3 QA/QC Comments

A total of seven (7) RPD exceedances were recorded from the heavy metals data analysed. Due to the low concentrations of the detected concentrations, analytes did not exceed the DQO by more than 5%, the measured concentrations were less than five (5) times the PQL and the differences in measured concentrations were less than 5% of the NEPM 2013 Land Use Criteria. The recorded RPD values are not considered to be statistically significant and do not adversely affect the assessment data. It is considered that the analytical data generated is of an acceptable degree of accuracy and precision for the purpose of assessing potential contamination on the Site.

Considering the low concentrations of the contamination recorded across the Site, the differences noted in the duplicate samples is not significant enough to diminish the confidence that contaminant concentrations comply with the soil assessment criteria. It is the opinion of DLA that the observed level of heterogeneity is acceptable and presents negligible risk to human health or the environment when considered in the context of the overall assessment data.

5.0 DISCUSSION

This CIA included both visual and historical investigations at the areas of disturbance for the proposed mine 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 Eastern Open Cut Area

The Eastern Open Mining Area includes areas of the former Wallings Property (including properties located on Upper Bylong Road) and Tarwyn Park. The field observations and a review of Site history information identified a minor amount of contamination. The hydrocarbon stains adjacent to the above ground diesel storage tanks on both the former Wallings Property and Tarwyn Park are only minor amounts of contamination (1.0m diameter). Remediation would involve removal of surface layer material by scraping.

Asbestos containing material in the form of external and internal wall sheeting is present within buildings across the Site. A hazardous materials survey should be carried out on each of the buildings to determine the present condition of asbestos. A hazardous material survey to be conducted prior to demolition of the buildings will determine if the asbestos is bonded, painted, and sealed and poses minimal risk to human health and the environment. Water pipes associated with dams and stock watering points were not observed in all locations. Poly-pipe and metal pipe observed on the former Wallings Property presents minimal risk to human health or the environment. Asbestos containing material conduits that may be installed underground would require a hazardous material hazardous assessment to determine the condition of the asbestos.

Soil samples collected from the identified areas of concern complied with the respective HIL values for TRH, OC and OP Pesticides, PCBs and heavy metals. A minor detection of PCB above the LOR was compliant with the Site acceptance criteria and would cause no risk to human health or the environment.

5.2 North-Western OEA, South Western OEA and Western Open Cut Area

Several of the properties in these areas were not accessible, however considering the past and present farming practices within the local area significant differences between properties are highly unlikely. The review of Site history and aerial photography did not highlight any form of potential contamination not found within the other Sites. Additionally there are fewer buildings and anthropogenic change in the western area of the Project Boundary.

Asbestos containing material in the form of external and internal wall sheeting is present within buildings across the Site. A hazardous materials survey should be carried out on each of the buildings to determine the present condition of the asbestos. A hazardous material survey prior to demolition of the buildings will determine if the asbestos is bonded, painted, and sealed and poses minimal risk to human health and the environment. Water pipes associated with dams and stock watering points were not observed in all locations. Poly-pipe and metal pipe observed on the former Wallings Property presents minimal risk to human health or the environment. Asbestos containing material conduit that may be installed underground would require a hazardous material Assessment to determine the condition of the asbestos.

Soil samples collected from the identified areas of concern complied with the respective HIL values for TRH, OC and OP Pesticides, PCBs and heavy metals. Minor hydrocarbon staining of surface soil was observed adjacent to the above ground diesel storage tanks. Removal and remediation or disposal of the TRH contaminated soil would render the Site suitable for a land use consistent with NEPM 2013 Table 1A (1) Commercial/Industrial. 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 Administration, Amenities and Rail Loop

No potential contaminant sources were identified within the proposed Administration, Amenities and Rail Loop area within the Project Boundary. Inspection of dumped waste adjacent to the proposed water storage area on the lower section of the open woodland hillside included cars, trucks, machinery, batteries, used chemical drums, timber, wire and other assorted rural waste. There was no asbestos containing material detected within any of the identified waste piles. Care should be taken when handling and transporting batteries from this location as the plastic casings have perished with age on some units and may potentially crack and spill acid or chemicals (including cadmium). Minor contamination is possibly associated with this area, but could be remediated by removing the surface layer of soil to remove any minor hydrocarbon stains.

A set of samples should be collected from the existing rail corridor and analysed for asbestos prior to works commencing which may disturb the existing ballast and ground surface. The potential for asbestos contamination is low due to the small volume of trains utilising the railway line.

Soil samples collected from the identified areas of concern complied with the respective HIL values for TRH, OC and OP Pesticides, PCBs and heavy metals. A minor detection of Total PAH above the LOR was compliant with the Site acceptance criteria and would cause no risk to human health or the environment. It is the opinion of DLA that the Site is suitable for a land use consistent with NEPM 2013 Table 1A (1) Commercial/Industrial. There were no off-Site influences identified as having the potential to impact the suitability of the Site or future occupants of the land.

5.4 Accommodation Facility

There were no potential contaminant sources identified within the accommodation facility area. Asbestos containing material in the form of external and internal wall sheeting is present within buildings across the Site. A hazardous materials survey should be carried out on each of the buildings to determine the present condition of the asbestos. A hazardous material survey will determine if the asbestos is bonded, painted, and sealed and poses minimal risk to human health and the environment.

It is the opinion of DLA that the Site is suitable for a land use consistent with NEPM 2013 Table 1A (1) Residential A. There were no off-Site influences identified as having the potential to impact the suitability of the Site or future occupants of the land.

5.5 Remaining Area within Project Boundary

The remaining land within the Project Boundary consists of rural production and open woodland areas. There is a quarry on Bylong Valley Way. The quarry is likely to contain its own diesel storage tank(s). There are voids within the quarry area as observed in the aerial photography. There is potential for former voids to be filled with waste, and anecdotal evidence is useful in determining the full use of this land over time. It is unlikely the quarry and quarrying activities would have any contamination impact on the Project.

There is a council run waste transfer station located on the eastern side of the Project Boundary. There is no refuse left on the site. The waste is dropped off and then collected by council for transport out of the area. Contamination emanating from this site is not likely.

5.6 Groundwater

Considering on-site observations, and detected levels of contaminants in the soils, the likelihood of groundwater impacts is considered to be very low across the Project Boundary. 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. There are regional elevated concentrations of zinc (Zn), copper (Cu) and nitrites (No_x). It is the opinion of DLA that no further groundwater investigation is therefore warranted for assessment of contamination potential.

6.0 CONCLUSIONS

6.1 Eastern Open Cut Mining Area

The sampling regime and subsequent assessment and reporting of the Eastern Open Cut Area is considered to be adequate to determine the land use suitability of the Site. There has been no evidence found to infer contamination by heavy metals, pesticides or asbestos (other than bonded and within existing dwellings) 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 the volume and condition of any asbestos containing materials present.

The small hydrocarbon surface stains associated with the above ground diesel storage can be remediated by removing the surface soil by scraping and therefore does not warrant any further action by way of a Remedial Action Plan (RAP) or NSW Site Auditor involvement.

It is the opinion of DLA that the Site is suitable for a land use consistent with NEPM 2013 Table 1A (1) Commercial/Industrial. There were no off-Site influences identified as having the potential to impact the suitability of the Site or future occupants of the land.

6.2 North-Western OEA, South-Western OEA and Western Open Cut Mining Area

The sampling regime and subsequent assessment and reporting of the Western Overburden and Open Cut Area are considered to be adequate to determine the land use suitability of the Site. There is no evidence to infer contamination by heavy metals, pesticides, or asbestos (other than bonded and within existing dwellings) by previous landowners or land uses.

A comprehensive hazardous materials survey should be undertaken before any future demolition or refurbishment works of building structures are carried out to determine the volume and condition of any asbestos containing materials present.

It is the opinion of DLA that the Site is suitable for a land use consistent with NEPM 2013 Table 1(A) 1 Commercial/Industrial. There were no off-Site influences identified as having the potential to impact the suitability of the Site or future occupants of the land.

6.3 Administration, Amenities and Rail Loop

The sampling regime and subsequent assessment and reporting of the Administration, Amenities and Rail Loop Areas of the Project Boundary are considered to be adequate to determine the land use suitability of the Site. There is no evidence to infer contamination by heavy metals, pesticides, or asbestos (other than bonded and within existing dwellings) at the Site. The gully area with the waste/storage does not have any significant contamination other than storage of machinery, metal, tyres, batteries and building material. It is recommended the waste should be removed from the gully area.

It is recommended a set of samples should be collected and analysed for asbestos from the existing rail corridor prior to works commencing on the rail loop that will join the main line. Additionally a comprehensive hazardous materials survey should be undertaken before any future demolition or refurbishment works of structures are carried out to determine the volume of any asbestos containing materials present within dwellings and other structures.

It is the opinion of DLA that the Site is suitable for a land use consistent with NEPM 2013 Table 1A (1) Commercial/Industrial. No off-Site influences were identified as having the potential to impact the suitability of the Site or future occupants of the land.

6.4 Accommodation Facility Area

The sampling regime and subsequent assessment and reporting of the Accommodation Facility Area is considered to be adequate to determine the land use suitability of the Site. There was no evidence to infer contamination by heavy metals, pesticides, or asbestos (other than bonded and within existing dwellings) at the Site.

A comprehensive hazardous materials survey should be undertaken before any future demolition or refurbishment works of structures are carried out to determine the volume and condition of any asbestos containing materials present.

It is the opinion of DLA that the Site is suitable for a land use consistent with NEPM 2013 Table 1A (1) Residential A and Commercial/Industrial D. There were no off-Site influences identified as having the potential to impact the suitability of the Site or future occupants of the land.

6.5 Remaining Area within Project Boundary

The on-site observations and desktop searches of the remaining land within the Project Boundary are generally rural production properties and open woodland. The desktop searches and on-site observations highlighted the General Store as containing USTs and an AST for unleaded and diesel storage. There are groundwater monitoring wells associated with the USTs and these should be purged and sampled to ascertain the current status of groundwater on the Site.

It is the opinion of DLA that the area within the Project Boundary is suitable for a land use consistent with NEPM 2013 Table 1A (1) Commercial/Industrial The accommodation facility area is suitable for a land use being consistent with NEPM 2013 Table 1A (1) Residential. There were no on-site influences identified as having the potential to impact the suitability of the Site or future occupants of the land.

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Ozone Protection Act 1989.

Waste Avoidance and Resource Recovery Act 2001.

Water Board (Corporatisation) Act 1994.

Figure 1

Locality Plan

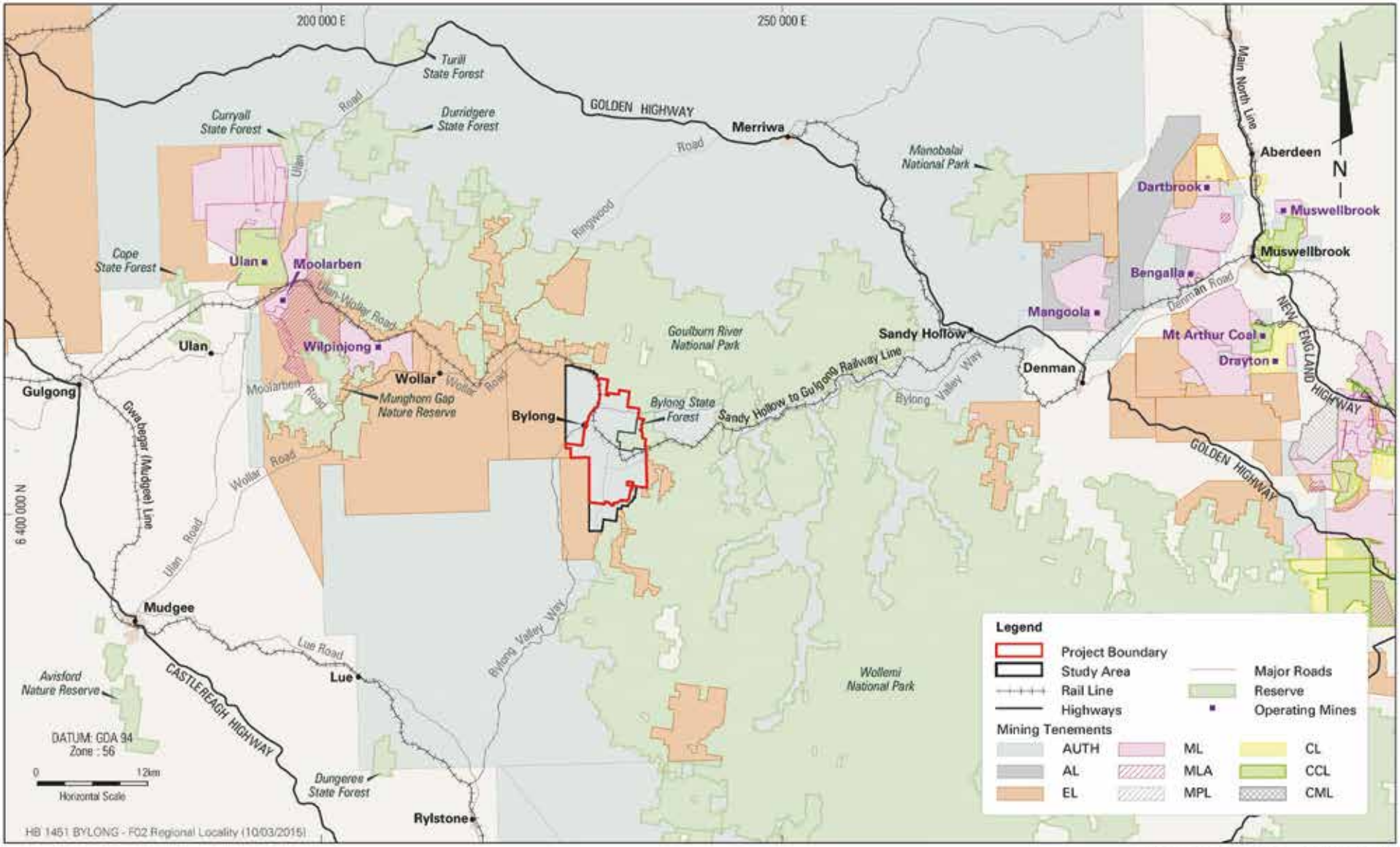
BYLONG COAL PROJECT

Locality Plan

FIGURE 1

Figure 2

Coal Mining and Regional Location



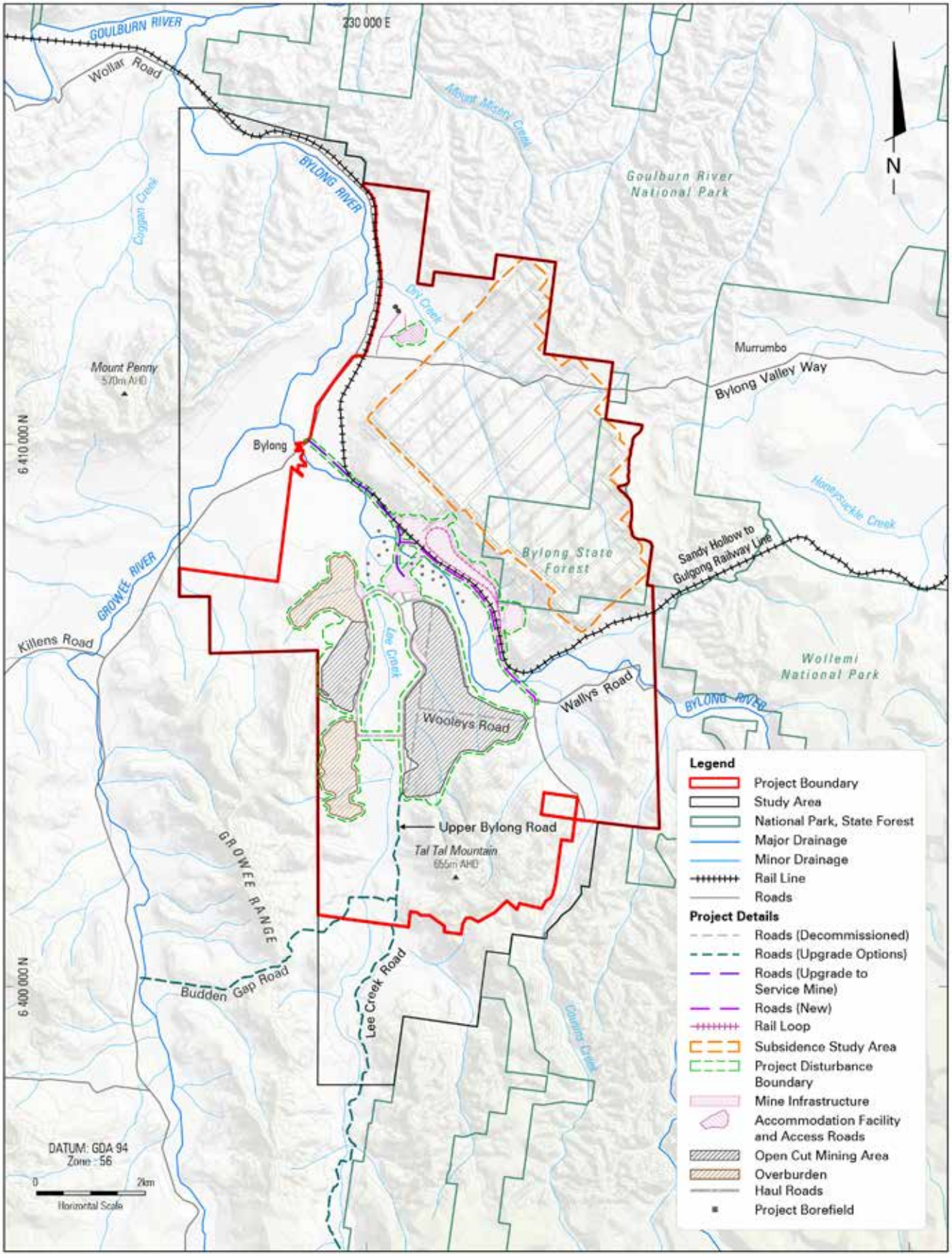
BYLONG COAL PROJECT

Regional Locality

FIGURE 2

Figure 3

Conceptual Project Layout



BYLONG COAL PROJECT

KEPCO BYLONG AUSTRALIA | Hansen Bailey ENVIRONMENTAL CONSULTANTS | WorleyParsons resources & energy

Conceptual Project Layout

FIGURE 3

Figure 4

Sample Locations – Open Cut and Overburden Emplacement Areas

Sample Location

DLA environmental

Sydney
Unit 2B/30 Leighton Place
Hornsby NSW 2077
Tel: 02-94761765
Fax: 02-94761557

Maitland
42B Church Street
Maitland NSW 2335
Tel: 02-49330001

Title: Sampling locations for the Open Cut and Emplacement areas. Bylong Valley NSW

Figure: 4	Project no:: DLH1151
Date: 06.2014	Revision: 1

Figure 5

Sample Locations – Rail Loop, Amenities and Road Upgrade

NORTH

● Sample Location

DLA environmental

Sydney
Unit 2B/30 Leighton Place
Hornsby NSW 2077
Tel: 02-94761765
Fax: 02-94761557

Maitland
42B Church Street
Maitland NSW 2335
Tel: 02-49330001

Title: Sampling locations for the Rail and Road Upgrades, Bylong Valley NSW

Figure: 5	Project no:: DLH1151
Date: 06.2014	Revision: 1

Figure 6

Sample Locations – Accommodation Facilities

Sample Location

DLA environmental

Sydney
Unit 2B/30 Leighton Place
Hornsby NSW 2077
Tel: 02-94761765
Fax: 02-94761557

Maitland
42B Church Street
Maitland NSW 2335
Tel: 02-49330001

Title: Sampling locations for the Accommodation area, Bylong Valley Way, NSW.

Figure:	Project no:
6	DLH1151
Date:	Revision:
06.2014	1

Appendix A

Sample Log and NATA Certified Analytical Data

DLH1151Bylong Coal Project Asbestos & Petroleum Hydrocarbon Results Semi-Volatile Organics & Metals

NEPM (1999) Amended 2013 Residetial A - Residential Land Use Criteria; mg/Kg						Asbestos	0.7	480	NL	110	5	C6-C10 50	>C10-C16 <1m 200 1-2m NL	>C16-C34 NL	>C34-C40 NL	3	300	DDT+DDD+DDE- 240	Aldrin+Dieldrin 6	Chlordane 50	Endosulfan - 270	Endrin - 10	Heptachlor - 6	HCB - 10	Methoxychlor - 300		1	100	20	100	6,000	300	40	400	7,400
							BTEX - <1m					TRH Sand				PAH		Pesticides														Heavy Metals			
Sample ID	Depth*	Date	Chemical Report	Asbestos Report	Soil Desciption		Benz	Toluen	EthylBe	Xylene	Naph	F1	F2	F3	F4	BaP TEQ	Total	OC								OP	PCB	As	Cd	Cr VI	Cu	Pb	Hg	Ni	Zn
S1	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	12	11	16	nd	32	50
S1a	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	12	11	15	nd	34	50
S1b	surface	14/05/2014	SE127962	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	10	10	16	0.02	31	48
S2	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	24	12	17	nd	47	44
S3	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	66	12	14	nd	65	36
S4	surface	14/05/2014	EnvLab110091	--	light brown clay	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	42	22	15	nd	93	44
S5	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	38	6	8	nd	30	19
S6	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	42	6	10	nd	27	15
S7	surface	14/05/2014	EnvLab110091	--	red brown sandy clay	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4	nd	25	8	10	nd	51	30
S8	surface	14/05/2014	EnvLab110091	--	red brown sandy clay	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	12	15	18	nd	11	16
S9	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	32	13	14	nd	43	41
S10	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	23	8	11	nd	20	30
S11	surface	14/05/2014	EnvLab110091	--	dark brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	13	10	13	nd	28	40
S12	surface	14/05/2014	EnvLab110091	--	brown gravelly loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	12	6	14	nd	18	16
S13	surface	14/05/2014	EnvLab110091	--	light brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	20	10	11	nd	35	43
S13a	surface	14/05/2014	EnvLab110091	--	light brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8	0.4	24	10	13	0.2	39	43
S13b	surface	14/05/2014	SE127962	--	light brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	9	0.3	22	11	17	0.03	40	53
S14	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	14	3	9	nd	14	9
S15	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	16	5	11	nd	20	15
S16	surface	14/05/2014	EnvLab110091	--	light brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8	nd	20	13	19	nd	39	48
S17	surface	14/05/2014	EnvLab110091	--	light brown sandy clay	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	12	4	8	nd	10	16
S18	surface	14/05/2014	EnvLab110091	--	light brown sandy clay	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	12	3	8	nd	7	10
S19	surface	14/05/2014	EnvLab110091	--	grey brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	9	nd	15	11	16	nd	20	63
S20	surface	14/05/2014	EnvLab110091	--	grey brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	11	13	160	nd	16	1000
S21	surface	14/05/2014	EnvLab110091	--	grey brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	10	11	18	nd	20	39
S22	surface	14/05/2014	EnvLab110091	--	orange sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	22	4	7	nd	27	17
S23	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	29	5	8	nd	33	23
S23a	surface	14/05/2014	EnvLab110091	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	28	5	7	nd	32	22
S23b	surface	14/05/2014	SE127962	--	red brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	3	nd	27	5.3	9	0.01	42	25
S24	surface	14/05/2014	EnvLab110091	--	grey brown gravelly loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.3	5	nd	22	28	46	0.1	10	120
S25	surface	14/05/2014	EnvLab110091	--	dark brown loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	47	27	10	nd	51	47
S26	surface	14/05/2014	EnvLab110091	--	dark brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	26	15	6	nd	30	33
S27	surface	14/05/2014	EnvLab110091	--	dark brown loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	31	19	8	nd	39	42
S28	surface	14/05/2014	EnvLab110091	--	dark brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8	nd	12	14	18	nd	26	69
S29	surface	14/05/2014	EnvLab110091	--	brown sandy gravelly loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8	nd	21	7	10	nd	33	26
S30	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8	nd	15	12	18	nd	32	59
S31	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	12	8	11	nd	25	41
S32	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	10	nd	9	8	15	nd	20	39
S33	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	11	9	14	nd	24	34
S33a	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	10	7	13	nd	19	30
S33b	surface	15/05/2014	SE127962	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	10	7.9	16	0.01	23	34
S34	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	11	5	13	nd	16	18
S35	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	8	7	13	nd	20	38
S36	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7	nd	12	10	16	nd	28	39
S37	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8	nd	10	12	18	nd	26	45
S38	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	nd	15	7	14	nd	27	35
S39	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	15	10	12	nd	29	75
S40	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	17	3	4	nd	4	10
S41	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6	2	2	nd	8	10
S42	surface	15/05/2014	EnvLab110091	--	brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	19	10	6	nd	24	35
S43	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4	nd	26	4	10	nd	61	20
S44	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	20	11	6	nd	23	32
S45	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	13	7	4	nd	16	21
S46	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	27	16	9	nd	35	63
S47	surface	15/05/2014	EnvLab110091	--	brown clay loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5	nd	16	5	7	nd	37	25
S48	surface	15/05/2014	EnvLab110091	--	brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	9	4	4	nd	7	51
S49	surface	15/05/2014	EnvLab110091	--	brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	23	5	7	nd	10	11
S49a	surface	15/05/2014	EnvLab110091	--	brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	30	5	7	nd	10	10
S50	surface	15/05/2014	EnvLab110091	--	orange brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	20	5	9	nd	7	23
S50a	surface	15/05/2014	EnvLab110091	--	orange brown sandy loam	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	17	5	10	nd	8	22
Avge							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6.5	0.4	19.8	9.3	14.5	0.1	27.5	51.0
Stdev							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.6	0.1	11.0	5.3	20.1	0.1	15.9	126.1
95% UCL							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6.0	0.2	22.1	10.5	25.8	0.1	31.0	122.0
Proc. B Min Sample Number (for validation only)							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.002	0.000	0.003	0.000	0.03	1	0.0113	0.002

* Depth relates to Depth below surface level -- Not Tested; nd: Not Detected above Laboratory LOR **BOLD** = Detection above LOR RED = Exceeds HIL Criteria

-- Not Tested; nd: Not Detected above Laboratory LOR **BOLD** = Detection above LOR RED = Exceeds HIL Criteria

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CERTIFICATE OF ANALYSIS 110091

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

Attention: Stephen Challinor

Sample log in details:

Your Reference:	**DLH1151 Bylong**
No. of samples:	56 Soils
Date samples received / completed instructions received	20/05/2014 / 20/05/2014

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:	27/05/14 / 27/05/14
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:

Jacinta Hurst
Laboratory Manager

Client Reference: DLH1151 Bylong

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	110091-1	110091-2	110091-3	110091-4	110091-5
Your Reference	----------	S1	S1a	S2	S3	S4
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	115	108	115	113

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	110091-6	110091-7	110091-8	110091-9	110091-10
Your Reference	----------	S5	S6	S7	S8	S9
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	118	115	114	116	112

Client Reference: DLH1151 Bylong

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-11 S10 14/05/2014 Soil	110091-12 S11 14/05/2014 Soil	110091-13 S12 14/05/2014 Soil	110091-14 S13 14/05/2014 Soil	110091-15 S13a 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	118	111	114	116	113

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-16 S14 14/05/2014 Soil	110091-17 S15 14/05/2014 Soil	110091-18 S16 14/05/2014 Soil	110091-19 S17 14/05/2014 Soil	110091-20 S18 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	116	116	116	114	116

Client Reference: DLH1151 Bylong

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	110091-21	110091-22	110091-23	110091-24	110091-25
Your Reference	----------	S19	S20	S21	S22	S23
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	113	116	115	113	115

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	110091-26	110091-27	110091-28	110091-29	110091-30
Your Reference	----------	S23a	S24	S25	S26	S27
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	109	93	92	97

Client Reference: DLH1151 Bylong

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-31 S28 14/05/2014 Soil	110091-32 S29 14/05/2014 Soil	110091-33 S30 15/05/2014 Soil	110091-34 S31 15/05/2014 Soil	110091-35 S32 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	99	99	101	102

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-36 S33 15/05/2014 Soil	110091-37 S33a 15/05/2014 Soil	110091-38 S34 15/05/2014 Soil	110091-39 S35 15/05/2014 Soil	110091-40 S36 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPHC6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	99	104	100	100

Client Reference: DLH1151 Bylong

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	110091-41	110091-42	110091-43	110091-44	110091-45
Your Reference	----------	S37	S38	S39	S40	S41
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRHC_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPHC_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	101	102	103	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	110091-46	110091-47	110091-48	110091-49	110091-50
Your Reference	----------	S42	S43	S44	S45	S46
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRHC_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPHC_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	102	100	99	100

Client Reference: DLH1151 Bylong

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-51 S47 15/05/2014 Soil	110091-52 S48 15/05/2014 Soil	110091-53 S49 15/05/2014 Soil	110091-54 S49a 15/05/2014 Soil	110091-55 S50 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	101	104	101	100

vTRH(C6-C10)/BTEXN in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-56 S50a 15/05/2014 Soil
Date extracted	-	21/05/2014
Date analysed	-	22/05/2014
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	99

Client Reference: DLH1151 Bylong

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	110091-1	110091-2	110091-3	110091-4	110091-5
Your Reference	----------	S1	S1a	S2	S3	S4
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	85	87	83	89

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	110091-6	110091-7	110091-8	110091-9	110091-10
Your Reference	----------	S5	S6	S7	S8	S9
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	86	87	82	84	86

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	110091-11	110091-12	110091-13	110091-14	110091-15
Your Reference	----------	S10	S11	S12	S13	S13a
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	88	87	89	88	85

Client Reference: DLH1151 Bylong

svTRH (C10-C40) in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-16 S14 14/05/2014 Soil	110091-17 S15 14/05/2014 Soil	110091-18 S16 14/05/2014 Soil	110091-19 S17 14/05/2014 Soil	110091-20 S18 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	87	86	86	90

svTRH (C10-C40) in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-21 S19 14/05/2014 Soil	110091-22 S20 14/05/2014 Soil	110091-23 S21 14/05/2014 Soil	110091-24 S22 14/05/2014 Soil	110091-25 S23 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	84	86	93	84	84

svTRH (C10-C40) in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-26 S23a 14/05/2014 Soil	110091-27 S24 14/05/2014 Soil	110091-28 S25 14/05/2014 Soil	110091-29 S26 14/05/2014 Soil	110091-30 S27 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	86	88	84	87	85

Client Reference: DLH1151 Bylong

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	110091-31	110091-32	110091-33	110091-34	110091-35
Your Reference	----------	S28	S29	S30	S31	S32
Date Sampled	----------	14/05/2014	14/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	87	84	86	85	86

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	110091-36	110091-37	110091-38	110091-39	110091-40
Your Reference	----------	S33	S33a	S34	S35	S36
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	88	89	87	88	89

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	110091-41	110091-42	110091-43	110091-44	110091-45
Your Reference	----------	S37	S38	S39	S40	S41
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	86	87	89	87

Client Reference: DLH1151 Bylong

svTRH (C10-C40) in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-46 S42 15/05/2014 Soil	110091-47 S43 15/05/2014 Soil	110091-48 S44 15/05/2014 Soil	110091-49 S45 15/05/2014 Soil	110091-50 S46 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	88	88	88	88

svTRH (C10-C40) in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-51 S47 15/05/2014 Soil	110091-52 S48 15/05/2014 Soil	110091-53 S49 15/05/2014 Soil	110091-54 S49a 15/05/2014 Soil	110091-55 S50 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10}-C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	86	87	88	86	87

svTRH (C10-C40) in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-56 S50a 15/05/2014 Soil
Date extracted	-	21/05/2014
Date analysed	-	22/05/2014
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10}-C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16}-C_{34}	mg/kg	<100
TRH >C_{34}-C_{40}	mg/kg	<100
Surrogate o-Terphenyl	%	86

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-1 S1 14/05/2014 Soil	110091-2 S1a 14/05/2014 Soil	110091-3 S2 14/05/2014 Soil	110091-4 S3 14/05/2014 Soil	110091-5 S4 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	101	96	100	97	100

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-6 S5 14/05/2014 Soil	110091-7 S6 14/05/2014 Soil	110091-8 S7 14/05/2014 Soil	110091-9 S8 14/05/2014 Soil	110091-10 S9 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	99	104	92	94	97

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-11 S10 14/05/2014 Soil	110091-12 S11 14/05/2014 Soil	110091-13 S12 14/05/2014 Soil	110091-14 S13 14/05/2014 Soil	110091-15 S13a 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	96	98	96	100	98

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-16 S14 14/05/2014 Soil	110091-17 S15 14/05/2014 Soil	110091-18 S16 14/05/2014 Soil	110091-19 S17 14/05/2014 Soil	110091-20 S18 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	98	96	99	102	96

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-21 S19 14/05/2014 Soil	110091-22 S20 14/05/2014 Soil	110091-23 S21 14/05/2014 Soil	110091-24 S22 14/05/2014 Soil	110091-25 S23 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	94	98	65	92	93

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-26 S23a 14/05/2014 Soil	110091-27 S24 14/05/2014 Soil	110091-28 S25 14/05/2014 Soil	110091-29 S26 14/05/2014 Soil	110091-30 S27 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	98	98	93	91	92

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-31 S28 14/05/2014 Soil	110091-32 S29 14/05/2014 Soil	110091-33 S30 15/05/2014 Soil	110091-34 S31 15/05/2014 Soil	110091-35 S32 15/05/2014 Soil
Date extracted	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	100	101	100	100	101

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-36 S33 15/05/2014 Soil	110091-37 S33a 15/05/2014 Soil	110091-38 S34 15/05/2014 Soil	110091-39 S35 15/05/2014 Soil	110091-40 S36 15/05/2014 Soil
Date extracted	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	111	104	104	102	103

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-41 S37 15/05/2014 Soil	110091-42 S38 15/05/2014 Soil	110091-43 S39 15/05/2014 Soil	110091-44 S40 15/05/2014 Soil	110091-45 S41 15/05/2014 Soil
Date extracted	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.06	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.4	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	1.2	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	102	100	111	125	110

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-46 S42 15/05/2014 Soil	110091-47 S43 15/05/2014 Soil	110091-48 S44 15/05/2014 Soil	110091-49 S45 15/05/2014 Soil	110091-50 S46 15/05/2014 Soil
Date extracted	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	108	106	107	106	110

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-51 S47 15/05/2014 Soil	110091-52 S48 15/05/2014 Soil	110091-53 S49 15/05/2014 Soil	110091-54 S49a 15/05/2014 Soil	110091-55 S50 15/05/2014 Soil
Date extracted	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	108	108	106	106	107

Client Reference: DLH1151 Bylong

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-56 S50a 15/05/2014 Soil
Date extracted	-	22/05/2014
Date analysed	-	22/05/2014
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE
Surrogate p-Terphenyl-d14	%	110

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-1 S1 14/05/2014 Soil	110091-2 S1a 14/05/2014 Soil	110091-3 S2 14/05/2014 Soil	110091-4 S3 14/05/2014 Soil	110091-5 S4 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	88	91	86	91

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-6 S5 14/05/2014 Soil	110091-7 S6 14/05/2014 Soil	110091-8 S7 14/05/2014 Soil	110091-9 S8 14/05/2014 Soil	110091-10 S9 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	90	83	89	89

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-11 S10 14/05/2014 Soil	110091-12 S11 14/05/2014 Soil	110091-13 S12 14/05/2014 Soil	110091-14 S13 14/05/2014 Soil	110091-15 S13a 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	88	88	88	85

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-16 S14 14/05/2014 Soil	110091-17 S15 14/05/2014 Soil	110091-18 S16 14/05/2014 Soil	110091-19 S17 14/05/2014 Soil	110091-20 S18 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	86	89	91	90

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-21 S19 14/05/2014 Soil	110091-22 S20 14/05/2014 Soil	110091-23 S21 14/05/2014 Soil	110091-24 S22 14/05/2014 Soil	110091-25 S23 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	89	93	84	85

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-26 S23a 14/05/2014 Soil	110091-27 S24 14/05/2014 Soil	110091-28 S25 14/05/2014 Soil	110091-29 S26 14/05/2014 Soil	110091-30 S27 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	89	84	89	85

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-31 S28 14/05/2014 Soil	110091-32 S29 14/05/2014 Soil	110091-33 S30 15/05/2014 Soil	110091-34 S31 15/05/2014 Soil	110091-35 S32 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	85	85	86	88

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-36 S33 15/05/2014 Soil	110091-37 S33a 15/05/2014 Soil	110091-38 S34 15/05/2014 Soil	110091-39 S35 15/05/2014 Soil	110091-40 S36 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	89	89	86	89

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-41 S37 15/05/2014 Soil	110091-42 S38 15/05/2014 Soil	110091-43 S39 15/05/2014 Soil	110091-44 S40 15/05/2014 Soil	110091-45 S41 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	86	88	90	90

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-46 S42 15/05/2014 Soil	110091-47 S43 15/05/2014 Soil	110091-48 S44 15/05/2014 Soil	110091-49 S45 15/05/2014 Soil	110091-50 S46 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	89	89

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-51 S47 15/05/2014 Soil	110091-52 S48 15/05/2014 Soil	110091-53 S49 15/05/2014 Soil	110091-54 S49a 15/05/2014 Soil	110091-55 S50 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	90	89	89	89

Client Reference: DLH1151 Bylong

Organochlorine Pesticides in soil		
Our Reference:	UNITS	110091-56
Your Reference	----------	S50a
Date Sampled	----------	15/05/2014
Type of sample		Soil
Date extracted	-	21/05/2014
Date analysed	-	23/05/2014
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	90

Client Reference: DLH1151 Bylong

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-1 S1 14/05/2014 Soil	110091-2 S1a 14/05/2014 Soil	110091-3 S2 14/05/2014 Soil	110091-4 S3 14/05/2014 Soil	110091-5 S4 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	88	91	86	91

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-6 S5 14/05/2014 Soil	110091-7 S6 14/05/2014 Soil	110091-8 S7 14/05/2014 Soil	110091-9 S8 14/05/2014 Soil	110091-10 S9 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	90	83	89	89

Client Reference: DLH1151 Bylong

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-11 S10 14/05/2014 Soil	110091-12 S11 14/05/2014 Soil	110091-13 S12 14/05/2014 Soil	110091-14 S13 14/05/2014 Soil	110091-15 S13a 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	88	88	88	85

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-16 S14 14/05/2014 Soil	110091-17 S15 14/05/2014 Soil	110091-18 S16 14/05/2014 Soil	110091-19 S17 14/05/2014 Soil	110091-20 S18 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	86	89	91	90

Client Reference: DLH1151 Bylong

Organophosphorus Pesticides						
Our Reference:	UNITS	110091-21	110091-22	110091-23	110091-24	110091-25
Your Reference	----------	S19	S20	S21	S22	S23
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	89	93	84	85

Organophosphorus Pesticides						
Our Reference:	UNITS	110091-26	110091-27	110091-28	110091-29	110091-30
Your Reference	----------	S23a	S24	S25	S26	S27
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	89	84	89	85

Client Reference: DLH1151 Bylong

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-31 S28 14/05/2014 Soil	110091-32 S29 14/05/2014 Soil	110091-33 S30 15/05/2014 Soil	110091-34 S31 15/05/2014 Soil	110091-35 S32 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	85	85	86	88

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-36 S33 15/05/2014 Soil	110091-37 S33a 15/05/2014 Soil	110091-38 S34 15/05/2014 Soil	110091-39 S35 15/05/2014 Soil	110091-40 S36 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	89	89	86	89

Client Reference: DLH1151 Bylong

Organophosphorus Pesticides						
Our Reference:	UNITS	110091-41	110091-42	110091-43	110091-44	110091-45
Your Reference	----------	S37	S38	S39	S40	S41
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	86	88	90	90

Organophosphorus Pesticides						
Our Reference:	UNITS	110091-46	110091-47	110091-48	110091-49	110091-50
Your Reference	----------	S42	S43	S44	S45	S46
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	89	89

Client Reference: DLH1151 Bylong

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-51 S47 15/05/2014 Soil	110091-52 S48 15/05/2014 Soil	110091-53 S49 15/05/2014 Soil	110091-54 S49a 15/05/2014 Soil	110091-55 S50 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	90	89	89	89

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-56 S50a 15/05/2014 Soil
Date extracted	-	21/05/2014
Date analysed	-	23/05/2014
Diazinon	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Ethion	mg/kg	<0.1
Surrogate TCMX	%	90

Client Reference: DLH1151 Bylong

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-1 S1 14/05/2014 Soil	110091-2 S1a 14/05/2014 Soil	110091-3 S2 14/05/2014 Soil	110091-4 S3 14/05/2014 Soil	110091-5 S4 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	89	88	91	86	91

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-6 S5 14/05/2014 Soil	110091-7 S6 14/05/2014 Soil	110091-8 S7 14/05/2014 Soil	110091-9 S8 14/05/2014 Soil	110091-10 S9 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	88	90	83	89	89

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-11 S10 14/05/2014 Soil	110091-12 S11 14/05/2014 Soil	110091-13 S12 14/05/2014 Soil	110091-14 S13 14/05/2014 Soil	110091-15 S13a 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	89	88	88	88	85

Client Reference: DLH1151 Bylong

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-16 S14 14/05/2014 Soil	110091-17 S15 14/05/2014 Soil	110091-18 S16 14/05/2014 Soil	110091-19 S17 14/05/2014 Soil	110091-20 S18 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	87	86	89	91	90

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-21 S19 14/05/2014 Soil	110091-22 S20 14/05/2014 Soil	110091-23 S21 14/05/2014 Soil	110091-24 S22 14/05/2014 Soil	110091-25 S23 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	85	89	93	84	85

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-26 S23a 14/05/2014 Soil	110091-27 S24 14/05/2014 Soil	110091-28 S25 14/05/2014 Soil	110091-29 S26 14/05/2014 Soil	110091-30 S27 14/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	87	89	84	89	85

Client Reference: DLH1151 Bylong

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-31 S28 14/05/2014 Soil	110091-32 S29 14/05/2014 Soil	110091-33 S30 15/05/2014 Soil	110091-34 S31 15/05/2014 Soil	110091-35 S32 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	85	85	86	86	88

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-36 S33 15/05/2014 Soil	110091-37 S33a 15/05/2014 Soil	110091-38 S34 15/05/2014 Soil	110091-39 S35 15/05/2014 Soil	110091-40 S36 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	88	89	89	86	89

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-41 S37 15/05/2014 Soil	110091-42 S38 15/05/2014 Soil	110091-43 S39 15/05/2014 Soil	110091-44 S40 15/05/2014 Soil	110091-45 S41 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	86	88	90	90

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PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-46 S42 15/05/2014 Soil	110091-47 S43 15/05/2014 Soil	110091-48 S44 15/05/2014 Soil	110091-49 S45 15/05/2014 Soil	110091-50 S46 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	87	90	91	89	89

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-51 S47 15/05/2014 Soil	110091-52 S48 15/05/2014 Soil	110091-53 S49 15/05/2014 Soil	110091-54 S49a 15/05/2014 Soil	110091-55 S50 15/05/2014 Soil
Date extracted	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	23/05/2014	23/05/2014	23/05/2014	23/05/2014	23/05/2014
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	90	90	89	89	89

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-56 S50a 15/05/2014 Soil
Date extracted	-	21/05/2014
Date analysed	-	23/05/2014
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	90

Client Reference: DLH1151 Bylong

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-1	110091-2	110091-3	110091-4	110091-5
Your Reference	----------	S1	S1a	S2	S3	S4
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	7	7	7	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	12	24	66	42
Copper	mg/kg	11	11	12	12	22
Lead	mg/kg	16	15	17	14	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	32	34	47	65	93
Zinc	mg/kg	50	50	44	36	44

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-6	110091-7	110091-8	110091-9	110091-10
Your Reference	----------	S5	S6	S7	S8	S9
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	<4	<4	4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	38	42	25	12	32
Copper	mg/kg	6	6	8	15	13
Lead	mg/kg	8	10	10	18	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	30	27	51	11	43
Zinc	mg/kg	19	15	30	16	41

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-11	110091-12	110091-13	110091-14	110091-15
Your Reference	----------	S10	S11	S12	S13	S13a
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	<4	5	6	7	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	0.4
Chromium	mg/kg	23	13	12	20	24
Copper	mg/kg	8	10	6	10	10
Lead	mg/kg	11	13	14	11	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Nickel	mg/kg	20	28	18	35	39
Zinc	mg/kg	30	40	16	43	43

Client Reference: DLH1151 Bylong

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-16	110091-17	110091-18	110091-19	110091-20
Your Reference	----------	S14	S15	S16	S17	S18
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	<4	5	8	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	16	20	12	12
Copper	mg/kg	3	5	13	4	3
Lead	mg/kg	9	11	19	8	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	20	39	10	7
Zinc	mg/kg	9	15	48	16	10

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-21	110091-22	110091-23	110091-24	110091-25
Your Reference	----------	S19	S20	S21	S22	S23
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	9	5	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	11	10	22	29
Copper	mg/kg	11	13	11	4	5
Lead	mg/kg	16	160	18	7	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	20	16	20	27	33
Zinc	mg/kg	63	1,000	39	17	23

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-26	110091-27	110091-28	110091-29	110091-30
Your Reference	----------	S23a	S24	S25	S26	S27
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	<4	5	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	28	22	47	26	31
Copper	mg/kg	5	28	27	15	19
Lead	mg/kg	7	46	10	6	8
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	32	10	51	30	39
Zinc	mg/kg	22	120	47	33	42

Client Reference: DLH1151 Bylong

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-31	110091-32	110091-33	110091-34	110091-35
Your Reference	----------	S28	S29	S30	S31	S32
Date Sampled	----------	14/05/2014	14/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	8	8	8	<4	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	21	15	12	9
Copper	mg/kg	14	7	12	8	8
Lead	mg/kg	18	10	18	11	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	26	33	32	25	20
Zinc	mg/kg	69	26	59	41	39

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-36	110091-37	110091-38	110091-39	110091-40
Your Reference	----------	S33	S33a	S34	S35	S36
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	7	7	6	7	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	10	11	8	12
Copper	mg/kg	9	7	5	7	10
Lead	mg/kg	14	13	13	13	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	24	19	16	20	28
Zinc	mg/kg	34	30	18	38	39

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-41	110091-42	110091-43	110091-44	110091-45
Your Reference	----------	S37	S38	S39	S40	S41
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	8	6	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	15	15	17	6
Copper	mg/kg	12	7	10	3	2
Lead	mg/kg	18	14	12	4	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	26	27	29	4	8
Zinc	mg/kg	45	35	75	10	10

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Acid Extractable metals in soil						
Our Reference:	UNITS	110091-46	110091-47	110091-48	110091-49	110091-50
Your Reference	----------	S42	S43	S44	S45	S46
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	<4	4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	26	20	13	27
Copper	mg/kg	10	4	11	7	16
Lead	mg/kg	6	10	6	4	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	24	61	23	16	35
Zinc	mg/kg	35	20	32	21	63

Acid Extractable metals in soil						
Our Reference:	UNITS	110091-51	110091-52	110091-53	110091-54	110091-55
Your Reference	----------	S47	S48	S49	S49a	S50
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	9	23	30	20
Copper	mg/kg	5	4	5	5	5
Lead	mg/kg	7	4	7	7	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	37	7	10	10	7
Zinc	mg/kg	25	51	11	10	23

Acid Extractable metals in soil		
Our Reference:	UNITS	110091-56
Your Reference	----------	S50a
Date Sampled	----------	15/05/2014
Type of sample		Soil
Date digested	-	21/05/2014
Date analysed	-	21/05/2014
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	17
Copper	mg/kg	5
Lead	mg/kg	10
Mercury	mg/kg	<0.1
Nickel	mg/kg	8
Zinc	mg/kg	22

Client Reference: DLH1151 Bylong

Moisture						
Our Reference:	UNITS	110091-1	110091-2	110091-3	110091-4	110091-5
Your Reference	----------	S1	S1a	S2	S3	S4
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	7.2	7.4	10	8.5	13

Moisture						
Our Reference:	UNITS	110091-6	110091-7	110091-8	110091-9	110091-10
Your Reference	----------	S5	S6	S7	S8	S9
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	4.9	9.8	10	9.7	9.5

Moisture						
Our Reference:	UNITS	110091-11	110091-12	110091-13	110091-14	110091-15
Your Reference	----------	S10	S11	S12	S13	S13a
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	6.9	13	9.6	9.4	8.4

Moisture						
Our Reference:	UNITS	110091-16	110091-17	110091-18	110091-19	110091-20
Your Reference	----------	S14	S15	S16	S17	S18
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	5.9	6.5	11	5.7	3.9

Moisture						
Our Reference:	UNITS	110091-21	110091-22	110091-23	110091-24	110091-25
Your Reference	----------	S19	S20	S21	S22	S23
Date Sampled	----------	14/05/2014	14/05/2014	14/05/2014	14/05/2014	14/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	8.0	8.1	11	4.7	7.2

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Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-26 S23a 14/05/2014 Soil	110091-27 S24 14/05/2014 Soil	110091-28 S25 14/05/2014 Soil	110091-29 S26 14/05/2014 Soil	110091-30 S27 14/05/2014 Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	7.6	5.5	33	17	24

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-31 S28 14/05/2014 Soil	110091-32 S29 14/05/2014 Soil	110091-33 S30 15/05/2014 Soil	110091-34 S31 15/05/2014 Soil	110091-35 S32 15/05/2014 Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	17	9.2	9.4	7.2	5.8

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-36 S33 15/05/2014 Soil	110091-37 S33a 15/05/2014 Soil	110091-38 S34 15/05/2014 Soil	110091-39 S35 15/05/2014 Soil	110091-40 S36 15/05/2014 Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	8.6	8.7	8.7	7.9	11

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-41 S37 15/05/2014 Soil	110091-42 S38 15/05/2014 Soil	110091-43 S39 15/05/2014 Soil	110091-44 S40 15/05/2014 Soil	110091-45 S41 15/05/2014 Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	13	13	5.5	3.9	4.4

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	110091-46 S42 15/05/2014 Soil	110091-47 S43 15/05/2014 Soil	110091-48 S44 15/05/2014 Soil	110091-49 S45 15/05/2014 Soil	110091-50 S46 15/05/2014 Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	11	6.6	13	12	17

Client Reference: DLH1151 Bylong

Moisture						
Our Reference:	UNITS	110091-51	110091-52	110091-53	110091-54	110091-55
Your Reference	----------	S47	S48	S49	S49a	S50
Date Sampled	----------	15/05/2014	15/05/2014	15/05/2014	15/05/2014	15/05/2014
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/05/2014	21/05/2014	21/05/2014	21/05/2014	21/05/2014
Date analysed	-	22/05/2014	22/05/2014	22/05/2014	22/05/2014	22/05/2014
Moisture	%	8.1	6.9	6.9	7.6	5.3

Moisture		
Our Reference:	UNITS	110091-56
Your Reference	----------	S50a
Date Sampled	----------	15/05/2014
Type of sample		Soil
Date prepared	-	21/05/2014
Date analysed	-	22/05/2014
Moisture	%	6.6

Client Reference: DLH1151 Bylong

Method ID	Methodology Summary
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. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
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.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
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+/-5 deg C for a minimum of 12 hours.

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QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-			22/05/2014	110091-1	22/05/2014 || 22/05/2014	LCS-11	22/05/2014
$TRHC_6$ - C_9	mg/kg	25	Org-016	<25	110091-1	<25 || <25	LCS-11	125%
$TRHC_6$ - C_{10}	mg/kg	25	Org-016	<25	110091-1	<25 || <25	LCS-11	125%
Benzene	mg/kg	0.2	Org-016	<0.2	110091-1	<0.2 || <0.2	LCS-11	123%
Toluene	mg/kg	0.5	Org-016	<0.5	110091-1	<0.5 || <0.5	LCS-11	122%
Ethylbenzene	mg/kg	1	Org-016	<1	110091-1	<1 || <1	LCS-11	128%
m+p-xylene	mg/kg	2	Org-016	<2	110091-1	<2 || <2	LCS-11	126%
o-Xylene	mg/kg	1	Org-016	<1	110091-1	<1 || <1	LCS-11	129%
naphthalene	mg/kg	1	Org-014	<1	110091-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	120	110091-1	103 || 115 || RPD: 11	LCS-11	116%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
$TRHC_{10}$ - C_{14}	mg/kg	50	Org-003	<50	110091-1	<50 || <50	LCS-11	99%
$TRHC_{15}$ - C_{28}	mg/kg	100	Org-003	<100	110091-1	<100 || <100	LCS-11	86%
$TRHC_{29}$ - C_{36}	mg/kg	100	Org-003	<100	110091-1	<100 || <100	LCS-11	106%
$TRH>C_{10}$-C_{16}	mg/kg	50	Org-003	<50	110091-1	<50 || <50	LCS-11	99%
$TRH>C_{16}$-C_{34}	mg/kg	100	Org-003	<100	110091-1	<100 || <100	LCS-11	86%
$TRH>C_{34}$-C_{40}	mg/kg	100	Org-003	<100	110091-1	<100 || <100	LCS-11	106%
Surrogate o-Terphenyl	%		Org-003	92	110091-1	85 || 88 || RPD: 3	LCS-11	99%
QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-			22/05/2014	110091-1	22/05/2014 || 22/05/2014	LCS-11	22/05/2014
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	LCS-11	101%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	LCS-11	102%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	LCS-11	108%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	LCS-11	105%

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QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	LCS-11	108%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	LCS-11	99%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	110091-1	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	110091-1	<0.05 || <0.05	LCS-11	109%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	106	110091-1	101 || 104 || RPD: 3	LCS-11	99%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-			23/05/2014	110091-1	23/05/2014 || 23/05/2014	LCS-11	23/05/2014
HCB	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	88%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	76%
Heptachlor	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	98%
delta-BHC	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	103%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	127%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	103%
Dieldrin	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	95%
Endrin	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	97%
pp-DDD	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	111%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	LCS-11	103%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	87	110091-1	89 || 91 || RPD: 2	LCS-11	89%

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QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-			23/05/2014	110091-1	23/05/2014 || 23/05/2014	LCS-11	23/05/2014
Diazinon	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	LCS-11	96%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	LCS-11	81%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	110091-1	<0.1 || <0.1	LCS-11	89%
Surrogate TCMX	%		Org-008	87	110091-1	89 || 91 || RPD: 2	LCS-11	89%
QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-			23/05/2014	110091-1	23/05/2014 || 23/05/2014	LCS-11	23/05/2014
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	LCS-11	112%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	110091-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	87	110091-1	89 || 91 || RPD: 2	LCS-11	88%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-10	21/05/2014
Date analysed	-			21/05/2014	110091-1	21/05/2014 || 21/05/2014	LCS-10	21/05/2014
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	110091-1	7 || 7 || RPD: 0	LCS-10	89%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	110091-1	<0.4 || <0.4	LCS-10	95%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	110091-1	12 || 12 || RPD: 0	LCS-10	95%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	110091-1	11 || 11 || RPD: 0	LCS-10	94%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	110091-1	16 || 15 || RPD: 6	LCS-10	91%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	110091-1	<0.1 || <0.1	LCS-10	92%

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QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	110091-1	32 || 31 || RPD: 3	LCS-10	93%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	110091-1	50 || 49 || RPD: 2	LCS-10	93%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-11	22/05/2014 || 22/05/2014	LCS-12	22/05/2014
$TRHC_6$ - C_9	mg/kg	110091-11	<25 || <25	LCS-12	123%
$TRHC_6$ - C_{10}	mg/kg	110091-11	<25 || <25	LCS-12	123%
Benzene	mg/kg	110091-11	<0.2 || <0.2	LCS-12	123%
Toluene	mg/kg	110091-11	<0.5 || <0.5	LCS-12	121%
Ethylbenzene	mg/kg	110091-11	<1 || <1	LCS-12	125%
m+p-xylene	mg/kg	110091-11	<2 || <2	LCS-12	124%
o-Xylene	mg/kg	110091-11	<1 || <1	LCS-12	126%
naphthalene	mg/kg	110091-11	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	110091-11	118 || 117 || RPD: 1	LCS-12	111%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
$TRHC_{10}$ - C_{14}	mg/kg	110091-11	<50 || <50	LCS-12	112%
$TRHC_{15}$ - C_{28}	mg/kg	110091-11	<100 || <100	LCS-12	127%
$TRHC_{29}$ - C_{36}	mg/kg	110091-11	<100 || <100	LCS-12	102%
$TRH>C_{10}$-C_{16}	mg/kg	110091-11	<50 || <50	LCS-12	112%
$TRH>C_{16}$-C_{34}	mg/kg	110091-11	<100 || <100	LCS-12	127%
$TRH>C_{34}$-C_{40}	mg/kg	110091-11	<100 || <100	LCS-12	102%
Surrogate o-Terphenyl	%	110091-11	88 || 81 || RPD: 8	LCS-12	100%

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QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-11	22/05/2014 || 22/05/2014	LCS-12	22/05/2014
Naphthalene	mg/kg	110091-11	<0.1 || <0.1	LCS-12	101%
Acenaphthylene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	110091-11	<0.1 || <0.1	LCS-12	103%
Phenanthrene	mg/kg	110091-11	<0.1 || <0.1	LCS-12	108%
Anthracene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	110091-11	<0.1 || <0.1	LCS-12	106%
Pyrene	mg/kg	110091-11	<0.1 || <0.1	LCS-12	108%
Benzo(a)anthracene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	110091-11	<0.1 || <0.1	LCS-12	101%
Benzo(b+k)fluoranthene	mg/kg	110091-11	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	110091-11	<0.05 || <0.05	LCS-12	110%
Indeno(1,2,3-c,d)pyrene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	110091-11	96 || 94 || RPD: 2	LCS-12	99%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-11	23/05/2014 || 23/05/2014	LCS-12	23/05/2014
HCB	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	110091-11	<0.1 || <0.1	LCS-12	88%
gamma-BHC	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	110091-11	<0.1 || <0.1	LCS-12	76%
Heptachlor	mg/kg	110091-11	<0.1 || <0.1	LCS-12	98%
delta-BHC	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	110091-11	<0.1 || <0.1	LCS-12	103%
Heptachlor Epoxide	mg/kg	110091-11	<0.1 || <0.1	LCS-12	127%
gamma-Chlordane	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	110091-11	<0.1 || <0.1	LCS-12	103%
Dieldrin	mg/kg	110091-11	<0.1 || <0.1	LCS-12	97%
Endrin	mg/kg	110091-11	<0.1 || <0.1	LCS-12	97%
pp-DDD	mg/kg	110091-11	<0.1 || <0.1	LCS-12	112%
Endosulfan II	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	110091-11	<0.1 || <0.1	LCS-12	103%

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QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Methoxychlor	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	110091-11	89 || 83 || RPD: 7	LCS-12	89%
QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-11	23/05/2014 || 23/05/2014	LCS-12	21/05/2014
Diazinon	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	110091-11	<0.1 || <0.1	LCS-12	95%
Fenitrothion	mg/kg	110091-11	<0.1 || <0.1	LCS-12	80%
Bromophos-ethyl	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	110091-11	<0.1 || <0.1	LCS-12	89%
Surrogate TCMX	%	110091-11	89 || 83 || RPD: 7	LCS-12	82%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-11	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-11	23/05/2014 || 23/05/2014	LCS-12	21/05/2014
Arochlor 1016	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	110091-11	<0.1 || <0.1	LCS-12	111%
Arochlor 1260	mg/kg	110091-11	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	110091-11	89 || 83 || RPD: 7	LCS-12	91%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	110091-11	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Date analysed	-	110091-11	21/05/2014 || 21/05/2014	LCS-11	21/05/2014
Arsenic	mg/kg	110091-11	<4 || <4	LCS-11	97%
Cadmium	mg/kg	110091-11	<0.4 || <0.4	LCS-11	104%
Chromium	mg/kg	110091-11	23 || 25 || RPD: 8	LCS-11	103%
Copper	mg/kg	110091-11	8 || 8 || RPD: 0	LCS-11	102%
Lead	mg/kg	110091-11	11 || 12 || RPD: 9	LCS-11	99%
Mercury	mg/kg	110091-11	<0.1 || <0.1	LCS-11	93%
Nickel	mg/kg	110091-11	20 || 20 || RPD: 0	LCS-11	102%
Zinc	mg/kg	110091-11	30 || 30 || RPD: 0	LCS-11	102%

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QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-21	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-21	22/05/2014 || 22/05/2014	LCS-13	22/05/2014
$TRHC_6$ - C_9	mg/kg	110091-21	<25 || <25	LCS-13	110%
$TRHC_6$ - C_{10}	mg/kg	110091-21	<25 || <25	LCS-13	110%
Benzene	mg/kg	110091-21	<0.2 || <0.2	LCS-13	109%
Toluene	mg/kg	110091-21	<0.5 || <0.5	LCS-13	113%
Ethylbenzene	mg/kg	110091-21	<1 || <1	LCS-13	110%
m+p-xylene	mg/kg	110091-21	<2 || <2	LCS-13	104%
o-Xylene	mg/kg	110091-21	<1 || <1	LCS-13	113%
naphthalene	mg/kg	110091-21	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	110091-21	113 || 111 || RPD: 2	LCS-13	104%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-21	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-21	22/05/2014 || 22/05/2014	LCS-13	21/05/2014
$TRHC_{10}$ - C_{14}	mg/kg	110091-21	<50 || <50	LCS-13	113%
$TRHC_{15}$ - C_{28}	mg/kg	110091-21	<100 || <100	LCS-13	130%
$TRHC_{29}$ - C_{36}	mg/kg	110091-21	<100 || <100	LCS-13	132%
$TRH>C_{10}$-C_{16}	mg/kg	110091-21	<50 || <50	LCS-13	113%
$TRH>C_{16}$-C_{34}	mg/kg	110091-21	<100 || <100	LCS-13	130%
$TRH>C_{34}$-C_{40}	mg/kg	110091-21	<100 || <100	LCS-13	132%
Surrogate o-Terphenyl	%	110091-21	84 || 85 || RPD: 1	LCS-13	101%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-21	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-21	22/05/2014 || 22/05/2014	LCS-13	22/05/2014
Naphthalene	mg/kg	110091-21	<0.1 || <0.1	LCS-13	100%
Acenaphthylene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	110091-21	<0.1 || <0.1	LCS-13	102%
Phenanthrene	mg/kg	110091-21	<0.1 || <0.1	LCS-13	99%
Anthracene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	110091-21	<0.1 || <0.1	LCS-13	98%
Pyrene	mg/kg	110091-21	<0.1 || <0.1	LCS-13	101%
Benzo(a)anthracene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	110091-21	<0.1 || <0.1	LCS-13	95%
Benzo(b+k)fluoranthene	mg/kg	110091-21	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	110091-21	<0.05 || <0.05	LCS-13	104%
Indeno(1,2,3-c,d)pyrene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]

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QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	110091-21	94 || 91 || RPD: 3	LCS-13	106%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-21	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-21	23/05/2014 || 23/05/2014	LCS-13	23/05/2014
HCB	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	110091-21	<0.1 || <0.1	LCS-13	86%
gamma-BHC	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	110091-21	<0.1 || <0.1	LCS-13	75%
Heptachlor	mg/kg	110091-21	<0.1 || <0.1	LCS-13	97%
delta-BHC	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	110091-21	<0.1 || <0.1	LCS-13	102%
Heptachlor Epoxide	mg/kg	110091-21	<0.1 || <0.1	LCS-13	127%
gamma-Chlordane	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	110091-21	<0.1 || <0.1	LCS-13	100%
Dieldrin	mg/kg	110091-21	<0.1 || <0.1	LCS-13	95%
Endrin	mg/kg	110091-21	<0.1 || <0.1	LCS-13	95%
pp-DDD	mg/kg	110091-21	<0.1 || <0.1	LCS-13	110%
Endosulfan II	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	110091-21	<0.1 || <0.1	LCS-13	102%
Methoxychlor	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	110091-21	85 || 85 || RPD: 0	LCS-13	88%

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QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-21	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-21	23/05/2014 || 23/05/2014	LCS-13	21/05/2014
Diazinon	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	110091-21	<0.1 || <0.1	LCS-13	97%
Fenitrothion	mg/kg	110091-21	<0.1 || <0.1	LCS-13	82%
Bromophos-ethyl	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	110091-21	<0.1 || <0.1	LCS-13	91%
Surrogate TCMX	%	110091-21	85 || 85 || RPD: 0	LCS-13	82%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-21	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-21	23/05/2014 || 23/05/2014	LCS-13	21/05/2014
Arochlor 1016	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	110091-21	<0.1 || <0.1	LCS-13	106%
Arochlor 1260	mg/kg	110091-21	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	110091-21	85 || 85 || RPD: 0	LCS-13	89%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	110091-21	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Date analysed	-	110091-21	21/05/2014 || 21/05/2014	LCS-12	21/05/2014
Arsenic	mg/kg	110091-21	9 || 9 || RPD: 0	LCS-12	95%
Cadmium	mg/kg	110091-21	<0.4 || <0.4	LCS-12	104%
Chromium	mg/kg	110091-21	15 || 15 || RPD: 0	LCS-12	101%
Copper	mg/kg	110091-21	11 || 12 || RPD: 9	LCS-12	101%
Lead	mg/kg	110091-21	16 || 18 || RPD: 12	LCS-12	98%
Mercury	mg/kg	110091-21	<0.1 || <0.1	LCS-12	93%
Nickel	mg/kg	110091-21	20 || 20 || RPD: 0	LCS-12	100%
Zinc	mg/kg	110091-21	63 || 83 || RPD: 27	LCS-12	100%

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QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-31	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Date analysed	-	110091-31	22/05/2014 || 22/05/2014	110091-2	22/05/2014
TRH C_6 - C_9	mg/kg	110091-31	<25 || <25	110091-2	124%
TRH C_6 - C_{10}	mg/kg	110091-31	<25 || <25	110091-2	124%
Benzene	mg/kg	110091-31	<0.2 || <0.2	110091-2	121%
Toluene	mg/kg	110091-31	<0.5 || <0.5	110091-2	125%
Ethylbenzene	mg/kg	110091-31	<1 || <1	110091-2	125%
m+p-xylene	mg/kg	110091-31	<2 || <2	110091-2	124%
o-Xylene	mg/kg	110091-31	<1 || <1	110091-2	126%
naphthalene	mg/kg	110091-31	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	110091-31	97 || 99 || RPD: 2	110091-2	116%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-31	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Date analysed	-	110091-31	22/05/2014 || 22/05/2014	110091-2	21/05/2014
TRH C_{10} - C_{14}	mg/kg	110091-31	<50 || <50	110091-2	104%
TRH C_{15} - C_{28}	mg/kg	110091-31	<100 || <100	110091-2	119%
TRH C_{29} - C_{36}	mg/kg	110091-31	<100 || <100	110091-2	115%
TRH >C_{10}-C_{16}	mg/kg	110091-31	<50 || <50	110091-2	104%
TRH >C_{16}-C_{34}	mg/kg	110091-31	<100 || <100	110091-2	119%
TRH >C_{34}-C_{40}	mg/kg	110091-31	<100 || <100	110091-2	115%
Surrogate o-Terphenyl	%	110091-31	87 || 86 || RPD: 1	110091-2	110%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-31	22/05/2014 || 22/05/2014	110091-2	21/05/2014
Date analysed	-	110091-31	22/05/2014 || 22/05/2014	110091-2	22/05/2014
Naphthalene	mg/kg	110091-31	<0.1 || <0.1	110091-2	98%
Acenaphthylene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	110091-31	<0.1 || <0.1	110091-2	98%
Phenanthrene	mg/kg	110091-31	<0.1 || <0.1	110091-2	108%
Anthracene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	110091-31	<0.1 || <0.1	110091-2	102%
Pyrene	mg/kg	110091-31	<0.1 || <0.1	110091-2	105%
Benzo(a)anthracene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	110091-31	<0.1 || <0.1	110091-2	95%
Benzo(b+k)fluoranthene	mg/kg	110091-31	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	110091-31	<0.05 || <0.05	110091-2	105%
Indeno(1,2,3-c,d)pyrene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]

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QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	110091-31	100 || 103 || RPD: 3	110091-2	93%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-31	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Date analysed	-	110091-31	23/05/2014 || 23/05/2014	110091-2	23/05/2014
HCB	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	110091-31	<0.1 || <0.1	110091-2	100%
gamma-BHC	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	110091-31	<0.1 || <0.1	110091-2	105%
Heptachlor	mg/kg	110091-31	<0.1 || <0.1	110091-2	102%
delta-BHC	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	110091-31	<0.1 || <0.1	110091-2	101%
Heptachlor Epoxide	mg/kg	110091-31	<0.1 || <0.1	110091-2	100%
gamma-Chlordane	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	110091-31	<0.1 || <0.1	110091-2	98%
Dieldrin	mg/kg	110091-31	<0.1 || <0.1	110091-2	94%
Endrin	mg/kg	110091-31	<0.1 || <0.1	110091-2	99%
pp-DDD	mg/kg	110091-31	<0.1 || <0.1	110091-2	99%
Endosulfan II	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	110091-31	<0.1 || <0.1	110091-2	99%
Methoxychlor	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	110091-31	85 || 88 || RPD: 3	110091-2	133%

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QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-31	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Date analysed	-	110091-31	23/05/2014 || 23/05/2014	110091-2	23/05/2014
Diazinon	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	110091-31	<0.1 || <0.1	110091-2	100%
Fenitrothion	mg/kg	110091-31	<0.1 || <0.1	110091-2	80%
Bromophos-ethyl	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	110091-31	<0.1 || <0.1	110091-2	94%
Surrogate TCMX	%	110091-31	85 || 88 || RPD: 3	110091-2	98%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-27	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Date analysed	-	110091-27	23/05/2014 || 23/05/2014	110091-2	23/05/2014
Arochlor 1016	mg/kg	110091-27	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	110091-27	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	110091-27	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	110091-27	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	110091-27	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	110091-27	0.3 || 0.3 || RPD: 0	110091-2	124%
Arochlor 1260	mg/kg	110091-27	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	110091-27	89 || 98 || RPD: 10	110091-2	108%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	110091-31	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Date analysed	-	110091-31	21/05/2014 || 21/05/2014	LCS-13	21/05/2014
Arsenic	mg/kg	110091-31	8 || 8 || RPD: 0	LCS-13	96%
Cadmium	mg/kg	110091-31	<0.4 || <0.4	LCS-13	102%
Chromium	mg/kg	110091-31	12 || 12 || RPD: 0	LCS-13	101%
Copper	mg/kg	110091-31	14 || 15 || RPD: 7	LCS-13	100%
Lead	mg/kg	110091-31	18 || 19 || RPD: 5	LCS-13	97%
Mercury	mg/kg	110091-31	<0.1 || <0.1	LCS-13	86%
Nickel	mg/kg	110091-31	26 || 26 || RPD: 0	LCS-13	100%
Zinc	mg/kg	110091-31	69 || 71 || RPD: 3	LCS-13	100%

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QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-41	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Date analysed	-	110091-41	22/05/2014 || 22/05/2014	110091-22	22/05/2014
$TRHC_6$ - C_9	mg/kg	110091-41	<25 || <25	110091-22	118%
$TRHC_6$ - C_{10}	mg/kg	110091-41	<25 || <25	110091-22	118%
Benzene	mg/kg	110091-41	<0.2 || <0.2	110091-22	115%
Toluene	mg/kg	110091-41	<0.5 || <0.5	110091-22	119%
Ethylbenzene	mg/kg	110091-41	<1 || <1	110091-22	119%
m+p-xylene	mg/kg	110091-41	<2 || <2	110091-22	118%
o-Xylene	mg/kg	110091-41	<1 || <1	110091-22	121%
naphthalene	mg/kg	110091-41	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	110091-41	101 || 102 || RPD: 1	110091-22	113%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-41	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Date analysed	-	110091-41	22/05/2014 || 22/05/2014	110091-22	21/05/2014
$TRHC_{10}$ - C_{14}	mg/kg	110091-41	<50 || <50	110091-22	112%
$TRHC_{15}$ - C_{28}	mg/kg	110091-41	<100 || <100	110091-22	133%
$TRHC_{29}$ - C_{36}	mg/kg	110091-41	<100 || <100	110091-22	75%
$TRH>C_{10}$-C_{16}	mg/kg	110091-41	<50 || <50	110091-22	112%
$TRH>C_{16}$-C_{34}	mg/kg	110091-41	<100 || <100	110091-22	133%
$TRH>C_{34}$-C_{40}	mg/kg	110091-41	<100 || <100	110091-22	75%
Surrogate o-Terphenyl	%	110091-41	85 || 87 || RPD: 2	110091-22	112%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-41	22/05/2014 || 22/05/2014	110091-22	21/05/2014
Date analysed	-	110091-41	22/05/2014 || 22/05/2014	110091-22	22/05/2014
Naphthalene	mg/kg	110091-41	<0.1 || <0.1	110091-22	102%
Acenaphthylene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	110091-41	<0.1 || <0.1	110091-22	102%
Phenanthrene	mg/kg	110091-41	<0.1 || <0.1	110091-22	108%
Anthracene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	110091-41	<0.1 || <0.1	110091-22	107%
Pyrene	mg/kg	110091-41	<0.1 || <0.1	110091-22	109%
Benzo(a)anthracene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	110091-41	<0.1 || <0.1	110091-22	99%
Benzo(b+k)fluoranthene	mg/kg	110091-41	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	110091-41	<0.05 || <0.05	110091-22	108%
Indeno(1,2,3-c,d)pyrene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]

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QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	110091-41	102 || 100 || RPD: 2	110091-22	97%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-41	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Date analysed	-	110091-41	23/05/2014 || 23/05/2014	110091-22	23/05/2014
HCB	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	110091-41	<0.1 || <0.1	110091-22	83%
gamma-BHC	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	110091-41	<0.1 || <0.1	110091-22	72%
Heptachlor	mg/kg	110091-41	<0.1 || <0.1	110091-22	91%
delta-BHC	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	110091-41	<0.1 || <0.1	110091-22	96%
Heptachlor Epoxide	mg/kg	110091-41	<0.1 || <0.1	110091-22	119%
gamma-Chlordane	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	110091-41	<0.1 || <0.1	110091-22	97%
Dieldrin	mg/kg	110091-41	<0.1 || <0.1	110091-22	90%
Endrin	mg/kg	110091-41	<0.1 || <0.1	110091-22	90%
pp-DDD	mg/kg	110091-41	<0.1 || <0.1	110091-22	104%
Endosulfan II	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	110091-41	<0.1 || <0.1	110091-22	96%
Methoxychlor	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	110091-41	86 || 87 || RPD: 1	110091-22	133%

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QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-41	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Date analysed	-	110091-41	23/05/2014 || 23/05/2014	110091-22	23/05/2014
Diazinon	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	110091-41	<0.1 || <0.1	110091-22	92%
Fenitrothion	mg/kg	110091-41	<0.1 || <0.1	110091-22	76%
Bromophos-ethyl	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	110091-41	<0.1 || <0.1	110091-22	85%
Surrogate TCMX	%	110091-41	86 || 87 || RPD: 1	110091-22	132%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-31	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Date analysed	-	110091-31	23/05/2014 || 23/05/2014	110091-22	23/05/2014
Arochlor 1016	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	110091-31	<0.1 || <0.1	110091-22	111%
Arochlor 1260	mg/kg	110091-31	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	110091-31	85 || 85 || RPD: 0	110091-22	75%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	110091-41	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Date analysed	-	110091-41	21/05/2014 || 21/05/2014	110091-2	21/05/2014
Arsenic	mg/kg	110091-41	8 || 8 || RPD: 0	110091-2	77%
Cadmium	mg/kg	110091-41	<0.4 || <0.4	110091-2	81%
Chromium	mg/kg	110091-41	10 || 10 || RPD: 0	110091-2	82%
Copper	mg/kg	110091-41	12 || 12 || RPD: 0	110091-2	89%
Lead	mg/kg	110091-41	18 || 18 || RPD: 0	110091-2	77%
Mercury	mg/kg	110091-41	<0.1 || <0.1	110091-2	80%
Nickel	mg/kg	110091-41	26 || 24 || RPD: 8	110091-2	76%
Zinc	mg/kg	110091-41	45 || 45 || RPD: 0	110091-2	76%

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QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-51	21/05/2014 || 21/05/2014	110091-42	21/05/2014
Date analysed	-	110091-51	22/05/2014 || 22/05/2014	110091-42	22/05/2014
$TRHC_6$ - C_9	mg/kg	110091-51	<25 || <25	110091-42	101%
$TRHC_6$ - C_{10}	mg/kg	110091-51	<25 || <25	110091-42	101%
Benzene	mg/kg	110091-51	<0.2 || <0.2	110091-42	99%
Toluene	mg/kg	110091-51	<0.5 || <0.5	110091-42	103%
Ethylbenzene	mg/kg	110091-51	<1 || <1	110091-42	102%
m+p-xylene	mg/kg	110091-51	<2 || <2	110091-42	101%
o-Xylene	mg/kg	110091-51	<1 || <1	110091-42	104%
naphthalene	mg/kg	110091-51	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	110091-51	102 || 97 || RPD: 5	110091-42	101%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-51	21/05/2014 || 21/05/2014	110091-42	21/05/2014
Date analysed	-	110091-51	22/05/2014 || 22/05/2014	110091-42	21/05/2014
$TRHC_{10}$ - C_{14}	mg/kg	110091-51	<50 || <50	110091-42	109%
$TRHC_{15}$ - C_{28}	mg/kg	110091-51	<100 || <100	110091-42	131%
$TRHC_{29}$ - C_{36}	mg/kg	110091-51	<100 || <100	110091-42	#
$TRH>C_{10}$-C_{16}	mg/kg	110091-51	<50 || <50	110091-42	109%
$TRH>C_{16}$-C_{34}	mg/kg	110091-51	<100 || <100	110091-42	131%
$TRH>C_{34}$-C_{40}	mg/kg	110091-51	<100 || <100	110091-42	#
Surrogate o-Terphenyl	%	110091-51	86 || 87 || RPD: 1	110091-42	80%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-51	22/05/2014 || 22/05/2014	110091-42	21/05/2014
Date analysed	-	110091-51	22/05/2014 || 22/05/2014	110091-42	22/05/2014
Naphthalene	mg/kg	110091-51	<0.1 || <0.1	110091-42	99%
Acenaphthylene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	110091-51	<0.1 || <0.1	110091-42	99%
Phenanthrene	mg/kg	110091-51	<0.1 || <0.1	110091-42	97%
Anthracene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	110091-51	<0.1 || <0.1	110091-42	96%
Pyrene	mg/kg	110091-51	<0.1 || <0.1	110091-42	98%
Benzo(a)anthracene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	110091-51	<0.1 || <0.1	110091-42	93%
Benzo(b+k)fluoranthene	mg/kg	110091-51	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	110091-51	<0.05 || <0.05	110091-42	101%
Indeno(1,2,3-c,d)pyrene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]

Client Reference: DLH1151 Bylong

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	110091-51	108 || 110 || RPD: 2	110091-42	104%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-51	21/05/2014 || 21/05/2014	110091-42	21/05/2014
Date analysed	-	110091-51	23/05/2014 || 23/05/2014	110091-42	23/05/2014
HCB	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	110091-51	<0.1 || <0.1	110091-42	86%
gamma-BHC	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	110091-51	<0.1 || <0.1	110091-42	74%
Heptachlor	mg/kg	110091-51	<0.1 || <0.1	110091-42	92%
delta-BHC	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	110091-51	<0.1 || <0.1	110091-42	100%
Heptachlor Epoxide	mg/kg	110091-51	<0.1 || <0.1	110091-42	124%
gamma-Chlordane	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	110091-51	<0.1 || <0.1	110091-42	102%
Dieldrin	mg/kg	110091-51	<0.1 || <0.1	110091-42	96%
Endrin	mg/kg	110091-51	<0.1 || <0.1	110091-42	97%
pp-DDD	mg/kg	110091-51	<0.1 || <0.1	110091-42	111%
Endosulfan II	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	110091-51	<0.1 || <0.1	110091-42	101%
Methoxychlor	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	110091-51	90 || 96 || RPD: 6	110091-42	85%

Client Reference: DLH1151 Bylong

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-51	21/05/2014 || 21/05/2014	110091-42	21/05/2014
Date analysed	-	110091-51	23/05/2014 || 23/05/2014	110091-42	23/05/2014
Diazinon	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	110091-51	<0.1 || <0.1	110091-42	95%
Fenitrothion	mg/kg	110091-51	<0.1 || <0.1	110091-42	78%
Bromophos-ethyl	mg/kg	110091-51	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	110091-51	<0.1 || <0.1	110091-42	89%
Surrogate TCMX	%	110091-51	90 || 96 || RPD: 6	110091-42	87%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	110091-41	21/05/2014 || 21/05/2014	110091-42	21/05/2014
Date analysed	-	110091-41	23/05/2014 || 23/05/2014	110091-42	23/05/2014
Arochlor 1016	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	110091-41	<0.1 || <0.1	110091-42	103%
Arochlor 1260	mg/kg	110091-41	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	110091-41	86 || 87 || RPD: 1	110091-42	97%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	110091-51	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Date analysed	-	110091-51	21/05/2014 || 21/05/2014	110091-22	21/05/2014
Arsenic	mg/kg	110091-51	5 || 5 || RPD: 0	110091-22	81%
Cadmium	mg/kg	110091-51	<0.4 || <0.4	110091-22	84%
Chromium	mg/kg	110091-51	16 || 17 || RPD: 6	110091-22	84%
Copper	mg/kg	110091-51	5 || 5 || RPD: 0	110091-22	90%
Lead	mg/kg	110091-51	7 || 8 || RPD: 13	110091-22	89%
Mercury	mg/kg	110091-51	<0.1 || <0.1	110091-22	90%
Nickel	mg/kg	110091-51	37 || 39 || RPD: 5	110091-22	81%
Zinc	mg/kg	110091-51	25 || 26 || RPD: 4	110091-22	#

Client Reference: DLH1151 Bylong

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	110091-51	21/05/2014 || 21/05/2014
Date analysed	-	110091-51	23/05/2014 || 23/05/2014
Arochlor 1016	mg/kg	110091-51	<0.1 || <0.1
Arochlor 1221	mg/kg	110091-51	<0.1 || <0.1
Arochlor 1232	mg/kg	110091-51	<0.1 || <0.1
Arochlor 1242	mg/kg	110091-51	<0.1 || <0.1
Arochlor 1248	mg/kg	110091-51	<0.1 || <0.1
Arochlor 1254	mg/kg	110091-51	<0.1 || <0.1
Arochlor 1260	mg/kg	110091-51	<0.1 || <0.1
Surrogate TCLMX	%	110091-51	90 || 96 || RPD: 6

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	110091-42	21/05/2014
Date analysed	-	[NT]	[NT]	110091-42	21/05/2014
Arsenic	mg/kg	[NT]	[NT]	110091-42	87%
Cadmium	mg/kg	[NT]	[NT]	110091-42	90%
Chromium	mg/kg	[NT]	[NT]	110091-42	93%
Copper	mg/kg	[NT]	[NT]	110091-42	97%
Lead	mg/kg	[NT]	[NT]	110091-42	88%
Mercury	mg/kg	[NT]	[NT]	110091-42	87%
Nickel	mg/kg	[NT]	[NT]	110091-42	96%
Zinc	mg/kg	[NT]	[NT]	110091-42	90%

Client Reference: **DLH1151 Bylong**

Report Comments:

TRHs in Soil (semi-vol):
Percent recovery is not possible to report due to interference from analytes (other than those being tested) in the sample/s.

METALS_S: # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

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

Client Reference: DLH1151 Bylong

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 batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

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

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

CHAIN OF CUSTODY - Client

ENVIROLAB SERVICES

Client:	DLA Environmental	**Client Project Name and Number:** DLH1151 Bylong	**Envirolab Services** 12 Ashley St, Chatswood, NSW, 2067
Project Mgr:	Stephen Challinor		
Sampler:	Mark Disher/Stephen Challinor	**PO No.:**	**Phone: 02 9910 6200**
Address:	42b Church St Maitland 2320	**Envirolab Services Quote No. :**	**Fax: 02 9910 6201**
		Date results required: standard	**E-mail: ahie@envirolabservices.com.au**
Email:	hunter@dlaenvironmental.com.au	**Or choose: standard / 1 day / 2 day / 3 day**	**Contact: Aileen Hie**
Phone:	(02) 49 33 0001 **Fax:**	*Note: Inform lab in advance if urgent turnaround is required - surcharge applies*	

Sample information				Tests Required														Comments
Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	Combo 6														Provide as much information about the sample as you can
1	S1	14/05/14	Soil	X														
2	S1a	14/05/14	Soil	X														
3	S2	14/05/14	Soil	X														
4	S3	14/05/14	Soil	X														
5	S4	14/05/14	Soil	X														
6	S5	14/05/14	Soil	X														
7	S6	14/05/14	Soil	X														
8	S7	14/05/14	Soil	X														
9	S8	14/05/14	Soil	X														
10	S9	14/05/14	Soil	X														
11	S10	14/05/14	Soil	X														
12	S11	14/05/14	Soil	X														
13	S12	14/05/14	Soil	X														
14	S13	14/05/14	Soil	X														
15	S13a	14/05/14	Soil	X														
16	S14	14/05/14	Soil	X														
17	S15	14/05/14	Soil	X														
18	S16	14/05/14	Soil	X														
19	S17	14/05/14	Soil	X														
20	S18	14/05/14	Soil	X														
21	S19	14/05/14	Soil	X														
22	S20	14/05/14	Soil	X														

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 11009 1
Date Received: 2015/14
Time Received: 9:00
Received by: PT
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Relinquished by (company):	DLA	**Received by (company):** ELS	**Samples Received: Cool or Ambient (circle one)**
Print Name:	Mark Disher	**Print Name:** PRAT	**Temperature Recieved at:** (if applicable)
Date & Time:	19/05/2014 11:43 AM	**Date & Time:** 20/5/14 9:00	**Transported by: Hand delivered / courier**
Signature:	Mark Disher	**Signature:** PT	**Page No:**

CHAIN OF CUSTODY - Client

ENVIROLAB SERVICES

Client:	DLA Environmental	**Client Project Name and Number:** DLH1151 Bylong	**Envirolab Services** 12 Ashley St, Chatswood, NSW, 2067
Project Mgr:	Stephen Challinor		
Sampler:	Mark Disher/Stephen Challinor	**PO No.:**	
Address:	42b Church St Maitland 2320	**Envirolab Services Quote No. :**	**Phone:** 02 9910 6200 **Fax:** 02 9910 6201
Email:	hunter@dlaenvironmental.com.au	**Date results required:** standard	**E-mail:** ahie@envirolabservices.com.au
Phone:	(02) 49 33 0001 **Fax:**	**Or choose:** standard / 1 day / 2 day / 3 day *surcharge applies*	**Contact:** Aileen Hie

Sample information				Tests Required															Comments
Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	Combo 6															Provide as much information about the sample as you can
23	S21	14/05/14	soil	x															
24	S22	14/05/14	soil	x															
25	S23	14/05/14	soil	x															
26	S23a	14/05/14	soil	x															
27	S24	14/05/14	soil	x															
28	S25	14/05/14	soil	x															
29	S26	14/05/14	soil	x															
30	S27	14/05/14	soil	x															
31	S28	14/05/14	soil	x															
32	S29	14/05/14	soil	x															
33	S30	15/05/14	soil	x															
34	S31	15/05/14	soil	x															
35	S32	15/05/14	soil	x															
36	S33	15/05/14	soil	x															
37	S33a	15/05/14	soil	x															
38	S34	15/05/14	soil	x															
39	S35	15/05/14	soil	x															
40	S36	15/05/14	soil	x															
41	S37	15/05/14	soil	x															110091
42	S38	15/05/14	soil	x															
43	S39	15/05/14	soil	x															
44	S40	15/05/14	soil	x															

Relinquished by (company): DLA	**Received by (company):** ELS	**Samples Received:** Cool or Ambient (circle one)
Print Name: Mark Disher	**Print Name:** PT	**Temperature Recieved at:** (if applicable)
Date & Time: 19/05/2014 11:43 AM	**Date & Time:** 2015/14 9:00	**Transported by:** Hand delivered / courier
Signature: Mark Disher	**Signature:** PT	**Page No:**

CHAIN OF CUSTODY - Client

ENVIROLAB SERVICES

Client:	DLA Environmental	**Client Project Name and Number:** DLH1151 Bylong	**Envirolab Services** 12 Ashley St, Chatswood, NSW, 2067
Project Mgr:	Stephen Challinor	**PO No.:**	
Sampler:	Mark Disher/Stephen Challinor	**Envirolab Services Quote No. :**	**Phone: 02 9910 6200**
Address:	42b Church St Maitland 2320	**Date results required:** standard **Or choose: standard / 1 day / 2 day / 3 day** *surcharge applies*	**Fax: 02 9910 6201** **E-mail: ahie@envirolabservices.com.au** **Contact: Aileen Hie**
Email:	hunter@dlaenvironmental.com.au		
Phone:	(02) 49 33 0001 **Fax:**		

Sample information				Tests Required																Comments
Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	Combo 6																Provide as much information about the sample as you can
45	S41	15/05/14	soil	x																
46	S42	15/05/14	soil	x																
47	S43	15/05/14	soil	x																
48	S44	15/05/14	soil	x																
49	S45	15/05/14	soil	x																
50	S46	15/05/14	soil	x																
51	S47	15/05/14	soil	x																
52	S48	15/05/14	soil	x																
53	S49	15/05/14	soil	x																
54	S49a	15/05/14	soil	x																
55	S50	15/05/14	soil	x																
56	S50a	15/05/14	soil	x																
																				110091

Relinquished by (company):	DLA	**Received by (company):** EL
Print Name:	Mark Disher	**Print Name:** PT
Date & Time:	19/05/2014 11:43 AM	**Date & Time:** 20/5/14 9:00
Signature:	Mark Disher	**Signature:** PT

Samples Received: Cool or Ambient (circle one)
Temperature Recieved at: (if applicable)
Transported by: Hand delivered / courier
Page No:

Appendix B

Quality Assurance and Quality Control

B1 – Field Quality Assurance

Decontamination

DLA maintains consistent sampling procedures, decontamination of equipment involved the following procedures: machinery

- 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.

A rinsate sample can be obtained to ensure decontamination procedures are effective in preventing cross contamination, which can result in false positive samples being generated and 'worst case' conclusions. Considering false negatives are of far greater concern on the project and that a significant number of sampling events occurred, collection and analysis of rinsate water would have added little to benefit the validation process.

Decontamination procedures are considered appropriate during sampling and no cross contamination can be inferred.

Trip Blank

The purpose of the trip blank is to identify whether cross-contamination is occurring during the sample collection and transport process. The blank sample is not separated from the sample collection and transportation process. A Trip Blank was not collected during the validation, as no volatile contaminates of concern were observed within the assessment area.

Trip Spike

Trip Spike samples are obtained from the laboratory prior to conducting field sampling where volatile substances are suspected. A trip spike represents a volatile "leakage" measure of the sample during handling and transportation of the sample batch. As with the Trip Blank, a Trip Spike was not collected during the validation, due to the lack of volatile contaminates of concern within the assessment area.

Field Duplicates

Field duplicate Soil samples were prepared in the field through the following process:

- A larger than normal quantity of soil is recovered from the sample location selected for duplication.
- The sample is placed in a decontaminated stainless bowl and mixed as thoroughly as practicable before being divided into equal parts.
- Two Portions of the sub-sample are immediately transferred, one for an intra-laboratory duplicate and another for the sample using the decontaminated trowel.
- Samples are placed into a labelled, laboratory supplied 250ml glass jar and sealed with an airtight, Teflon screw top lid. The fully filled jars are labelled as the sample and duplicate and immediately placed in a chilled esky.

Field duplicates are a quality assurance mechanism that provides an indication of the precision for the whole investigation process, that is; the sampling process, sample preparation and analysis. Due to volatile losses during duplicate preparation, these samples are used for comparative purposes only and are not considered in the overall assessment of volatile compounds.

The duplicate sample frequency was computed using the total number of samples analysed as part of this assessment. The duplicate sample frequencies are shown below:

Investigative Samples	50 samples	6 intra - laboratory duplicates	12%
	50 samples	4 inter - laboratory duplicates	8%

Comparisons were made of the laboratory test results for the duplicate samples with the original samples and the Relative Percentage Difference (RPD) calculated as difference / average in order to assess the accuracy of the sampling and laboratory test procedures.

The comparisons between the duplicates and original samples indicate acceptable RPDs when they comply with criteria which are commonly set at:

- less than 30% for inorganics and 50% for organics;
- less than five (5) times the laboratory limit of reporting (LOR);
- less than 5% of the relevant health investigation level (HIL) concentration.

Comparisons of the laboratory chemical test results were made between the duplicate samples and the original samples. The differences were calculated as %RPD in order to assess the precision of sampling procedures. The DQO for comparisons between the duplicates and original samples are commonly set at less than 30% for inorganics and 50% for organics.

A total of seven (7) RDP exceedances were recorded from the Heavy Metals data analysed. Due to the low concentrations of the detected concentrations, analytes did not exceed the DQO by more than 5%, the measured concentrations were less than five (5) times the PQL and the differences in measured concentrations were less than 5% of the NEPM 2013 Land Use Criteria. The recorded RPD values are not considered to be statistically significant and do not adversely affect the assessment data.

Considering the low concentrations of the contamination recorded across the Site, the differences noted in the duplicate samples is not significant enough to diminish the confidence that contaminant concentrations comply with the SAC. It is the opinion of DLA that the observed level of heterogeneity is acceptable and presents negligible risk to human health or the environment when considered in the context of the overall assessment data.

Refer to **Table B1** for calculated inter and intra laboratory duplicate RPD calculations.

DLA environmental

Table B1 – Intra and Inter Laboratory Duplicate RPD Calculations.

Field Duplicate Samples				100	20	100	6,000	300	40	400	7,400
Sample ID	Depth	Date	Chemical Report	Heavy Metals							
				As	Cd	Cr VI	Cu	Pb	Hg	Ni	Zn
S1	surface	14/05/2014	EnvLab110091	7	0.2	12	11	16	0.05	32	50
S1a	surface	14/05/2014	EnvLab110091	7	0.2	12	11	15	0.05	34	50
RPD				0%	0%	0%	0%	6%	0%	6%	0%
S1	surface	14/05/2014	EnvLab110091	7	0.2	12	11	16	0.05	32	50
S1b	surface	14/05/2014	EnvLab110091	7	0.1	10	10	16	0.02	31	48
RPD				0%	**67%**	18%	10%	0%	**86%**	3%	4%
S13	surface	14/05/2014	EnvLab110091	7	0.2	20	10	11	0.1	35	43
S13a	surface	14/05/2014	EnvLab110091	8	0.4	24	10	13	0.2	39	43
RPD				13%	**67%**	18%	0%	17%	**67%**	11%	0%
S13	surface	14/05/2014	EnvLab110091	7	0.2	20	10	11	0.1	35	43
S13b	surface	14/05/2014	EnvLab110091	9	0.3	22	11	17	0.03	40	53
RPD				25%	40%	10%	10%	43%	**108%**	13%	21%
S23	surface	14/05/2014	EnvLab110091	2	0.2	29	5	8	0.05	33	23
S23a	surface	14/05/2014	EnvLab110091	2	0.2	28	5	7	0.05	32	22
RPD				0%	0%	4%	0%	13%	0%	3%	4%
S23	surface	14/05/2014	EnvLab110091	2	0.2	29	5	8	0.05	33	23
S23b	surface	14/05/2014	EnvLab110091	3	0.2	27	5.3	9	0.01	42	25
RPD				40%	0%	7%	6%	12%	**125%**	24%	8%
S33	surface	15/05/2014	EnvLab110091	7	0.2	11	9	14	0.05	24	34
S33a	surface	15/05/2014	EnvLab110091	7	0.2	10	7	13	0.05	19	30
RPD				0%	0%	10%	25%	7%	0%	23%	13%
S33	surface	15/05/2014	EnvLab110091	7	0.2	11	9	14	0.05	24	34
S33b	surface	15/05/2014	EnvLab110091	7	0.2	10	7.9	16	0.01	23	34
RPD				0%	0%	10%	13%	13%	**133%**	4%	0%
S49	surface	15/05/2014	EnvLab110091	2	0.2	23	5	7	0.05	10	11
S49a	surface	15/05/2014	EnvLab110091	2	0.2	30	5	7	0.05	10	10
RPD				0%	0%	26%	0%	0%	0%	0%	10%
S50	surface	15/05/2014	EnvLab110091	2	0.2	20	5	9	0.05	7	23
S50a	surface	15/05/2014	EnvLab110091	2	0.2	17	5	10	0.05	8	22
RPD				0%	0%	16%	0%	11%	0%	13%	4%
DQO				30%	30%	30%	30%	30%	30%	30%	30%
LOR EnvLab/SGS				4/3	0.4/0.3	1/0.3	1/0.3	1/1	0.1/0.05	1/0.5	1/0.5
-- Not Tested; nd: Not Detected above Laboratory LOR											

B2 – Laboratory Quality Assurance Plan

Soil samples were analysed for contaminant indicators that may be associated with past and present land uses. Chemical analysed of soils was conducted by Envirolab Services and SGS Australia for the following parameters:

Inorganic

Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Zinc (Zn), Cyanide (CN) and Fluoride (F^-).

Organic

- Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAH);

The Laboratory Analytical Results for soils are summarised in **Appendix A** with NATA certified results provided in **Appendix B**

Laboratory Methods and Detection Limits

Typical methods used for analysis and their respective level of reporting for Envirolab and SGS laboratories, are outlined below:

Table B2 - Method of Soil Analysis – Envirolab

Analyte	Method	Level of Reporting Soil mg/kg	
PAH	USEPA SW-846 Method 8270,	**B(a)P** **All other Analytes**	0.05 0.1
Metals	USEPA 200.7 USEPA 7471A	**Hg** **As** **Cd-Cr-Cu-Ni-Pb-Zn**	0.10 4.0 1
Pesticides	USEPA SW-846 Method 8081 USEPA SW-846 Method 8140 USEPA SW-846 Method 8080 USEPA SW-846 Method 8870	**OCP** **OPP**	0.10 0.10
PCB	USEPA SW-846 Method 8080 USEPA SW-846 Method 8081	**PCB**	0.10
BTEX	USEPA SW-846 Method 8260	**Benzene** **Toluene** **Ethylbenzene** **Total Xylene**	1.0 1.0 1.0 3.0
TPH	USEPA SW-846 Method 8260 USEPA SW-846 Method 8000	**C6-C9** **C10-C14** **C15-C28** **C29-C36**	25 50 100 100

Table B3 - Method of Soil Analysis – SGS

Analyte	Method	Level of Reporting Soil mg/kg	
Polycyclic Aromatic Hydrocarbons	US EPA SW 846 Method 8270C SGS Method ID SEO-030 - In house method.	**Ind. Analyte** **Benzo[b+k] fluoanthene** **Benzo(a)Pyrene**	**0.1** **0.5** **0.05**
Metals	SGS Method ID SEM-005 - In house method. ICP-OES US EPA SW 846 Method 6010B SGS Method ID SEM-010 - In house method.	**Hg** **Ni** **Cd-Cr** **Cu-Zn** **Pb** **As**	**0.05** **0.5** **0.3** **0.5** **2** **3**
Pesticides	US EPA SW 846 Method 8081B SGS Method ID SEO-005 - In house method.	**OCP** **OPP**	**0.1** **0.1**
PCB	US EPA SW 846 Method 8082A SGS Method ID SEO-005 - In house method.	**PCB**	**0.1**
BTEX	US EPA SW 846 Method 8260 SGS Method ID SEO-017 - In house method.	**Benzene** **Toluene** **Ethylbenzene** **Total Xylene**	**0.5** **0.5** **0.5** **1.5**
TPH	US EPA SW 846 Method 8260 SGS Method ID SEO-017 - In house method. US EPA SW 846 Methods 8015B SGS Method ID SEO-020 - In house method.	**C_6-C_9** **C_{10}-C_{14}** **C_{15}-C_{28}** **C_{29}-C_{36}**	**20** **20** **50** **50**

B2.1 Laboratory Performance Data

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 OEH and outlined in the NEPM, 2013.

Descriptions are provided of the specific mechanisms used in the assessment of accuracy, precision and useability of analytical data within the project. Laboratory QA/QC results are summarised below, and included in Appendix B- Analytical Data with Chain of Custody.

Blanks

Blanks were used for the identification of false positive data. No results on blank samples were above the level of reporting for any analyte therefore no cross contamination of samples is said to have occurred as a result of laboratory techniques.

Matrix Spikes

Matrix Spikes are derived from extracting a portion of sample and spiking it with a known quantity of analyte. Accuracy of extraction methodology can be determined based on the percentage recovery of the analyte. The Laboratory reported that all analysis complied with the acceptance criteria of 70 – 130%.

Laboratory Control Samples

Control Sample Spikes were utilised to further determine the accuracy of extraction and recovery methods. The Laboratory Control Sample is spiked with a known concentration of analyte. Accuracy was then assessed by calculation of the percent recovery (%R). The percent recovery for control analysis were generally within the acceptance criteria of 70-130%. Acceptable recovery results were obtained from Laboratory Control Samples, indicating accurate reporting of analysed samples was undertaken.

Duplicates

Laboratory Duplicates are extracted at a frequency of 10% of samples and tested to ensure the results when compared to the actual sample meet the precision requirements of QA/QC. The %RPD's for comparisons between the duplicates and original samples are dependent on the concentration of analyte in the sample. When the concentration is greater than ten (5) times the EQL, acceptance criteria are commonly set at less than 30% for inorganics and 50% for organics.

Surrogates

To assess the performance of individual organic analysis the laboratory used surrogates. Percent recoveries were calculated for each surrogate providing an indication of analytical accuracy.

Surrogate recoveries for soil samples were all within recommended control limits, indicating that there was an acceptable degree of accuracy in analysing for organic compounds.

Appendix C

Historical Title Searches

~ Search ~

re Lot 2 in DP 607945

Title Tree

2/607945

↓

V. 14116 F. 14

↓

V. 6448 F. 70

↓

V. 3729 F. 120 & 121

↙ ↘

V. 1538 F. 211 V. 2725 F. 52

↓

V. 338 F. 127

8/5/14

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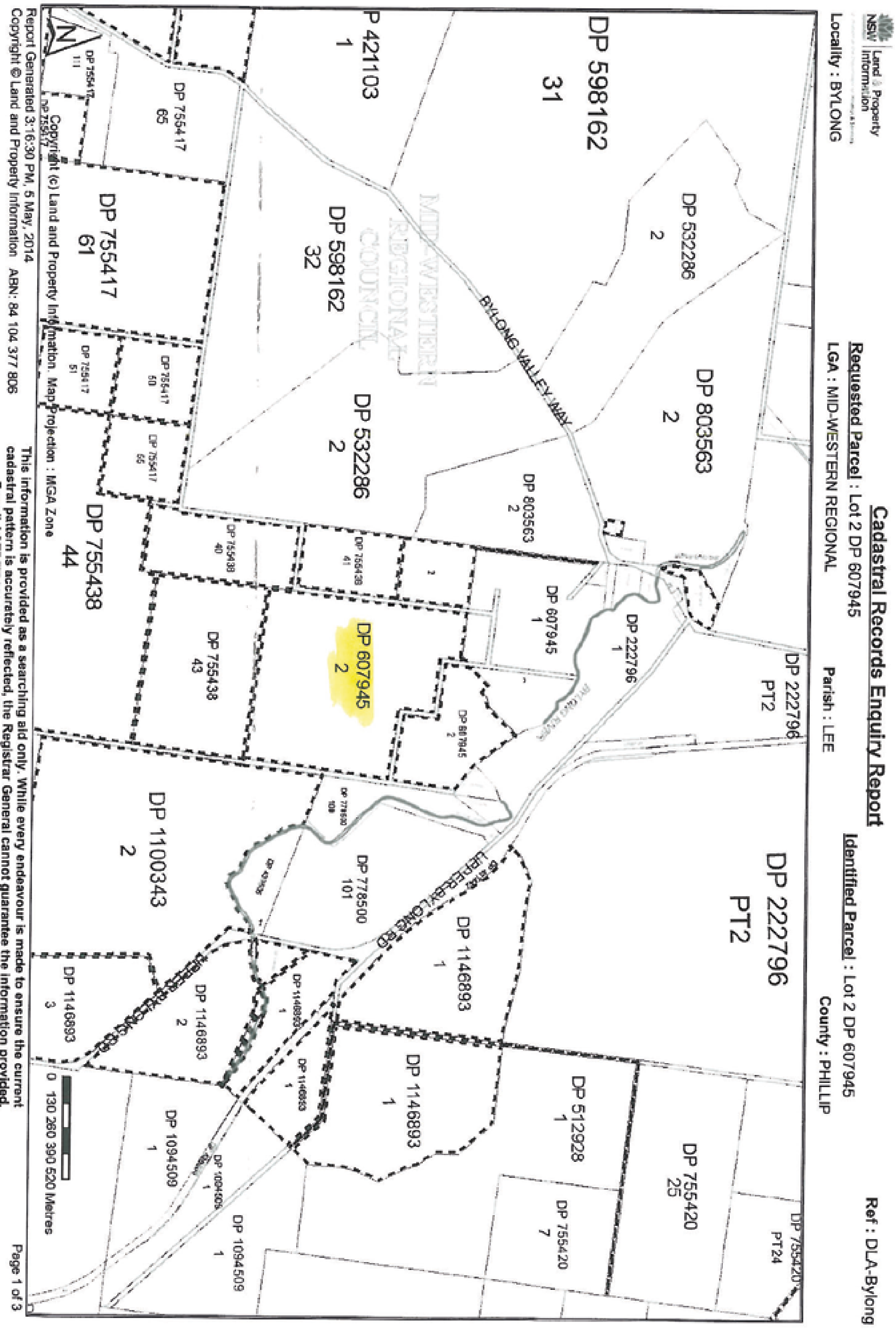
ESTABLISHED 1949


Land & Property Information
Cadastral Records Enquiry Report
Requested Parcel : Lot 2 DP 607945
Identified Parcel : Lot 2 DP 607945
Ref : DLA-Bylong
Locality : BYLONG
LGA : MID-WESTERN REGIONAL
Parish : LEE
County : PHILLIP
MID-WESTERN REGIONAL COUNCIL
BYLONG VALLEY WAY
UPPER BYLONG RD
DP 598162 31
DP 421103 1
DP 532286 2
DP 803563 2
DP 598162 32
DP 755417 61
DP 755417 65
DP 755438 44
DP 755438 43
DP 607945 2
DP 607945 1
DP 222796 1
DP 222796 PT2
DP 1100343 2
DP 778500 101
DP 1146893 1
DP 1146893 2
DP 1146893 3
DP 512928 1
DP 755420 25
DP 755420 7
DP 1094509 1
0 130 260 390 520 Metres
Report Generated 3:16:30 PM, 6 May, 2014
Copyright © Land and Property Information ABN: 84 104 377 806
Copyright (c) Land and Property Information. Map Projection : MGA Zone
This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.
Page 1 of 3

~ Search ~

re Lot 2 in DP 607945

Schedule of Registered Proprietors

C.G. V. 338 F127,	William Henry Tindale
Xfr 387696	of Bylong
(V. 1538 F.211)	Grazier
1/7/1904	
TA. A81390	Sydney Wallace Tindale
Reg 31/3/1914	of near Muswellbrook, Grazier &
(V. 338 F.127,	Percy Wilson Tindale
(V1538 F.211)	of near Rylstone, Grazier
Xfr A100010	Cecil Henry Tindale
Reg 18/5/14	of Muswellbrook Auctioneer &
(V 338 F.127,	Percy Wilson Tindale
(V1538 F.211)	
Xfr B191060	Herbert Stanley Thompson,
Reg 11/5/25	of Rylstone Grazier,
(V2725 F.52	Percival Charles Bascoe
(V.1538 F.211)	of Kellara, Merchant.
Xfr D 447097	As for Search
Xfr F569825	Lot 2 DP 1100343 & 8/5/14
(V3729 F.120-1)	Lot 2 DP 1146893

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~ Search ~

re Lot 2 in DP 607945

Schedule of Regd Proprietors Conta

Lfr F606347	
Lfr K531671	As for Search Lot 2 DP 1100343
Lfr L177906	
Lfr N726706	
(V6446 F.70)	
Lfr X382050	James Richard Inglis &
Reg 23/2/88	John Alan Inglis
(V.14116 F.14)	
Lfr 3802684	As for Search Lot 2 DP 1100343
Lfr 9737337	
CIV AI 118496	
(2/607945)	

8/5/14

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 2/607945

SEARCH DATE	TIME	EDITION NO	DATE
8/5/2014	10:42 AM	9	24/1/2014

LAND

LOT 2 IN DEPOSITED PLAN 607945
AT BYLONG
LOCAL GOVERNMENT AREA MID-WESTERN REGIONAL
PARISH OF LEE COUNTY OF PHILLIP
TITLE DIAGRAM DP607945

FIRST SCHEDULE

ACN 000 690 648 PTY LTD (CN AI118496)

SECOND SCHEDULE (5 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 LAND EXCLUDES THE ROAD(S) SHOWN IN DP607945
3 DP1137421 RIGHT OF CARRIAGEWAY OVER EXISTING TRACK IN USE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1137421
4 DP1147478 EASEMENT FOR OVERHEAD POWER LINE(S) 9 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN DP1147478
5 AI151384 RIGHT OF CARRIAGEWAY OVER TRACK IN USE AFFECTING THE PART DESIGNATED (X) IN DP1137421

NOTATIONS

NOTE: THIS FOLIO MAY BE ASSOCIATED WITH A CROWN TENURE WHICH IS SUBJECT TO PAYMENT OF AN ANNUAL RENT. FOR FURTHER DETAILS CONTACT THE LOCAL CROWN LANDS OFFICE AT ORANGE
UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

DLA-Bylong PRINTED ON 8/5/2014

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
8/5/2014 10:43AM

FOLIO: 2/607945

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 14116 FOL 14

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
5/9/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
24/2/1998	3802684	TRANSFER	
24/2/1998	3802685	MORTGAGE	EDITION 1
4/3/1998	3824870	MORTGAGE	EDITION 2
7/3/2002	8379935	DISCHARGE OF MORTGAGE	EDITION 3
23/1/2003	9298315	DISCHARGE OF MORTGAGE	EDITION 4
8/7/2003	9737337	TRANSFER	EDITION 5
9/11/2004	AB69236	DEPARTMENTAL DEALING	
22/12/2006	AC827839	DEPARTMENTAL DEALING	
17/4/2009	DP1137421	DEPOSITED PLAN	EDITION 6
8/4/2010	DP1147478	DEPOSITED PLAN	EDITION 7
11/1/2013	AH482815	DEPARTMENTAL DEALING	
4/11/2013	AI118496	CHANGE OF NAME	EDITION 8
8/11/2013	AI147134	CAVEAT	
24/1/2014	AI151384	TRANSFER GRANTING EASEMENT	EDITION 9

*** END OF SEARCH ***

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1411E014

FICATE OF TITLE

NEW SOUTH WALES

AL PROPERTY ACT, 1900

Vol. 14116 Fol. 14

Crown Grants Vol. 338 Fol.127
Vol.1538 Fol.211

Prior Title Vol.6448 Fol. 70

EDITION ISSUED

2 5 1980

14116 Fol. 14

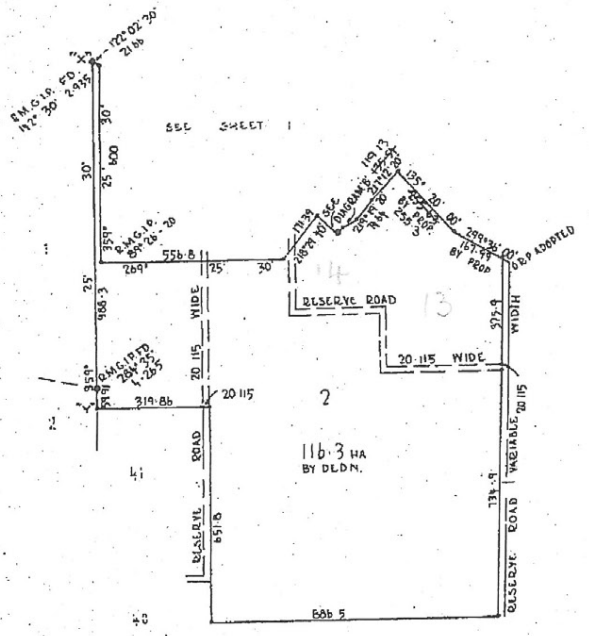
(Page 1) Vol.

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

Registrar-General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 607945 at Bylong in the Shire of Rylstone Parish of Lee and County of Phillip. EXCEPTING THEREOUT the roads shown in the plan hereon and the mineral reserved by the Crown Grants.

FIRST SCHEDULE

~~KELSTON INVESTMENTS PTY. LTD.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
~~2. P519157 Mortgage to Rural Bank of New South Wales~~ V266372
~~3. Q930233 Mortgage to The Commercial Bank of Australia Limited~~ V266373

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

RG 2/64

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

V167972 Pr
V266371 Wr
—2 DM
—3 DM
—4 M
X382049 D/m
—50 T /R.

Vol. 14116 Fol. 14

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General
James Richard Inglis and John Alan Inglis as tenants in common in equal shares by Transfer X382050 Registered 23.2.1988				[seal]

CANCELLED

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
~~V167972 Caveat by Commonwealth Trading Bank of Australia. Registered 12-6-1984~~				[signature]	Withdrawn	V266371
~~V266374 Mortgage to Commonwealth Trading Bank of Australia. Registered 8-8-1984~~				[signature]	Discharged	X382049

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

~ Search ~

re Lot 99 in DP 704724

Title Tree

99/704724

↓

Crown Land

15/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

~ Search ~

re Lot 99 in DP 704724

Schedule of Registered Proprietors

99/704724	Edward Leslie Burke
vested	Allan Walter Burke &
16/7/1984	Kathleen Mary Burke
FI 362140	all of Bylong, Graziers
Lpr V466002	William John Hocking
Reg 3/12/84	of Kegaroo, Jeweller &
(99/704724)	Robert Leslie Hocking
	of Caringbah Jeweller
Lpr 71859	Robert Leslie Hocking
Reg 24/11/88	
(99/704724)	
Lpr 683073	Witane Pty. Ltd.
Reg 14/11/95	
(99/704724)	
Lpr 9737294	Wallings Pastoral Co. Pty Limited
Reg 30/6/2003	NOW
(99/704724)	ACN 000 690 648 Pty Ltd
	vide CN AI 118496 Reg 4/11/2013
	Ag 15/5/14

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 99/704724

SEARCH DATE	TIME	EDITION NO	DATE
15/5/2014	5:48 PM	10	4/11/2013

LAND

LOT 99 IN DEPOSITED PLAN 704724
AT RYLSTONE
LOCAL GOVERNMENT AREA MID-WESTERN REGIONAL
PARISH OF LEE COUNTY OF PHILLIP
TITLE DIAGRAM DP704724

FIRST SCHEDULE

ACN 000 690 648 PTY LTD (CN AI118496)

SECOND SCHEDULE (1 NOTIFICATION)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE MEMORANDUM S700000A

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

DLA-Bylong PRINTED ON 15/5/2014

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
15/5/2014 5:49PM

FOLIO: 99/704724

First Title(s): 99/704724
Prior Title(s): CROWN LAND

Recorded	Number	Type of Instrument	C.T. Issue
11/7/1984	DP704724	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
16/7/1984	FI302140	FOLIO INSTRUCTION	FOLIO CREATED EDITION 1
3/12/1984	V466001	DISCHARGE OF MORTGAGE	
3/12/1984	V466002	TRANSFER	
3/12/1984	V466004	MORTGAGE	EDITION 2
8/10/1987	X129665	DISCHARGE OF MORTGAGE	EDITION 3
24/11/1988	Y1859	TRANSFER	
24/11/1988	Y1860	MORTGAGE	EDITION 4
20/12/1990	Z409101	VARIATION OF MORTGAGE	EDITION 5
1/12/1992	E941405	VARIATION OF MORTGAGE	EDITION 6
2/8/1995	O426637	VARIATION OF MORTGAGE	EDITION 7
14/11/1995	O683070	DISCHARGE OF MORTGAGE	
14/11/1995	O683072	APPLICATION FOR RECORDING OF ACTION AFFECTING CROWN HOLDING	
14/11/1995	O683071	APPLICATION FOR REMOVAL OF RESTRICTIONS	
14/11/1995	O683073	TRANSFER	EDITION 8
30/6/2003	9737294	TRANSFER	EDITION 9
9/11/2004	AB69236	DEPARTMENTAL DEALING	
4/11/2013	AI118496	CHANGE OF NAME	EDITION 10

*** END OF SEARCH ***

DLA-Bylong

PRINTED ON 15/5/2014

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Folio Instn No. 302140.

Holding No. S.P. 1983-1

Land District RYLSTONE

Name BURKE, E.L., A.W. & K.M.
Surname Other Names

Crown Titles Section	L.O.	Investigation Branch C.L.O.	Assembly Section	Crown Titles Section
6-6-84		NO STATUS		6-6-84
C. T. Issue	Typist	Batch No.	Vol.	Fol.
			99	704724

Delivered to ~~Reg. Prop.~~ / Mortgagee: Westpac Banking Corp. P/Box 374.

Date Issued 16/7/1984.

N.S.W. STAMP DUTIES OFFICE
DULY STAMPED
$1.00

23 NOV 1984 13

V466002

TRANSFER

REAL PROPERTY ACT, 1900
(See Instructions for Completion on back of form

T 3 ~~2nd~~ R2/3
$ 30

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
99/D.P.704724 Folio Identifier 99/704724	WHOLE	At Rylstone

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

EDWARD LESLIE BURKE, ALLAN WALTER BURKE and KATHLEEN MARY BURKE all of Bylong, Graziers

OFFICE USE ONLY: N

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 110,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (b)

WILLIAM JOHN HOCKING of 27 Cedar Street, Lugarno, Jeweller and ROBERT LESLIE HOCKING of 97a President Avenue, Caringbah, Jeweller

OFFICE USE ONLY: TC2.

TENANCY Note (d)

as ~~joint tenants~~/tenants in common in equal shares

PRIOR ENCUMBRANCES Note (e)

subject to the following PRIOR ENCUMBRANCES 1. Settlement Purchase 1983/1 Rylstone subject to the provisions of the Closer Settlement Act.
2. 3.

DATE OF TRANSFER 26 October 1984.

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (f)

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

Signature of Witness
JOHN LONERAGAN.
Name of Witness (BLOCK LETTERS)
Solicitor. Mudgee.
Address and occupation of Witness

x B.R. Burke
x K. Mary Burke
A W Burke
Signature of Transferor

Note (f)

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

Signature of Witness
B. R. NEILSON
Name of Witness (BLOCK LETTERS)
Sydney Solicitor
Address and occupation of Witness

W.J. Hocking
R.L. Hocking
Signature of Transferee

TO BE COMPLETED BY LODGING PARTY Notes (g) and (h)

LODGED BY
A.C. BOYLE, NEILSON & CO.,
SOLICITORS,
65 York Street,
SYDNEY. NSW. 2000
D.X. 772, Sydney.
Delivery Box Number ~~1588~~

LOCATION OF DOCUMENTS

CT	OTHER	
		Herewith.
		In R.G.O. with
		Produced by

OFFICE USE ONLY

Extra Fee	Checked by	REGISTERED – –19
	EA3.	3 DEC 1984 Registrar General

Req:R512476 /Doc:DL Y001859 /Rev:30-Aug-2010 /Sts:OK.OK /Prt:15-May-2014 17:53 /Pgs:ALL /Seq:1 of 2
Ref:DLA-Bylong /Src:T

RP 13
1985

STAMP DUTY

$1.00

OFFICE OF STATE REVENUE
(N.S.W. TREASURY)
1988/89 S2
DULY STAMPED

Y001859

TRANSFER

REAL PROPERTY ACT, 1900

T CA 1 2 X

$ 40

R 1/2

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
99/704724	WHOLE	At Rylstone

DESCRIPTION OF LAND
Note (a)

TRANSFEROR
Note (b)

WILLIAM JOHN HOCKING

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 73,000.00

ESTATE
Note (c)

and transfers an estate in fee simple as to an undivided one-half share

in the land above described to the TRANSFEREE

TRANSFEREE
Note (d)

ROBERT LESLIE HOCKING of 97a President Avenue, Caringbah

OFFICE USE ONLY

S

TENANCY
Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES
Note (f)

subject to the following PRIOR ENCUMBRANCES 1. ..... 2. ..... 3. .....

DATE 11-11-1988

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION
Note (g)

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

..... Signature of Witness

B.R. NEILSON Name of Witness (BLOCK LETTERS)

Sydney Solicitor Address and occupation of Witness

W.J. Hocking Signature of Transferor

Note (g)

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

..... Signature of Witness

178 ..... Name of Witness (BLOCK LETTERS)

..... Address and occupation of Witness

..... Signature of Transferee (B.R. NEILSON) Solicitor

TO BE COMPLETED BY LODGING PARTY
Notes (h) and (i)

$84
S

LODGED BY
A.C. BOYLE, NEILSON & CO.,
SOLICITORS,
65 York Street,
SYDNEY. NSW. 2000
D.X. 772, Sydney.
Delivery Box Number 138S

LOCATION OF DOCUMENTS

CT	OTHER	
	M Lon	Herewith.
		In L.T.O. with
		Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED -19
Signed	Extra Fee	24 NOV 1988

Secondary Directions

Delivery Directions

Consent to L.P.

Req:R512476 /Doc:DL Y001859 /Rev:30-Aug-2010 /Sts:OK.OK /Prt:15-May-2014 17:53 /Pgs:ALL /Seq:2 of 2
Ref:DLA-Bylong /Src:T

1985

INSTRUCTIONS FOR COMPLETION

This dealing should be marked by the Commissioner of Stamp Duties before lodgment by hand at the Land Titles Office.

Typewriting and handwriting should be clear, legible and in permanent dense black or dark blue non-copying ink.

Alterations are not to be made by erasure, the words rejected are to be ruled through and initialled by the parties to the dealing in the left hand margin.

If the space provided is insufficient, additional sheets of the same size and quality of paper and having the same margins as this form should be used. Each additional sheet must be identified as an annexure and signed by the parties and the attesting witnesses.

If it is intended to create easements, covenants, &c., use forms RP13A, RP13B, RP13C as appropriate.

Rule up all blanks.

The following instructions relate to the SIDE NOTES on the form.

(a) Description of land.
- (i) TORRENS TITLE REFERENCE – For a manual reference insert the Volume and Folio (e.g., Vol 8514 Fol 126) – For a computer folio insert the folio identifier (e.g., 12/701924)
- (ii) PART/WHOLE – If part only of the land in the folio of the Register is being transferred, delete the word "WHOLE" and insert the lot and plan number, portion, &c. See also sections 327 and 327AA of the Local Government Act, 1919
- (iii) LOCATION – Insert the locality shown on the Certificate of Title/Crown Grant, e.g., at Chullora. If the locality is not shown, insert the Parish and County, e.g., Ph. Lismore Co. Rous

(b) Show the full name of the transferor(s).

(c) If the estate being transferred is a lesser estate than an estate in fee simple, delete "fee simple" and insert appropriate estate.

(d) Show the full name, address and occupation or description of the transferee(s).

(e) Delete if only one transferee. If more than one transferee, delete either "joint tenants" or "tenants in common", and, if the transferees hold as tenants in common, state the shares in which they hold.

(f) In the memorandum of prior encumbrances, state only the registered number of any mortgage, lease, charge or writ to which this dealing is subject.

(g) Execution.

GENERALLY
- (i) Should there be insufficient space for the execution of this dealing, use an annexure sheet
- (ii) The certificate of correctness under the Real Property Act, 1900, must be signed by all parties to the transfer, each party to execute the dealing in the presence of an adult witness, not being a party to the dealing, to whom he/she is personally known. The solicitor for the transferee may sign the certificate on behalf of the transferee, the solicitor's name (not that of his/her firm) to be typewritten or printed adjacent to the signature. Any person falsely or negligently certifying is liable to the penalties provided by section 117 of the Real Property Act, 1900

ATTORNEY
- (iii) If the transfer is executed by an attorney for the transferor/transferee pursuant to a registered power of attorney, the form of attestation must set out the full name of the attorney, and the form of execution must indicate the source of his/her authority, e.g., "AB by his attorney (or receiver or delegate, as the case may be) XY pursuant to power of attorney registered Book No

AUTHORITY
- (iv) If the transfer is executed pursuant to an authority (other than specified in (iii)), the form of execution must indicate the statutory, judicial or other authority pursuant to which the transfer has been executed

CORPORATION
- (v) If the transfer is executed by a corporation under seal, the form of execution should include a statement that the seal has been properly affixed, e.g., in accordance with the Articles of Association of the corporation. Each person attesting the affixing of the seal must state his/her position (e.g., director, secretary) in the corporation.

(h) Insert the name, postal address, Document Exchange reference, telephone number, and delivery box number of the lodging party.

(i) The lodging party is to complete the LOCATION OF DOCUMENTS panel. Place a tick in the appropriate box to indicate the whereabouts of the Certificate of Title. List, in an abbreviated form, other documents lodged, e.g., stat. dec. for statutory declaration, pbto for probate, L/A for letters of administration, &c.

OFFICE USE ONLY NOTICES ISSUED 6-12-89 SB.2 LO1341 D.H.

FIRST SCHEDULE DIRECTIONS

(A) FOLIO IDENTIFIER	(B) DIRECTION	(C) NAME

SECOND SCHEDULE AND OTHER DIRECTIONS

(D) FOLIO IDENTIFIER	(E) DIRECTION	(F) NOTIFN TYPE	(G) DEALING NUMBER	(H) DETAILS

Req:R512477 /Doc:DL 0683073 /Rev:25-Feb-2010 /Sts:OK.SC /Prt:15-May-2014 17:53 /Pgs:ALL /Seq:1 of 1
Ref:DLA-Bylong /Src:T

97-01T

TRANSFER

Real Property Act, 1900

0
683073 F

Office

N.S.W. STAMP DUTY
181095 1402 04 00186217B/03 $2.00

(A) LAND TRANSFERRED

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

FOLIO IDENTIFIER 99/704724
("VALLEY VIEW" LEE CREEK ROAD BYLONG)

(B) LODGED BY

L.T.O. Box	Name, Address or DX and Telephone
325T	GATES MOFFITT SOLICITORS 19 ROWE STREET, EASTWOOD 2122 DX 23508, EASTWOOD TEL: (02) 874 0331

REFERENCE (max. 15 characters): TC:RJ:W2088

(C) TRANSFEROR ROBERT LESLIE HOCKING

(D) acknowledges receipt of the consideration of $291,500.00
and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. LAND EXCLUDES MINERALS SUBJECT TO RESERVATIONS CONTAINED IN THE CROWN GRANT

(F) TRANSFEREE

T
TS (s713 LGA)
TW (Sheriff)

WITANE PTY LTD (ACN 057 321 212)

(G) TENANCY:

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** 9th November 1995

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

Signature of Witness

B. R. NEILSON
Name of Witness (BLOCK LETTERS)

Sydney Solicitor
Address of Witness

Signature of Transferor

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

THOMAS SIDNEY CURRAN
SOLICITOR
FOR TRANSFEREE MORTGAGEE

Signature of Transferee

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

CHECKED BY (office use only)

Ausdoc Commercial and Law Stationers 1991

Req:R512478 /Doc:DL 9737294 /Rev:02-Jul-2003 /Sts:NO.OK /Prt:15-May-2014 17:53 /Pgs:ALL /Seq:1 of 1
Ref:DLA-Bylong /Src:T

(1)

Form: 01T
Release: 2.1
www.lpi.nsw.gov.au

TRANSFER

New South Wales
Real Property Act 1900

9737294R

PRIVACY NOTE: this information is legally required and will become part of the public record

STAMP DUTY

Office of State Revenue use only

OFFICE OF STATE REVENUE (N.S.W. TREASURY)

CLIENT No. 5774318
STAMP DUTY $8,115.00
TRANSACTION No. 03 26 05
STAMP No. 922
SIGNATURE J mitchell
DATE 24.6.2003
ASSESSMENT DETAILS:

(A) **TORRENS TITLE**

Folio Identifier 99/704724
("Valley View", Upper Bylong Valley via Rylstone

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODES
325T	Gates Moffitt Reference:	T TW (Sheriff)

(C) **TRANSFEROR**

WITANE PTY LIMITED (ACN 057 321 212)

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 275,000.00 and as regards

(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE**

WALLINGS PASTORAL CO PTY LIMITED (ACN 000 690 648)

(I) **TENANCY:**

(J) **DATE** 24th June 2003

Certified correct for the purposes of the Real Property Act 1900 by the corporation named below the common seal of which was affixed pursuant to the authority specified and in the presence of the authorised person(s) whose signature(s) appear(s) below.
Corporation: Witane Pty Limited (ACN 057 321 212)
Authority:

WITANE PTY LTD ACN 057 321 212 The Common Seal of

Signature of authorised person:
Name of authorised person: David John Wallings
Office held: Director

Signature of authorised person:
Name of authorised person: Helen Janette Wallings
Office held: Director

Certified correct for the purposes of the Real Property Act 1900 by the corporation named below the common seal of which was affixed pursuant to the authority specified and in the presence of the authorised person(s) whose signature(s) appear(s) below.
Corporation: Wallings Pastoral Co Pty Limited (ACN 000 690 648)
Authority:

WALLINGS PASTORAL CO. PTY. LIMITED A.C.N. 000 690 648 Common Seal

Signature of authorised person:
Name of authorised person: David John Wallings
Office held: Director

Signature of authorised person:
Name of authorised person: Helen Janette Wallings
Office held: Director

Page 1 of 1
number additional pages sequentially

All handwriting must be in block capitals.

Land and Property Information NSW.

~ Search ~

re Lot 67 in DP 755420

Title Tree

67/755420

↓

Crown Grant
V. 6528 F. 217

14/5/14

Jenners/Title Searching Co.
ESTABLISHED 1949

~ Search ~

re Lot 67 in DP 755820

Schedule of Registered Proprietors

Crown Grant V. 6528 F.217 10/12/1951	Arthur Holmes Woolley
Tf G526620 Reg 22/10/56 (V. 6528 F217)	Arthur Holmes Woolley of Bylong Grazier
Tf G526621 Reg 22/10/56 (V. 6528 F217)	Andrew Woolley of Bylong Grazier
Tf MB37346 Reg 19/7/72 (V. 6528 F.217)	Wallings Holdings Pty. Limited NOW ACN 000 690 648 Pty. Ltd. vide CN AI 118496

14/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

Jenners Title Searching Co.

LPI On-Line

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 LPI*NSW* Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 67/755420

SEARCH DATE	TIME	EDITION NO	DATE
14/5/2014	10:58 AM	4	4/11/2013

LAND

LOT 67 IN DEPOSITED PLAN 755420
AT RYLSTONE
LOCAL GOVERNMENT AREA MID-WESTERN REGIONAL
PARISH OF BYLONG COUNTY OF PHILLIP
(FORMERLY KNOWN AS PORTION 67)
TITLE DIAGRAM CROWN PLAN 4043.2125

FIRST SCHEDULE

ACN 000 690 648 PTY LTD (CN AI118496)

SECOND SCHEDULE (2 NOTIFICATIONS)

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

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

DLA-Bylong PRINTED ON 14/5/2014

*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.

Jenners Title Searching Co.

LPI On-Line

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
14/5/2014 10:59AM

FOLIO: 67/755420

First Title(s): VOL 6528 FOL 217
Prior Title(s): VOL 6528 FOL 217

Recorded	Number	Type of Instrument	C.T. Issue
19/5/1986	DP755420	DEPOSITED PLAN	FOLIO CREATED EDITION 1
31/1/1990	Y794409	DISCHARGE OF MORTGAGE	
31/1/1990	Y794410	MORTGAGE	EDITION 2
19/2/1991		AMENDMENT: VOL FOL INDEX	
17/2/1998	3790101	DISCHARGE OF MORTGAGE	EDITION 3
6/8/2003	9855091	WITHDRAWAL OF CAVEAT	
9/11/2004	AB69236	DEPARTMENTAL DEALING	
2/4/2007	AD23587	DEPARTMENTAL DEALING	
13/4/2011	AG175587	DEPARTMENTAL DEALING	
4/11/2013	AI118496	CHANGE OF NAME	EDITION 4

*** END OF SEARCH ***

DLA-Bylong PRINTED ON 14/5/2014

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17A.

F 730580

REGISTRAR GENERAL NEW SOUTH WALES

New South Wales.

Fees—
Entry : 15 : 0 to collect
Endorsements : :
£ : :

1st paid 16 Sept. 10.52

CAVEAT BY THE REGISTRAR GENERAL FORBIDDING REGISTRATION OF DEALING WITH ESTATE OR INTEREST.

(REAL PROPERTY ACT, 1900.)

I, THE REGISTRAR GENERAL OF NEW SOUTH WALES, forbid the Registration of any dealing affecting the land comprised in Crown Grant, Vol. 6528 Fol. 217

not consistent with the powers of the registered proprietor as Mortgagee from Arthur Holmes Woolley as shown on transfer dated 4th August 1948 and registered No. 21 Book 2062

DATED this 16th day of September 1952

J. H. Pell

Registrar General

REGISTRAR GENERAL NEW SOUTH WALES

8b 6449 · A. H. PETTIFER, GOVERNMENT PRINTER.

No. 730580 Caveat.

THE REGISTRAR GENERAL.

Caveator

Particulars entered in Register Book
Volume 6528 Folio 217

the 16th day of September 1952
at 10 mins pt 12 o'clock in the after noon

J. Pells
Registrar General

84 55

UNDER SECRETARY - LANDEP, SYDNEY
CHAIRMAN, C.S.A.B'DS - SETBOARD, SYDNEY
DIRECTOR, S.L.S. - WARSET, SYDNEY
SURVEYOR GENERAL - SURGENL, SYDNEY
Telephone 8056 Extension 2282

Department of Lands
Sydney.

F 730580

12 SEP 1952

ADDRESS REPLY TO THE UNDER SECRETARY FOR LANDS
G.P.O. BOX 39
SYDNEY N.S.W.
AND QUOTE
C.S. 6125/39

The Registrar General,
SYDNEY.

Grant No. 51/347.... SUBJECT: Issue of Crown Grant - Mortgage.

Portion 67 ..... With reference to the Deed of Grant particularised in the margin hereof, which was forwarded to the Stamp Office on the 29th August, 1952 , I have to inform you that, from the books of this Department, it appears that the Grantee holds the land as Mortgagee from

Parish . Bylong ...

County . Phillip ..

Name of Grantee

Arthur Holmes Woolley .....

The Commercial Banking Company of Sydney Limited

as shown on transfer dated 4.8.48 ..... and registered No. 21 ..... Book 2062 ..... and to request you to enter on the said grant, before delivering same, a caveat forbidding the registration of any dealing except in accordance with the powers of the grantee as a mortgagee as provided by Regulation 59 ~~222A under the Crown Lands Consolidation Act, 1913~~ under the Closer Settlement Acts.

A.R. JONES,
Under Secretary,
per

6528 · 217

~ Search ~

re Lot 67 in DP 755420

Title Tree

67/755420

↓

Crown Grant
V. 6528 F. 217

14/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

~ Search ~

re Lot 67 in DP 755820

Schedule of Registered Proprietors

Crown Grant V. 6528 F. 217 10/12/1951	Arthur Holmes Woolley
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Tf G526621 Reg 22/10/56 (V. 6528 F217)	Andrew Woolley of Bylong Grazier
Tf M837346 Reg 19/7/72 (V 6528 F. 217)	Wallings Holdings Pty. Limited NOW ACN 000 690 648 Pty. Ltd. vide CN AI 118496

14/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

Jenners Title Searching Co.

LPI On-Line

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

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 67/755420

SEARCH DATE	TIME	EDITION NO	DATE
14/5/2014	10:58 AM	4	4/11/2013

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AT RYLSTONE
LOCAL GOVERNMENT AREA MID-WESTERN REGIONAL
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(FORMERLY KNOWN AS PORTION 67)
TITLE DIAGRAM CROWN PLAN 4043.2125

FIRST SCHEDULE

ACN 000 690 648 PTY LTD (CN AI118496)

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NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

DLA-Bylong PRINTED ON 14/5/2014

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Jenners Title Searching Co. LPI On-Line

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SEARCH DATE
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19/2/1991		AMENDMENT: VOL FOL INDEX	
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2/4/2007	AD23587	DEPARTMENTAL DEALING	
13/4/2011	AG175587	DEPARTMENTAL DEALING	
4/11/2013	AI118496	CHANGE OF NAME	EDITION 4

*** END OF SEARCH ***

DLA-Bylong PRINTED ON 14/5/2014

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17A.

F 730580

REGISTRAR·GENERAL·NEW·SOUTH·WALES·

New South Wales.

Fees—
Entry : 15 : 0 to collect
Endorsements : :
£ : :

15/ paid 16.9.52

CAVEAT BY THE REGISTRAR GENERAL FORBIDDING REGISTRATION OF DEALING WITH ESTATE OR INTEREST.

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not consistent with the powers of the registered proprietor as Mortgagee from Arthur Holmes Woolley as shown on transfer dated 4th August 1948 and registered No. 21 Book 2062

DATED this 16th day of September 1952

Registrar General.

REGISTRAR GENERAL NEW SOUTH WALES

St 6449 · A. H. PETTIFER, GOVERNMENT PRINTER.

No. 730580 Caveat.

THE REGISTRAR GENERAL

Caveator

Particulars entered in Register Book
Volume 6528 Folio 217

the 16th day of September 1952
at Twenty pt 12 o'clock in the after noon

J. W. Pells
Registrar General

5455

UNDER SECRETARY - LANDEP, SYDNEY
CHAIRMAN, C.S.A.B'DS - SETBOARD, SYDNEY
DIRECTOR, S.L.S. - WARSET, SYDNEY
SURVEYOR GENERAL - SURGENL, SYDNEY
Telephone 8056 Extension 2282

Department of Lands
Sydney.

12 SEP 1952

F 730580

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G.P.O. BOX 39
SYDNEY N.S.W.
AND QUOTE
C.S. 6125/39

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Parish Bylong ...

County Phillip ..

Name of Grantee

Arthur Holmes Woolley .....

The Commercial Banking Company of Sydney Limited

as shown on transfer dated 4.8.48 ..... and registered No. 21 ..... Book 2062 ..... and to request you to enter on the said grant, before delivering same, a caveat forbidding the registration of any dealing except in accordance with the powers of the grantee as a mortgagee as provided by Regulation 59 ~~222A under the Crown Lands Consolidation Act, 1913~~ under the Closer Settlement Acts.

A.R. JONES,
Under Secretary,
per

6528 · 217

~ Search ~

re Lot 2 in DP 1100343
Being PART Cn to Consol 14187-237

Title Tree

A/C 14187-237

↓

V. 14187 F. 237

↓

V. 6444 F. 70

↓

V. 4383 F. 127 & 128

↓

V. 2920 F. 74

7/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

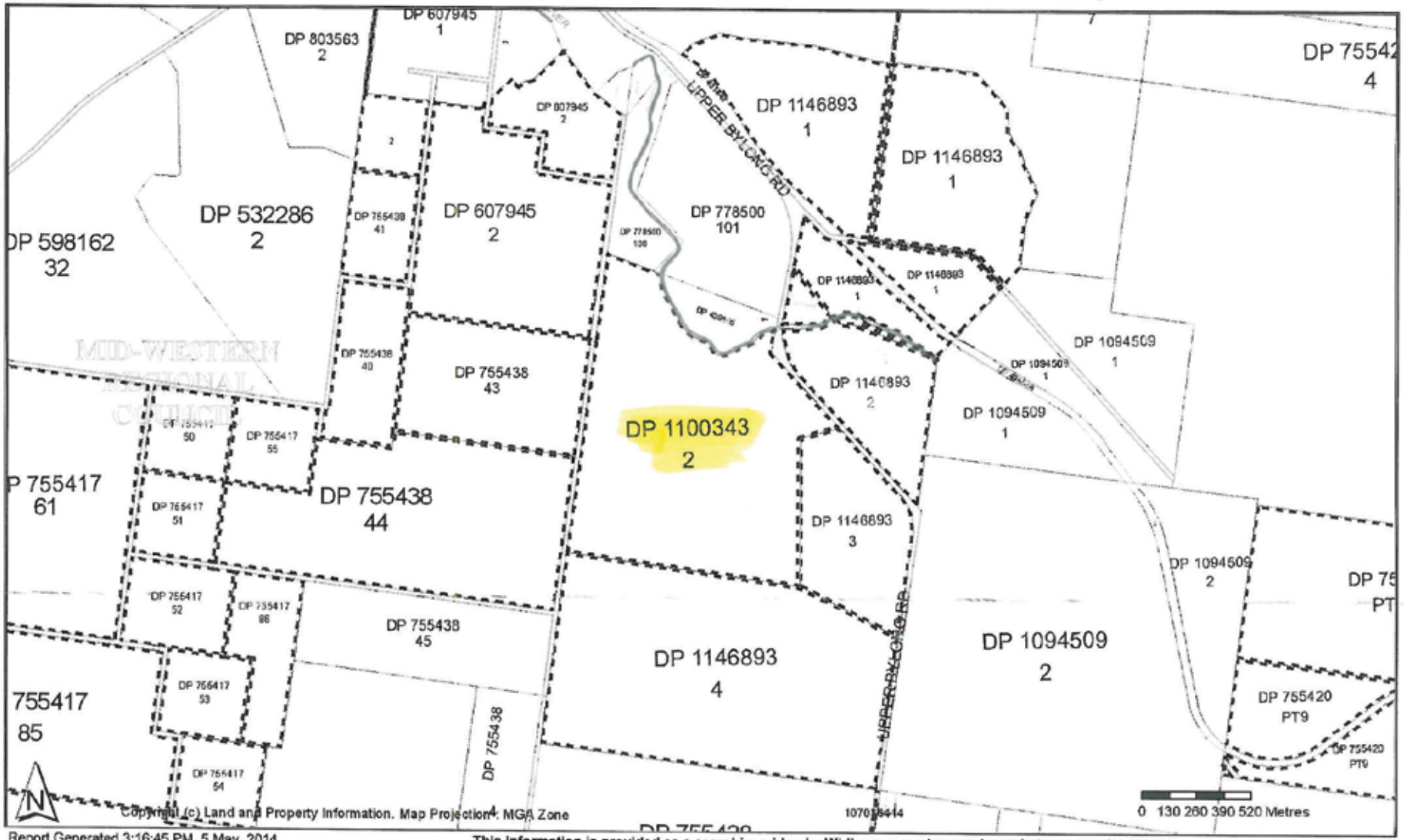
NSW Land & Property Information

Cadastral Records Enquiry Report

Ref : DLA-Bylong

Requested Parcel : Lot 2 DP 1100343 **Identified Parcel** : Lot 2 DP 1100343

Locality : UPPER BYLONG LGA : MID-WESTERN REGIONAL Parish : LEE County : PHILLIP



Report Generated 3:16:45 PM, 5 May, 2014

This information is provided as a searching aid only. While every endeavour is made to ensure the current cadastral pattern is accurately reflected, the Registrar General cannot guarantee the information provided. For all ACTIVITY PRIOR to SEPT 2002 you must refer to the RGs Charting and Reference Maps.

~ Search ~

re Lot 2 in DP 1100343 &
Lot 2 in DP 1146893

Schedule of Registered Proprietors

V. 2920 F. 74	Allan Daxelby
issued	of Bylong
13/3/1919	Grazier
Tfr B929712	Herbert Stanley Thompson &
Reg 13/2/30	Percy Charles Basche
(V. 2920 F. 74)	both of Bylong, Graziers
Tfr D447097	Rollo Oswald Basche
Reg 20/2/46	of Sydney Merchant &
(V. 4383 F. 127	Percy Charles Basche
& F. 128)	

7/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

~ Search ~

re Lot 2 in DP 1100343
Being Pt, M/C 14187-237
Schedule of Regd Proprietors Contd

Ltr F569825	Eric Atkinson
Reg 16/11/51	of Bylong
(V. 4383 F. 127)	Grazier
Ltr F606347	Kevin Patrick Delaney
Reg 13/2/53	of Cowra
(V. 6448 F. 70)	Grazier
Ltr K531671	Hutchenson Bros Pty. Limited
Reg 6/2/67	
(V. 6448 F. 70)	
Ltr L177906	Fermoy Investments Pty. Limited
Reg 23/9/68	
(V. 6448 F. 70)	
Ltr N726706	Kelston Investments Pty. Ltd.
Reg 19/3/74	
(V. 6448 F. 70)	

7/5/14

Jenners Title Searching Co.
ESTABLISHED 1949

~ Search ~

re Lot 2 in DP 1100343.
Being Pt A/C 14187-237
Schedule of Regd Proprietors Contd

Ff X 382050 Reg 20/2/88 (V 14187 F 237)	James Richard Inglis John Alan Inglis
Ff 3802684 Reg 24/2/88 (V 14187 F 237)	Prisstine Pty. Limited
Ff 9737337 Reg 8/7/2003 (V 14187 F 237)	Wallings Pastoral Co Pty. Limited NOW ACN 000 690 648 Pty Ltd (vide CN I 118496 Reg 4/11/2013

MJ 7/5/14
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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 14187-237

SEARCH DATE	TIME	EDITION NO	DATE
7/5/2014	4:07 PM	5	24/1/2014

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT BYLONG
LOCAL GOVERNMENT AREA MID-WESTERN REGIONAL
PARISH OF BUDDEN COUNTY OF PHILLIP
PARISH OF LEE COUNTY OF PHILLIP
TITLE DIAGRAM SEE SCHEDULE OF PARCELS

FIRST SCHEDULE

ACN 000 690 648 PTY LTD (CN AI118496)

SECOND SCHEDULE (15 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S) AS REGARDS 50/755417, 51/755417, 52/755417, 53/755417, 54/755417, 55/755417, 61/755417, 62/755417, 63/755417, 85/755417, 86/755417, 87/755417, 40/755438, 41/755438, 43/755438, 44/755438, 1/1100343
2 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) AS REGARDS 2/1100343
3 LAND EXCLUDES THE ROAD(S) AS REGARDS LOT 2 IN DP1100343
4 AE39619 LEASE TO TELSTRA CORPORATION LIMITED OF THE PART OF LOT 44 SHOWN HATCHED IN PLAN WITH AE39619. COMMENCES: 1/2/2013. EXPIRES: 31/1/2018.
AI151385 CONCURRENT LEASE AS TO THE PART CROSS HATCHED IN PLAN WITH AI151385
5 AE39620 LEASE TO TELSTRA CORPORATION LIMITED OF THE PART OF LOT 44 SHOWN HATCHED IN PLAN WITH AE39620. COMMENCES: 1/2/2018. EXPIRES: 31/1/2023.
AI151385 CONCURRENT LEASE AS TO THE PART CROSS HATCHED IN PLAN WITH AI151385
AI151386 CONCURRENT LEASE AS TO THE PART CROSS HATCHED IN PLAN WITH AI151386
6 AE39621 LEASE TO TELSTRA CORPORATION LIMITED OF THE PART OF LOT 44 SHOWN HATCHED IN PLAN WITH AE39621. COMMENCES: 1/2/2023. EXPIRES: 31/1/2028.
AI151386 CONCURRENT LEASE AS TO THE PART CROSS HATCHED IN PLAN WITH AI151386
AI151387 CONCURRENT LEASE AFFECTING THE PART CROSS HATCHED IN PLAN WITH AI151387

END OF PAGE 1 - CONTINUED OVER

DLA-Bylong PRINTED ON 7/5/2014

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: AUTO CONSOL 14187-237 PAGE 2

SECOND SCHEDULE (15 NOTIFICATIONS) (CONTINUED)

7	DP1137421	RIGHT OF CARRIAGEWAY OVER EXISTING TRACK IN USE AFFECTING THE PART OF LOTS 40, 41 & 44 DP 755438 SHOWN SO BURDENED IN DP1137421
8	DP1147478	EASEMENT FOR OVERHEAD POWER LINE(S) 9 METRE(S) WIDE AFFECTING THE PART(S) OF LOTS 40-41 AND 44 IN DP755438 SHOWN SO BURDENED IN DP1147478
9	AI151384	RIGHT OF CARRIAGEWAY OVER TRACK IN USE AFFECTING THE PART OF LOTS 40, 41 & 44 IN DP755438 DESIGNATED (X) IN DP1137421
10	AI151384	EASEMENT FOR COMMUNICATIONS AND SERVICES 8 WIDE AFFECTING THE PART OF LOT 44 IN DP755438
11	AI151385	LEASE TO CROWN CASTLE AUSTRALIA PTY LTD OF THE AREA HATCHED IN PLAN WITH AI151385. EXPIRES: 5/11/2018.
12	AI151386	LEASE TO CROWN CASTLE AUSTRALIA PTY LTD OF THE PART HATCHED IN PLAN WITH AI151386. EXPIRES: 5/11/2023.
13	AI151387	LEASE TO CROWN CASTLE AUSTRALIA PTY LTD OF THE PART SHOWN HATCHED IN PLAN WITH AI151387. EXPIRES: 5/11/2028.
14	AI151388	LEASE TO CROWN CASTLE AUSTRALIA PTY LTD OF THE PART HATCHED IN PLAN WITH AI151388. EXPIRES: 5/11/2033.
15	AI151389	LEASE TO CROWN CASTLE AUSTRALIA PTY LTD OF THE PART HATCHED IN PLAN WITH AI151389. EXPIRES: 5/11/2038.

NOTATIONS

NOTE: THIS FOLIO MAY BE ASSOCIATED WITH A CROWN TENURE WHICH IS SUBJECT TO PAYMENT OF AN ANNUAL RENT. FOR FURTHER DETAILS CONTACT THE LOCAL CROWN LANDS OFFICE AT ORANGE. NOT ALL PARCELS WITHIN THIS TITLE MAY BE AFFECTED BY A CROWN TENURE.

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS	TITLE DIAGRAM
LOTS 50-55 IN DP755417	CROWN PLAN 219.2125
LOT 61 IN DP755417	CROWN PLAN 746.2125
LOTS 62-63 IN DP755417	CROWN PLAN 747.2125
LOT 85 IN DP755417	CROWN PLAN 2012.2125
LOT 86 IN DP755417	CROWN PLAN 2011.2125
LOT 87 IN DP755417	CROWN PLAN 2013.2125
LOT 40 IN DP755438	CROWN PLAN 1204.2125
LOT 41 IN DP755438	CROWN PLAN 1205.2125
LOT 43 IN DP755438	CROWN PLAN 1886.2125
LOT 44 IN DP755438	CROWN PLAN 1884.2125
LOTS 1-2 IN DP1100343	DP1100343.

*** END OF SEARCH ***

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
7/5/2014 4:09PM

FOLIO: AUTO CONSOL 14187-237

Recorded	Number	Type of Instrument	C.T. Issue
4/3/1998	3824870	MORTGAGE	
3/7/2006	AC431954	CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 14187-237 PARCELS IN CONSOL ARE: 50-55/755417, 61-63/755417, 85-87/755417, 40-41/755438, 43-44/755438, 1-2/1100343.	
13/7/2007	AD265898	DEPARTMENTAL DEALING	
20/7/2007	AD283270	DEPARTMENTAL DEALING	
17/7/2008	AE39618	LEASE	
17/7/2008	AE39619	LEASE	
17/7/2008	AE39620	LEASE	
17/7/2008	AE39621	LEASE	EDITION 1
17/4/2009	DP1137421	DEPOSITED PLAN	EDITION 2
8/4/2010	DP1147478	DEPOSITED PLAN	EDITION 3
4/11/2013	AI118496	CHANGE OF NAME	EDITION 4
8/11/2013	AI147134	CAVEAT	
24/1/2014	AI151384	TRANSFER GRANTING EASEMENT	
24/1/2014	AI151385	LEASE	
24/1/2014	AI151386	LEASE	
24/1/2014	AI151387	LEASE	
24/1/2014	AI151388	LEASE	
24/1/2014	AI151389	LEASE	EDITION 5

*** END OF SEARCH ***

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Form: 10CN
Release: 5·3

CHANGE OF NAM

New South Wales
Real Property Act 1900

AI118496G

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

ADDITIONAL FEE RAISED

(A) **TORRENS TITLE**

See Annexure A

CT SIGHTED CANC. AREA

(B) **REGISTERED DEALING**

Number | Torrens Title

RELODGED

(C) **LODGED BY**

Document Collection Box 268D

Name, Address or DX, Telephone, and Customer Account Number if any

SYDNEY LEGAL AGENTS - INFOTRACK
LLP: 132579W
Reference: AUSTIN / 5849

CODE **CN**

- 1 NOV 2013
1315
TIME:

(D) **REGISTERED PROPRIETOR**

Whose name is to be changed; show the name as it currently appears on the Torrens Title

WALLINGS PASTORAL CO PTY LTD (ACN 000 690 648)

(E) **NEW NAME**

Of the above registered proprietor in full

ACN 000 690 648 PTY LTD

OFF L: AE39618

(F) The registered proprietor of the above land applies to have its new name recorded in the Register in respect of that land and hereby consents to the Registrar General contacting the relevant issuing authorities to validate any supporting evidence lodged with this application.

(G) **STATUTORY DECLARATION BY THE APPLICANT***

I, DAVID JOHN WALLINGS

solemnly and sincerely declare that—

1. I am a director of the applicant
2. on at in the SELECT >>> >>> >>> >>> >>>
   I married
3. On 2 October 2013 the applicant changed its name from Wallings Pastoral Co Pty Ltd to ACN 000 690 648 Pty Ltd.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900, and I certify this application to be correct for the purposes of the Real Property Act 1900.

Made and subscribed at NEWCASTLE in the State of New South Wales on 18 OCT 2013
in the presence of JESSICA MARTIN of 19 ROWE ST, EASTWOOD

☐ Justice of the Peace (J.P. Number:) ☒ Practising Solicitor
☐ Other qualified witness *[specify]*

** who certifies the following matters concerning the making of this statutory declaration by the person who made it:

1. I saw the face of the person ~~*OR I did not see the face of the person because the person was wearing a face covering, but I am satisfied that the person had a special justification for not removing the covering*~~; and
2. I have known the person for at least 12 months ~~*OR I have confirmed the person's identity using an identification document and the document I relied on was a*~~ *[Omit ID No.]*

Signature of witness: Signature of applicant:

* As the services of a qualified witness cannot be provided at lodgment, the declaration should be signed and witnessed prior to lodgment. ** If made outside NSW, cross out the witness certification. If made in NSW, cross out the text which does not apply.

(H) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS.*

The applicant's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 505707 Full name: ~~MICHAEL ANTHONY GIUGNI~~ JESSICA MARTIN. Signature:

ALL HANDWRITING MUST BE IN BLOCK CAPITALS. Page 1 of 2 1309