

# PRELIMINARY SITE INVESTIGATION (PSI)

53 MCAULEYS LANE, MYOCUM, NEW SOUTH WALES



**PREPARED FOR:**

Tareeda Developments Pty Ltd; and  
Boreas Group Pty Ltd

**PREPARED BY:**

Mr Dane Egelton  
Contaminated Site Investigation Australia Pty Ltd  
PO Box 785  
ALSTONVILLE NSW 2477



12 April 20203

**REVISION HISTORY:**

Revision	Description	Distributed to	Date
Rev.0	PSI Report	Mr Dwayne Roberts	16 October 2020
Rev.1	PSI Report	Tareeda Developments Pty Ltd and Boreas Group Pty Ltd	16 November 2020
Rev.2	PSI Report	Tareeda Developments Pty Ltd and Boreas Group Pty Ltd	12 April 2023

## Table of Contents

1	Introduction.....	6
1.1	Objectives .....	6
1.2	Scope of Works.....	6
2	Site Information.....	7
2.1	Site Identification .....	7
2.2	Regional Setting.....	7
2.3	Geology/Soils.....	7
2.4	Site Visit and Observations.....	8
3	Historical Information.....	11
3.1	Title Search .....	11
3.2	Aerial Photography.....	11
3.3	Cattle Dip Search Results.....	12
4	Contaminants .....	13
4.1	Possible Sources of Contamination .....	13
4.2	Contaminants of Potential Concern (COPC) .....	13
5	Guidelines/Criteria .....	13
5.1	Ecological Criteria .....	14
5.2	Human Health Criteria.....	14
5.3	Data Quality Objectives .....	15
5.4	Data Quality indicators.....	16
5.5	Field Data QA/QC Acceptance Criteria .....	17
5.6	Laboratory QA/QC .....	18
5.7	Transporting Samples.....	18
5.8	Sampling Rationale .....	18
6	Conceptual Site Model (CSM).....	20
7	Results .....	21
7.1	Discussion .....	21
7.2	QA/QC.....	21
8	Concluding Comments.....	22
8.1	Unexpected Finds .....	23
9	Limitations .....	23

## **APPENDIX A – FIGURES**

Figure 1: Site Layout and Local Setting

Figure 2: Sample Locations

Figure 3: 1958 Aerial Photograph

Figure 4: 1966 Aerial Photograph

Figure 5: 1971 Aerial Photograph

Figure 6: 1987 Aerial Photograph

Figure 7: 1997 Aerial Photograph

Figure 8: Development Application Plan

## **APPENDIX B – LABORATORY REPORTS**

## **APPENDIX C – HISTORICAL TITLE SEARCHES**

## ABBREVIATIONS

AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
AS	Australian Standard
BGS	Below Ground Surface
BH	Bore Hole
COPC	Contaminants of Potential Concern
CSI Aus	Contaminated Site Investigations Australia
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
GPR	Ground Penetrating Radar
HDPE	High Density Polyethylene
HIL	Health Investigation Level
HSL	Health Screening Level
IP	Interface Probe
LNAPL	Light Non-Aqueous Phase Liquid
MAH	Monocyclic Aromatic Hydrocarbon
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photoionisation Detector
RPD	Relative Percentage Difference
QA	Quality Assurance
QC	Quality Control
RAP	Remediation Action Plan
SAQP	Sampling Analysis and Quality Plan
SVB	Soil Vapour Bore
TDS	Total Dissolved Solid
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbon
TRH	Total Recoverable Hydrocarbon
USCS	Unified Soil Classification System
UST	Underground Storage Tank
VOC	Volatile Organic Compound
XRF	X-Ray Fluorescence Analyser

## 1 Introduction

Contaminated Site Investigations Australia Pty Ltd (CSI Aus) was commissioned by Ardill Payne and Partners, to conduct a Preliminary Site Investigation (PSI) at the rural property located at 53 McAuleys Lane, Myocum, New South Wales (the site).

The site is currently a large rural lot with a residential dwelling and associated sheds and buildings. The new owner intends to rezone the site to R5 (large residential lots) and subdivide the site into 39 individual allotments (Community Title subdivision).

The proposed sub-division and rezoning of the site has triggered the need for the PSI under State Environmental Planning Policy (Resilience and Hazards 2021, Chapter 4 Remediation of Land), (formerly known as SEPP 55). This report outlines the findings of the PSI, and is a revised version which incorporates a change in the original subdivision plan.

### 1.1 Objectives

The objective of the PSI is to identify potential contamination of surface soils or potentially contaminating historical activities at the site and make an assessment of the site's suitability for residential use, or establish if further investigation is required. This objective will be met via desktop research of government resources, a site visit and walk-over, surface soil sampling and subsequent laboratory analysis.

### 1.2 Scope of Works

The following scope of work was undertaken by CSI Aus, in accordance with NSW EPA guidelines and Byron Shire Councils specifications:

- Desktop assessment of site location, setting and historical use;
- Review of available historical aerial photography and historical title searches;
- Site visit and walk-over (see photos in report);
- Collection of nine primary soil samples (three samples from each of the three Lots) to assess for contaminants of potential concern (COPC);
- Chain of Custody documentation;
- Analysis of samples via a NATA accredited laboratory; and
- Preparation of this PSI report.

## 2 Site Information

### 2.1 Site Identification

The site is located approximately 2.5 kilometers south east of the township of Mullumbimby, in a predominantly rural area. General site information is presented in Table 1 below, and site layout and setting is presented in Appendix A, Figure 1.

Table 1 General Site Information	
Site Address:	53 McAuleys Lane, Myocum, NSW 2481
Formal ID:	Lot 8/DP589795, Parish of Brunswick, County of Rous
Municipality	Byron Shire Council
Site Area:	Approximately 34.82 ha
Site Owner:	Balance Design Consultants Limited
Land Description:	Largely cleared rural property with undulating hills, surface water bodies and two residential dwellings, one towards the most elevated portion of the site and one within 200m of McAuleys Lane. The site has aspects in all directions and has been used for cattle farming in the past. The property is fenced and has a small cattle crush.
Current Zoning:	Rural Landscape RU2
Current Site Use:	At the time of the site visit (2020), the property was being used as a rural residential property. Livestock were not present.
Proposed Site Use:	Subdivision for residential use (R5 Large Lot Residential)
Adjoining Land Uses:	<b>North:</b> Rural/agriculture and residential <b>East:</b> Rural/agriculture and residential <b>South:</b> Rural/agriculture and residential <b>West:</b> Rural/agriculture and residential

### 2.2 Regional Setting

The site is located at approximately 35 to 61m AHD and slopes radially in all directions from the crest, which is in the centre of the southern portion of the site. The landscape has low gently undulating to rolling rises and hills on plateau surfaces of the Lismore Basalts geological formation. The area has been extensively cleared during early settlement times and was previously closed-forest (Big Scrub). The nearest surface water body is Kings Creek located approximately 600m northeast of the site. The site does have a creek and chain-of-ponds in the northern portion which flows offsite to the east. The property is approximately 3.8 kilometers inland from the coast in the northern rivers area of NSW.

### 2.3 Geology/Soils

A review of the NSW Environment online mapping service indicates that the site is considered to be low probability for potential acid sulphate soils. Soil mapping for the site identifies the predominant soil type as “Wollongbar” which is typical of the region and the underlying Lismore Basalts. This soil landscape covers the northern 80% of the site. This soil type can be quite deep (>200cm) and well-draining as it has a low moisture

holding capacity. The crests and side slopes tend to have a shallower soil profile and potential for mottled clay lenses. pH of the soil is typically 4.0 – 5.0.

The site soils were relatively uniform in lithology and consisted of a firm dark reddish-brown clay loam (Krasnozems also known as Ferrosols) consistent with the Environment NSW soil maps. The southern 20% of the site is mapped as the “Billinudgel” soil landscape and this was observed during the site visit for the soil sample MYL4 which was distinctly different in physical properties from the soil on the northern portion. The Billinudgel soil profile is a lighter brown loose clay loam with hydrophobic properties and was crumbly as it was dry and very fine. pH of the soil is typically 5.0 – 5.5.

Shallow soils were high in organic material in the form of grass rootlets. No visual or olfactory indicators of soil contamination were identified from the site visit conducted during September 2020.

A total of nine primary soil samples and one duplicate were collected from surface soils and submitted for analysis by a NATA accredited laboratory. See Section 6 for summary results and Appendix B for laboratory reports. Sample locations and identification are presented in Appendix A, Figure 2.

## 2.4 Site Visit and Observations

A site visit and walk-over was conducted by Dane Egelton of CSI Aus on 14 September 2020. The property has two residential dwellings and associated sheds, chook pens etc. A small cattle crush is present in the centre of the site.

The majority of each of the proposed lots is cleared of original native vegetation (Big Scrub) with only sparse mature vegetation remaining along fence lines, water courses and around the existing dwellings. The remainder of the property is vacant and grass covered.

There were no visual or olfactory indicators of industrial activities that would potentially cause contamination of the site soils or underlying groundwater. *Note:* groundwater was not assessed during this PSI.

The site surface was free of demolition and/or construction waste at the time of the site inspection. The property extremities (gullies and boundary fences) and close to existing dwellings were not physically assessed.

**PHOTOGRAPH 1**  
**CURRENT SITE LAYOUT AND SETTING – VIEW FROM PROPOSED LOT 30 LOOKING EAST**



**PHOTOGRAPH 2**  
**CURRENT SITE LAYOUT AND SETTING – VIEW FROM PROPOSED LOT 31 LOOKING WEST**



**PHOTOGRAPH 3**  
**CATTLE HOLDING PEN AND CATTLE CRUSH**



### 3 Historical Information

#### 3.1 Title Search

Limited information on previous site use and ownership was obtained from the NSW Land Registry Services. The land appears to have only be used for farming since the title was first created.

See Appendix C for historical land title documents and as summarised below.

Table 2 Historical Title Search	
Date	Information
29/7/1908	Grant of land purchased by the Bank of NSW (196 pounds, 15 Shillings). Parcel of land was ~196 acres and encompasses the lots to the north of current titles and also Mullumbimby Rd. Vol 1894 Fol 227.
9/5/1911	Transfer of title to William Amos Bassett ( <b>farmer</b> )
10/5/1911	Transfer of title to Archibald Henderson Senior. Deed was cancelled and title issued as Vol 2213 Fol 126
?	Transfer of title to Geoffrey Arthur Henderson and Harry Berton Henderson (joint tenants) - <b>Farmers</b> . Vol 4923 Fol 220
19/3/1937	Title was cancelled under the public roads act (Mullumbimby Rd) and split into new titles. Vol 4923 Fol 220
27/4/1938	New title assigned to Geoffrey and Harry Henderson
8/7/1976	Certificate of title issued to? Copy of document is not legible
23/6/1977	Deposited plan created - 589795
11/8/1977	Alan Phillip Dixon ( <b>Farmer</b> ) and wife Margaret Dixon of North Tumbulgum Joint Tenants
26/6/1977	Vol 13354 Fol 139 was cancelled
23/10/1979	John Zeigler Huie and Beverley Ann Yeomans of Watsons Bay (50% share each) tenancy in common
23/8/1988	Title converted to computer folio
13/6/1989	Transfer
20/8/1991	Mortgage
14/6/1994	Local Government area amendment
7/6/1999	Transfer of mortgage
15/7/2013	Transfer of mortgage
15/9/2018	Department Dealing
8/2/2019	Transfer of mortgage

#### 3.2 Aerial Photography

The NSW Government Spatial Services Portal was viewed to identify historical aerial photographs that captured the site over time. From the available photographs, five were obtained for the years 1958, 1966, 1971, 1987, and 1997 to assess the land use activities that may be visually obvious. These photos are presented in Figures 3 to 7 within Appendix A.

In summary, the land use and layout has not changed significantly between the 1958 aerial photograph and the site walk over conducted in September 2020. In the 1958 photograph it appears a residential dwelling is present in the northern portion of the site near the entrance driveway, in this location a house is still present today.

- 1958 – 1966: No significant change onsite.
- 1966 – 1971: No significant change onsite.
- 1971 – 1987: The creek flowing east through the property has been dammed creating two surface water bodies. Some agriculture or landscaping is observed in the northern corner of the site adjacent to McAuleys Lane. In the elevated southern portion of the site a few linear vegetation patterns have emerged, tree planting? Potentially some quarrying activities offsite to the east are visible.
- 1987 – 1997: Vegetation observed in the previous photo has matured and the remainder of the site is relatively unchanged. Quarrying activities? offsite to the east have expanded and are clearly visible.

### 3.3 Cattle Dip Search Results

The Byron Shire Council mapping tool was viewed to identify any cattle dips that may have been on the site. The site of investigation did not have any, however, two were observed offsite to the east and west. The distance between these dips and the site would exclude the likely risk of soil contamination from onsite migration.

No cattle dips or similar structures were observed during site visit.

## 4 Contaminants

### 4.1 Possible Sources of Contamination

With the site's previous use as residential and cattle farming, the only identified potential source of contamination has been identified as:

- Agriculture
- Previous human occupation

### 4.2 Contaminants of Potential Concern (COPC)

Based on the review of the site history, contaminants of potential concern in surface soils are considered to include:

- Pesticides (Organochlorine and Organophosphate OCP/OPP)
- Heavy Metals/Metalloids (Arsenic, Cadmium, Chromium, Copper, Mercury, Nickel, Lead and Zinc)

Following a desktop review of site history and a site visit, there are no impacts expected on groundwater at the site resulting from previous use, and therefore, soil vapour and groundwater were not investigated (or considered necessary) as part of this PSI.

## 5 Guidelines/Criteria

The soil analytical results have been assessed with regard to the suitability of the site for the proposed residential subdivision. The following receptors have been identified as requiring protection:

- Human Health - Future occupants of the residential development
- Maintenance of Modified Ecosystems

The adopted guidelines associated with the protection of each identified receptor are detailed in the following sections. The guidelines have been sourced from the National Environment Protection Measure - Assessment of Site Contamination, as amended in 2013 (NEPM). The NEPM presents a range of guidelines applicable for the protection of receptors associated with land uses.

It is emphasised within the NEPM that the purpose of the guidelines is to provide a basis whereby the chemical profile for a site may be screened to identify conditions that may warrant further consideration of risks to human health or the environment. Therefore, the guidelines do not represent values above which remedial action or other site management measure would be required. Rather, the adopted guidelines provide an appropriate basis for identifying conditions which do not warrant any further consideration.

## 5.1 Ecological Criteria

The NEPM defines Ecological Investigation Levels (EILs) based on land use and soil properties (pH, cation exchange capacity, and clay content). As no assessment of soil properties has been undertaken at the site, the most conservative criteria have been adopted for the land use setting 'Residential/Public Open Space'. In addition to the EILs, the NEPM defines Ecological Screening Levels (ESLs) for hydrocarbons, based on the land use and soil type. The selected ESLs have been adopted for the land use 'Urban Residential/Public Open Space'. The selected soil texture 'fine' has been adopted as the site uppermost geology consists predominantly of clay loam.

## 5.2 Human Health Criteria

The NEPM provides Health-based Investigation Levels (HILs) and Health Screening Levels (HSLs) for a range of different land uses and soil types. The human health criteria for the site have been adopted for the land use setting 'Residential A', which includes garden accessible soil for home grown produce of <10% fruit and vegetable intake (no poultry). The selected soil texture 'clay' has been adopted as the site uppermost geology consists predominantly of clay loam.

TABLE 3 Assessment Criteria				
Element / Compound	Health-based Investigation Levels (mg/kg)			
	1*. Residential A	Residential B	Recreational C	Commercial/Industrial D
Metals				
Arsenic	100	500	300	3,000
Cadmium	20	150	90	900
Chromium (VI)	100	500	300	3,600
Copper	6,000	30,000	17,000	240,000
Lead	300	1,200	600	1,500
Nickel	400	1,200	1,200	6,000
Zinc	7,400	60,000	30,000	40,000
Mercury	40	120	80	730
Organochlorine Pesticides				
DDT+DDE+DDD	240	600	400	3600
Aldrin & Dieldrin	6	10	10	45
Chlordane	50	90	70	530
Endosulfan	270	400	340	2,000
Endrin	10	20	20	100
Heptachlor	6	10	10	50
HCB	10	15	10	80
Methoxychlor	300	500	400	2,500
Toxaphene	20	30	30	160

**Notes:** \* NEPC (2013) – Interim Health Investigation Levels. Residential Setting A (Low density residential) is the appropriate criteria for this assessment

### 5.3 Data Quality Objectives

Data quality objectives (DQOs) were developed to define the type and quality of data required to achieve the potential soil contamination assessment and, if required, remediation investigation objectives. Development of the DQOs was based on guidelines in the US EPA *Guidance for the Data Quality Objectives Process* (2000), and with reference to relevant guidelines published by the NSW EPA (1997 and 1998), ANZECC 2000, and NEPC 2013, which define minimum data requirements and quality control procedures.

The DQO process comprises a seven-step planning approach. Using this approach, CSI Aus has developed the sampling design for data collection activities that support the objectives of the soil investigation and facilitate decision-making. Table 4 below lists the seven steps and identifies the sections within this report that addresses those steps.

TABLE 4 Data Quality Objectives Process	
DQO Step	Discussion and Detailed description
1. Define the problem	A SEPP 55 investigation has been triggered by BSC for the rezoning. Assessment of site history from the site proposed to be rezoned has not previously been obtained and site history indicates rural and residential use only.
2. Identify the decision	If identified COPC are detected in surface soils exceed Tier 1 or Tier 2 Risk Assessment Criteria. If the 95% UCL does <u>not</u> exceed Tier 1 and/or Tier 2 Risk Assessment Criteria a human health pathway is considered to not exist.
3. Identify the inputs of the decision	Correct collection of soil samples, sample preservation and use of a NATA accredited laboratory. Surface soil samples collected from nine locations selected randomly and judgmentally across the site. Analysis of soil samples for 8 common heavy metals and persistent pesticides Tier 1, and if required Tier 2 Risk Assessment.
4. Define the investigation boundaries	The property boundary outlined in Section 2 Table 1.
5. Develop a decision rule – analytical approach	Acceptable limits for analytical approach are presented in Data Quality Indicators Table 5 below. The analytical method can achieve detection limits below Tier 1 Risk Assessment Criteria.
6. Specify tolerable limits on decision errors	The limits on decision errors expressed as per cent error for the investigative activities should be no greater than 10 per cent. The aggregate sampling and analysis error may be greater, but error resulting from sampling procedures or the nature of the sample matrix is not quantifiable. By implementing statistically valid sampling plan and adopting the 95% UCL to compare against the Tier 1 / 2 Risk Assessment Criteria we have adopted a 5% level of significance, i.e. adopting a 5% probability we will make the wrong decision (Type 1 / Type 2 error). The data must fall within the range of DQIs to be considered reliable.
7. Optimise the design for obtaining data	Presented in Sections 6 & 7 of this PSI. All available resources were used to collate historical data. Physical data was obtained by soil sampling and analysis, onsite inspection by certified and experienced staff.

## 5.4 Data Quality indicators

Quality Assurance and Quality Control QA/QC is tested by review of data against Data Quality Indicators (DQIs) to ensure data precision, accuracy, representativeness, comparability and completeness. A summary of DQIs for samples to be collected as part of the investigation are presented in the table below:

TABLE 5 Data Quality Indicators		
Data Quality Objectives	Frequency	Data Quality Indicator
Precision		
Duplicate samples	1 per 10 samples	RPD <50%
Accuracy		
Laboratory control samples	1 per day	General analytes recovery of 70–130%
Analysis blank	1 per day or batch	Non-detect
Representativeness		
Samples analysed within specified holding times	Soil Samples	<30 days. Within specific analyte holding times
Samples transported under COC conditions	N/A	All samples will be transported under chain of custody documentation
Reliability of field measured data	N/A	N/A
Comparability		
Industry best practice for all sample media	All samples, all analytes	Experienced staff
Consistent sampling techniques	All samples all analytes	Same staff and method for the project
Appropriate laboratory reporting limits	All samples, all analytes	PQL's must be below the adopted criteria
Completeness		
Appropriate sample design to meet objectives	N/A	PSI does not require analytical data because it is primarily a desktop assessment. For completeness surface soil sampling has been conducted based on site history review and site visit.

## 5.5 Field Data QA/QC Acceptance Criteria

For all samples, field sample QA/QC was conducted in accordance with AS 4482.1–2005 (Australian Standard, 2005) and consist of the following:

AS 4482.1–2005 (Australian Standard, 2005) indicates an acceptable RPD range of 30-50%, and that the variation can be expected to be higher for organic analysis than inorganics, and for low concentrations of analytes.

Field and Laboratory Quality Control/Quality Assurance (QA/QC) procedures were conducted in accordance with NEPC (2013) and AS 4482.1–2005.

All soil samples were collected in new sample media jars provided by the laboratory and the soil sampling trowel was thoroughly washed between sample locations to prevent cross contamination. Samples were not composited but rather individual samples taken from each location identified in Figure 2.

The acceptance criteria for QA/QC samples are detailed in Table 5 above:

## 5.6 Laboratory QA/QC

The nominated laboratory must comply with the minimum QA procedures documented in Schedule B(3) in NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure and include, but not be limited to:

- At least one analysis blank per batch
- Duplicate analysis at a rate of one per batch or one per ten samples, whichever is smaller
- Laboratory Control Samples at a rate of one per batch
- Matrix spikes, and
- Surrogate Spikes

A review of SGS's quality report in Appendix B indicates that all QA procedures were satisfactory and no significant outliers were reported.

In the event the acceptance criteria are not met, the variation is taken into consideration and its implications assessed in regard to the context of the investigation.

## 5.7 Transporting Samples

Before sample transportation, appropriate methods for test specific handling requirements were reviewed. Samples were transported and delivered within documented holding times using ice bricks to preserve samples. To avoid breakages, all glass containers were well cushioned. Samples were transported under chain of custody documentation directly to the laboratory. The original chain-of-custody record accompanied the samples to the analytical laboratory, see Appendix C.

## 5.8 Sampling Rationale

The desktop assessment did not identify any activities or previous site uses that would indicate the potential for contamination of soils or groundwater. As a secondary line of evidence to make an assessment of the sites' contamination status and suitability for residential use, nine primary soil samples were collected and analysed for completeness. If these samples detect concentrations of the COPC above the residential criteria, further investigation would be required.

Surface soil sample locations have been randomly selected and judgementally selected (cattle crush) to target the portion of the site to be developed for residential dwellings. Given the site history did not identify cattle dips, fuel tanks, industrial activities or other likely contamination sources, a small number of soil samples were obtained from across the site for spatial coverage.

Sample identification is as follows;

<b>Table 6 Sample location Identification</b>	
Sample ID from original lot plan (Fig 2)	Approximate location of sample on new plan (Fig 8)
MYL40	Lot CT. Common
MYL15	Lot CT Common
CY	Lot CT.10
MYL30	Lot CT.18
MYL31	Lot CT.22
MYL12	Lot CT.12
MYL2	Lot CT.26
MYL4	Lot CT.30
MYL23	Lot CT.13

The CY (Cattle yard) sample, was judgementally selected and collected from inside the cattle crush to assess if metals or pesticides had been introduced to the soils. See Figure 2 in Appendix A for sample locations. See Figure 8 for the proposed subdivision layout with reference to sample locations above.

As outlined in NSW government document “Consultants Reporting on Contaminated Land”, where a complete site history clearly shows that activities have been non-contaminating, there are no impacts from off-site contamination sources, and observations do not indicate any potential for contamination, there may be no need for further investigation or site sampling. As part of this PSI, samples were collected as a secondary line of evidence that contamination is *not* present at the site and to confirm the hypothesis that contamination is not an issue for the proposed development.

As Outlined in the NSW EPA’s “Sampling Design Guidelines” the number of samples collected should be determined by the investigator on a site-specific basis. For this PSI nine samples have been selected to get good site coverage for making the assessment of general soil conditions, and at the same time to identify any unexpected detections of contaminants of potential concern. The soil sampling frequency data table A in these design guidelines is only to be used as a guide and is generally used on sites where contamination is likely to be present as a result of industrial activity.

## 6 Conceptual Site Model (CSM)

National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (NEPC 2013) identifies a conceptual site model (CSM) as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments.

NEPC (2013) identified the essential elements of a CSM as including:

1. Known and potential sources of contamination and contaminants of concern including the mechanism(s) of contamination;
  - For this site the potential sources of contamination would be the potential for historical use of persistent pesticides.
2. Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air);
  - This would be expected to be limited to the surface soils at this site given its historical use for agriculture and *not* for industrial use.
3. Human and ecological receptors;
  - Human receptors would be likely given that the proposed future use is residential with access to soil for home grown produce. Ecological receptors also apply as the property has areas of E2 zoning
4. Potential and complete exposure pathways;
  - A complete pathway does exist for persistent pesticides in surface soils (if present).
5. Any potential preferential pathways for vapour migrations (if potential for vapours identified)
6. Given that volatile compounds are not a significant risk at this site, this pathway is not considered to be complete for this contaminant.
7. Data Gaps
  - Groundwater has not been assessed in this PSI due to the lack of evidence that would indicate groundwater contamination as an issue.

## 7 Results

The results for soil analysis have been summarised in Table 7 below. Laboratory certificate of analysis and QA/QC assessment is provided at the end of this report in Appendix B.

TABLE 7 Soil Analytical Results Summary												
Analyte	Criteria 1,2,3		Concentrations in mg/kg									
		PQL	MYL4	MYL2	MYL31	MYL30	MYL12	MYL15	CY	CY DUP	MYL23	MYL40
Arsenic	100	2	2	5	9	7	6	7	5	4	2	5
Cadmium	20	0.2	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	100	2	3.7	17	18	45	32	22	45	45	57	38
Copper	6,000	2	2.1	6.6	0.6	1.7	0.9	1.3	2.6	2.1	1.1	6.7
Lead	300	2	4	12	12	14	12	11	11	9	7	13
Nickel	400	2	0.6	0.8	0.8	4.9	3.9	9.4	11	12	11	13
Zinc	7,400	2	<2	70	6	29	22	32	36	33	33	93
Mercury	40	0.05	<0.05	<0.05	0.12	0.10	0.19	0.15	0.18	0.17	0.13	0.10
OCP/OPP - 37 compounds	7-260	1-1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes: NEPC (2013) – Interim Health Investigation Levels. Residential Setting A. (Low density residential).

ND = Non-Detect

OCP/OPP = Organochlorine and Organophosphate Pesticides

### 7.1 Discussion

The site history information did not identify likely contaminating activities. As can be seen from the results summary table above, there were no exceedances of the residential criteria or the more sensitive ecological criteria and all results for the compounds tested were either non-detect (OC/OP pesticides, and cadmium) or below the human health investigation limits (metals). The collection of further data is not considered to be warranted and the surface of the site is free of contamination in the areas sampled.

### 7.2 QA/QC

CSI Aus has completed a review of the Quality Assurance (QA) steps and Quality Control (QC) results, according to the data quality objectives defined in Section 5.6 and the following documents:

- NEPC, National Environment Protection (Assessment of Site Contamination) Measure, National Environment Protection Council (1999)
- US EPA Guidance on Environmental Data Verification and Data Validation (2002)

These documents include examining holding times, laboratory accreditation, sample preservation methods, a review of field quality control sample results and a review of laboratory quality control sample results.

SGS Australia (Sydney laboratory) was the chosen NATA accredited laboratory for soil analysis. The primary sample was identified as CY and the duplicate was identified as CY Dup. As can be seen from Table 6 below, all relative percentage difference (RPD) values met the +/-50% acceptance criteria.

TABLE 6 RPD Values			
Compound	CY	CY Dup	Relative Percentage Difference (%)
Arsenic	5	4	22.2
Cadmium	<0.3	<0.3	ND
Chromium	45	45	0.0
Copper	2.6	2.1	21.3
Lead	11	9	20.0
Nickel	11	12	-8.7
Zinc	36	33	8.7
Mercury	0.18	0.17	5.7
OCP	ND	ND	0.0
OPP	ND	ND	0.0

Good agreement between primary and duplicate samples indicates appropriate sampling technique in the field and appropriate quality control in the laboratory. Based on the DQI criteria being met, all analytical data collected in this investigation is considered to be representative of site conditions at the time of sampling and satisfactory for use in this assessment.

## 8 Concluding Comments

CSI Aus has undertaken a Preliminary Site Investigation at 53 McAuleys Lane, Myocum to assess the contamination status of the site under SEPP 55. A desktop review of available information and a site visit did *NOT* identify evidence of previous development or activities on the site that would suggest potentially contaminating activities had taken place within the area of focus. Analytical results from surface soils indicated all of the compounds tested returned concentrations that were below the adopted criteria for residential use.

Based on the sample data collected (nine primary surface soil samples) and the absence of contamination at the site, no further investigation is deemed warranted. A review of laboratory data against the data quality indicators outlined in this report, demonstrates that the data is representative and satisfactory for use in the assessment.

Therefore, the site is considered to be suitable for its intended use.

## 8.1 Unexpected Finds

During the construction phase of development (roads, sub-terranean services infrastructure and general earthworks), *if* unexpected finds are uncovered (old pipe work, storage tanks etc) work should cease until an experienced environmental scientist can inspect the material and make an assessment of the significance for site contamination. This would include any human-made structures uncovered during development. This PSI has been limited to desktop study and minor surface soil sampling.

## 9 Limitations

The findings of this report are based on the objectives and scope of work outlined above. CSI Aus performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment industry. No warranties or guarantees, express or implied, are made. Subject to the scope of work, CSI Aus' assessment is limited strictly to identifying typical environmental conditions associated with the subject property and does not include evaluation of any other issues.

This report does not comment on any regulatory obligations based on the findings, for which a legal opinion should be sought. This report relates only to the objectives and scope of work stated, and does not relate to any other works undertaken for the Client.

The report and conclusions are based on the information obtained at the time of the assessment. Changes to the subsurface conditions may occur subsequent to the investigation described herein, through natural process or through the intentional or accidental addition of contaminants, and these conditions may change with space and time.

The site history, and associated uses, areas of use, and potential contaminants, were determined based on the activities described in the scope of work. Additional site history information held by the Client, regulatory authorities, or in the public domain, which was not provided to CSI Aus or was not sourced by CSI Aus under the scope of work, may identify additional uses, areas of use and/or potential contaminants. The information sources referenced have been used to determine site history and desktop information regarding local subsurface conditions. While CSI Aus has used reasonable care to avoid reliance on data and information that is inaccurate or unsuitable, CSI Aus is not able to verify the accuracy or completeness of all information and data made available.

Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history, and which may not be expected at the site. The absence of any identified hazardous or toxic materials on the subject property should not be interpreted as a warranty or guarantee that such materials do not exist on the site. If additional certainty is required, additional site history or desktop studies, or environmental sampling and analysis, should be commissioned.

The results of this assessment are based upon site inspection and fieldwork conducted by CSI Aus personnel and information provided by the Client. Samples were collected at specific locations and should be considered to be an approximation of the condition of the sample. All conclusions regarding the property area are the professional opinions of CSI Aus personnel involved with the project, subject to the qualifications made above.

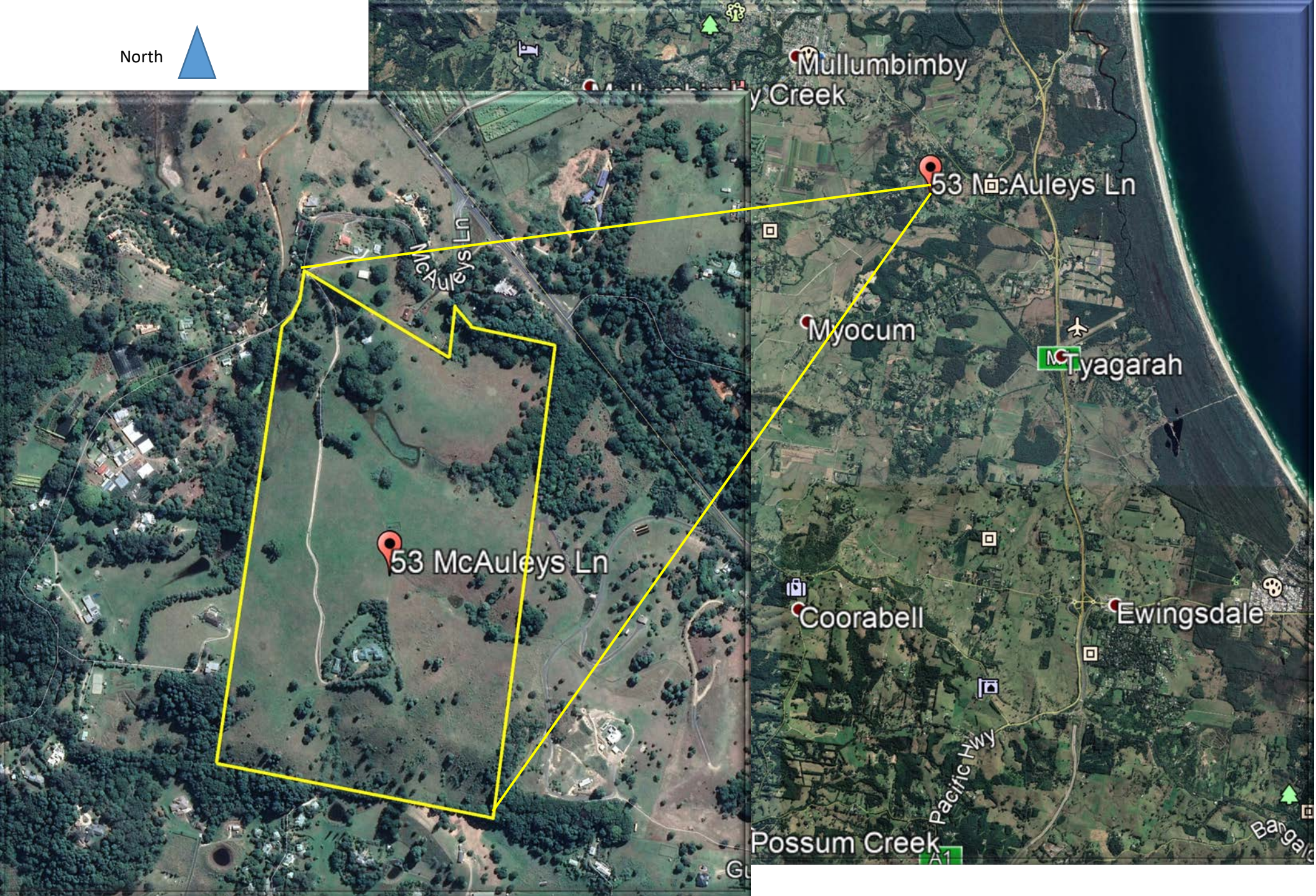
While normal assessments of data reliability have been made, CSI Aus assumes no responsibility or liability for errors in any data obtained from regulatory agencies, information from sources outside of CSI Aus. CSI Aus

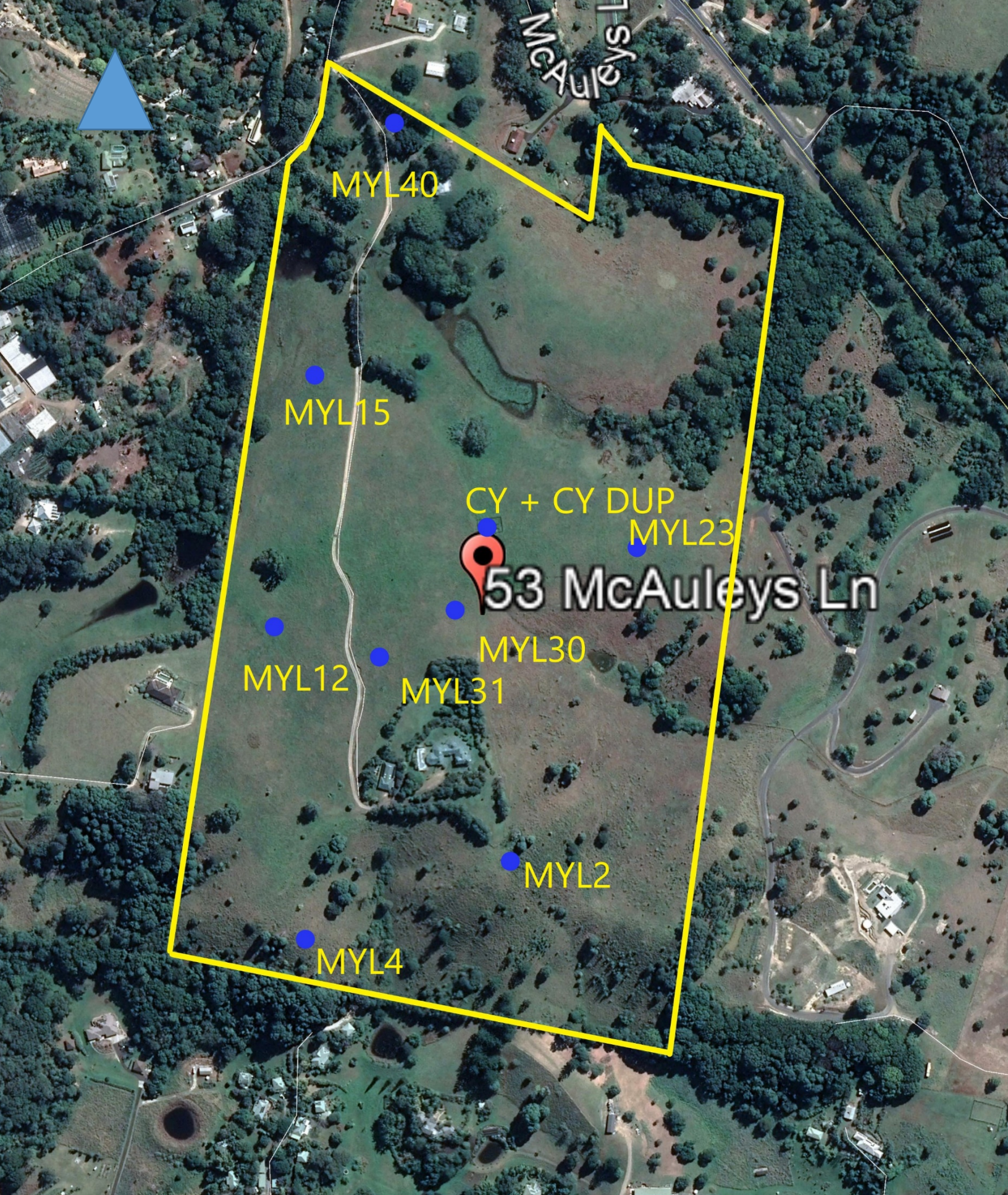
accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this document for a purpose other than that described above.

No part of this report may be reproduced, stored or transmitted in any form without the prior consent of CSI Aus.

## APPENDIX A – FIGURES

North





North



North



North



North



North



NORTH



PROJECT	MCAULEYS LANE SUBDIVISION	DRAWING	CONCEPT MASTERPLAN - FINAL
ADDRESS	53 MCAULEYS LN	DATE	12/10/2020
CLIENT	MYOCUM NSW	SCALE	1:1000
DOCUMENT	PLANNING PROPOSAL	DRAWING NO.	DA 18 100

VENU

## APPENDIX B – LABORATORY REPORTS



**Contaminated Site Investigations  
Australia Pty Ltd**

## CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 1 of 2

Company Name: CSI Australia P/L

Project Name/No: ~~0111 Evans Head~~ 2218 Myocum

Address: 933 Wardell Rd Meerschaum Vale

Purchase Order No:


Results Required By: Normal TAT

Telephone: 0499 859 528

Contact Name: Dane Egelton

Facsimile:

Email Results: [dane@csiaus.com.au](mailto:dane@csiaus.com.au)

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	TBT, DBT & MBT	TCLP Extraction	Organotins on TCLP	Metals (8)	OCPP / OPP	SGS EHS Sydney COC <b>SE211193</b> 									
MYL4	14/9/20	1		X	5	X	•			✓	✓	<div style="text-align: right;">Duplicate</div>									
MYL2		2							✓	✓											
MYL31		3							✓	✓											
MYL30		4							✓	✓											
MYL12		5							✓	✓											
MYL15		6							✓	✓											
CY		7							✓	✓											
CY Dup		8							✓	✓											
MYL23		9							✓	✓											
Relinquished By: <u>Dane Egelton</u>			Date/Time: <u>14/9/20</u> <u>4pm</u>			Received By: <u>[Signature]</u>			Date/Time: <u>16/09/20 @ 9.25</u>												
Relinquished By: <u>[Signature]</u>			Date/Time:			Received By:			Date/Time:												
Samples Intact: <u>Yes</u> / No			Temperature: Ambient / <u>Chilled</u>			Sample Cooler Sealed: Yes / No			Laboratory Quotation No:												
Comments																					

Page 2 of 2

2218 Myocum

Email Results: [dane@csiaus.com.au](mailto:dane@csiaus.com.au)

[illegible]



## SAMPLE RECEIPT ADVICE

SE211193

### CLIENT DETAILS

Contact DANE EGELTON  
Client CSI AUSTRALIA  
Address PO BOX 389  
ALSTONVILLE NSW 2477

Telephone (Not specified)  
Facsimile (Not specified)  
Email dane@csiaus.com.au

Project **2218 Myocum**  
Order Number (Not specified)  
Samples 10

### LABORATORY DETAILS

Manager Huong Crawford  
Laboratory SGS Alexandria Environmental  
Address Unit 16, 33 Maddox St  
Alexandria NSW 2015

Telephone +61 2 8594 0400  
Facsimile +61 2 8594 0499  
Email au.environmental.sydney@sgs.com

Samples Received Wed 16/9/2020  
Report Due Wed 23/9/2020  
SGS Reference **SE211193**

### SUBMISSION DETAILS

This is to confirm that 10 samples were received on Wednesday 16/9/2020. Results are expected to be ready by COB Wednesday 23/9/2020. Please quote SGS reference SE211193 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	10 Soil
Date documentation received	16/9/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	14.5°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

### COMMENTS

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.



## SAMPLE RECEIPT ADVICE

SE211193

### CLIENT DETAILS

Client **CSI AUSTRALIA**

Project **2218 Myocum**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	Moisture Content	OC Pesticides in Soil	OP Pesticides in Soil	Total Recoverable Elements in Soil/Waste
001	MYL4	1	1	29	14	7
002	MYL2	1	1	29	14	7
003	MYL31	1	1	29	14	7
004	MYL30	1	1	29	14	7
005	MYL12	1	1	29	14	7
006	MYL15	1	1	29	14	7
007	CY	1	1	29	14	7
008	CY DUP	1	1	29	14	7
009	MYL23	1	1	29	14	7
010	MYL40	1	1	29	14	7

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

## CLIENT DETAILS

Contact **DANE EGELTON**  
 Client **CSI AUSTRALIA**  
 Address **PO BOX 389  
 ALSTONVILLE NSW 2477**

Telephone (Not specified)  
 Facsimile (Not specified)  
 Email **dane@csiaus.com.au**

Project **2218 Myocum**  
 Order Number (Not specified)  
 Samples **10**

## LABORATORY DETAILS

Manager **Huong Crawford**  
 Laboratory **SGS Alexandria Environmental**  
 Address **Unit 16, 33 Maddox St  
 Alexandria NSW 2015**

Telephone **+61 2 8594 0400**  
 Facsimile **+61 2 8594 0499**  
 Email **au.environmental.sydney@sgs.com**

SGS Reference **SE211193 R0**  
 Date Received **16 Sep 2020**  
 Date Reported **22 Sep 2020**

## COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).


## SIGNATORIES



**Akheeque BENIAMEEN**  
 Chemist



**Bennet LO**  
 Senior Organic Chemist/Metals Chemis



**Dong LIANG**  
 Metals/Inorganics Team Leader



**Kamrul AHSAN**  
 Senior Chemist

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE211193.001 Soil 14 Sep 2020 MYL4	SE211193.002 Soil 14 Sep 2020 MYL2	SE211193.003 Soil 14 Sep 2020 MYL31	SE211193.004 Soil 14 Sep 2020 MYL30
-----------	-------	-----	--	---	---	--	--

### OC Pesticides in Soil Method: AN420 Tested: 18/9/2020

Hexachlorobenzene (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
Lindane	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
Aldrin	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
Delta BHC	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
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
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
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	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
Endrin Aldehyde	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
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1

### Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	101	97	95	102
---	---	---	-----	----	----	-----

### OP Pesticides in Soil Method: AN420 Tested: 18/9/2020

Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7

### Surrogates

2-fluorobiphenyl (Surrogate)	%	-	99	98	99	94
d14-p-terphenyl (Surrogate)	%	-	84	87	86	85

### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 16/9/2020

Arsenic, As	mg/kg	1	2	5	9	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	3.7	17	18	45
Copper, Cu	mg/kg	0.5	2.1	6.6	0.6	1.7
Nickel, Ni	mg/kg	0.5	0.6	0.8	0.8	4.9
Lead, Pb	mg/kg	1	4	12	12	14
Zinc, Zn	mg/kg	2	<2	70	6	29

Parameter	Units	LOR	Sample Number	SE211193.001	SE211193.002	SE211193.003	SE211193.004
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	14 Sep 2020	14 Sep 2020	14 Sep 2020	14 Sep 2020
			Sample Name	MYL4	MYL2	MYL31	MYL30

**Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES** Method: AN040/AN320 Tested: 16/9/2020 (continued)

**Mercury in Soil** Method: AN312 Tested: 16/9/2020

Mercury	mg/kg	0.05	<0.05	<0.05	0.12	0.10
---------	-------	------	-------	-------	------	------

**Moisture Content** Method: AN002 Tested: 18/9/2020

% Moisture	%w/w	1	12.2	36.8	17.2	30.8
------------	------	---	------	------	------	------

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE211193.005 Soil 14 Sep 2020 MYL12	SE211193.006 Soil 14 Sep 2020 MYL15	SE211193.007 Soil 14 Sep 2020 CY	SE211193.008 Soil 14 Sep 2020 CY DUP
-----------	-------	-----	--	--	--	---	---

## OC Pesticides in Soil Method: AN420 Tested: 18/9/2020

Hexachlorobenzene (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
Lindane	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
Aldrin	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
Delta BHC	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
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
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
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	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
Endrin Aldehyde	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
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1

## Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	99	96	99	99
---	---	---	----	----	----	----

## OP Pesticides in Soil Method: AN420 Tested: 18/9/2020

Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Methodathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7

## Surrogates

2-fluorobiphenyl (Surrogate)	%	-	96	95	89	90
d14-p-terphenyl (Surrogate)	%	-	84	89	85	83

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 16/9/2020

Arsenic, As	mg/kg	1	6	7	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	32	22	45	45
Copper, Cu	mg/kg	0.5	0.9	1.3	2.6	2.1
Nickel, Ni	mg/kg	0.5	3.9	9.4	11	12
Lead, Pb	mg/kg	1	12	11	11	9
Zinc, Zn	mg/kg	2	22	32	36	33

		Sample Number	SE211193.005	SE211193.006	SE211193.007	SE211193.008
		Sample Matrix	Soil	Soil	Soil	Soil
		Sample Date	14 Sep 2020	14 Sep 2020	14 Sep 2020	14 Sep 2020
		Sample Name	MYL12	MYL15	CY	CY DUP
Parameter	Units	LOR				

**Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES** Method: AN040/AN320 Tested: 16/9/2020 (continued)

**Mercury in Soil** Method: AN312 Tested: 16/9/2020

Mercury	mg/kg	0.05	0.19	0.15	0.18	0.17
---------	-------	------	------	------	------	------

**Moisture Content** Method: AN002 Tested: 18/9/2020

% Moisture	%w/w	1	31.5	20.6	21.6	23.8
------------	------	---	------	------	------	------

		Sample Number	SE211193.009	SE211193.010
		Sample Matrix	Soil	Soil
		Sample Date	14 Sep 2020	14 Sep 2020
		Sample Name	MYL23	MYL40
Parameter	Units	LOR		

### OC Pesticides in Soil Method: AN420 Tested: 18/9/2020

Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1

### Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	101	103
---	---	---	-----	-----

### OP Pesticides in Soil Method: AN420 Tested: 18/9/2020

Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

### Surrogates

2-fluorobiphenyl (Surrogate)	%	-	94	95
d14-p-terphenyl (Surrogate)	%	-	84	81

		Sample Number	SE211193.009	SE211193.010
		Sample Matrix	Soil	Soil
		Sample Date	14 Sep 2020	14 Sep 2020
		Sample Name	MYL23	MYL40
Parameter	Units	LOR		

**Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 16/9/2020**

Arsenic, As	mg/kg	1	<b>2</b>	<b>5</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>57</b>	<b>38</b>
Copper, Cu	mg/kg	0.5	<b>1.1</b>	<b>6.7</b>
Nickel, Ni	mg/kg	0.5	<b>11</b>	<b>13</b>
Lead, Pb	mg/kg	1	<b>7</b>	<b>13</b>
Zinc, Zn	mg/kg	2	<b>33</b>	<b>93</b>

**Mercury in Soil Method: AN312 Tested: 16/9/2020**

Mercury	mg/kg	0.05	<b>0.13</b>	<b>0.10</b>
---------	-------	------	-------------	-------------

**Moisture Content Method: AN002 Tested: 18/9/2020**

% Moisture	%w/w	1	<b>29.4</b>	<b>29.6</b>
------------	------	---	-------------	-------------

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB209282	mg/kg	0.05	<0.05	0 - 6%	105%	86%

### Moisture Content Method: ME-(AU)-[ENV]AN002

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB209436	%w/w	1	2 - 8%

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Hexachlorobenzene (HCB)	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Alpha BHC	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Lindane	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Heptachlor	LB209434	mg/kg	0.1	<0.1	0%	86%	116%
Aldrin	LB209434	mg/kg	0.1	<0.1	0%	90%	103%
Beta BHC	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Delta BHC	LB209434	mg/kg	0.1	<0.1	0%	89%	102%
Heptachlor epoxide	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
o,p'-DDE	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Alpha Endosulfan	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
Gamma Chlordane	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Alpha Chlordane	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
trans-Nonachlor	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
p,p'-DDE	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Dieldrin	LB209434	mg/kg	0.2	<0.2	0%	88%	100%
Endrin	LB209434	mg/kg	0.2	<0.2	0%	87%	107%
o,p'-DDD	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
o,p'-DDT	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Beta Endosulfan	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
p,p'-DDD	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
p,p'-DDT	LB209434	mg/kg	0.1	<0.1	0%	62%	91%
Endosulfan sulphate	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Endrin Aldehyde	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Methoxychlor	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Endrin Ketone	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Isodrin	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Mirex	LB209434	mg/kg	0.1	<0.1	0%	NA	NA
Total CLP OC Pesticides	LB209434	mg/kg	1	<1	0%	NA	NA

### Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB209434	%	-	92%	4 - 5%	93%	103%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

### OP Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dichlorvos	LB209434	mg/kg	0.5	<0.5	0%	110%	104%
Dimethoate	LB209434	mg/kg	0.5	<0.5	0%	NA	NA
Diazinon (Dimpylate)	LB209434	mg/kg	0.5	<0.5	0%	98%	101%
Fenitrothion	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
Malathion	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	LB209434	mg/kg	0.2	<0.2	0%	108%	110%
Parathion-ethyl (Parathion)	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
Bromophos Ethyl	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
Methidathion	LB209434	mg/kg	0.5	<0.5	0%	NA	NA
Ethion	LB209434	mg/kg	0.2	<0.2	0%	68%	74%
Azinphos-methyl (Guthion)	LB209434	mg/kg	0.2	<0.2	0%	NA	NA
Total OP Pesticides*	LB209434	mg/kg	1.7	<1.7	0%	NA	NA

### Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
2-fluorobiphenyl (Surrogate)	LB209434	%	-	97%	8%	89%	94%
d14-p-terphenyl (Surrogate)	LB209434	%	-	91%	8%	72%	79%

### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: ME-(AU)-[ENV]AN040/AN320

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB209277	mg/kg	1	<1	3 - 10%	100%	96%
Cadmium, Cd	LB209277	mg/kg	0.3	<0.3	0 - 7%	92%	85%
Chromium, Cr	LB209277	mg/kg	0.5	<0.5	5 - 10%	101%	101%
Copper, Cu	LB209277	mg/kg	0.5	<0.5	4 - 5%	101%	97%
Nickel, Ni	LB209277	mg/kg	0.5	<0.5	3 - 5%	100%	97%
Lead, Pb	LB209277	mg/kg	1	<1	3 - 18%	103%	99%
Zinc, Zn	LB209277	mg/kg	2	<2	9 - 44%	101%	97%

### METHOD

### METHODOLOGY SUMMARY

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

AN040

A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

AN040/AN320

A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

AN312

Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

AN420

SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

## FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
**	Indicative data, theoretical holding time exceeded.	QFL	QC result is below the lower tolerance
***	Indicates that both * and ** apply.	-	The sample was not analysed for this analyte
		NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.  
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

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

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/en-gb/environment-health-and-safety](http://www.sgs.com.au/en-gb/environment-health-and-safety).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or



## STATEMENT OF QA/QC PERFORMANCE

SE211193 R0

### CLIENT DETAILS

Contact DANE EGELTON  
Client CSI AUSTRALIA  
Address PO BOX 389  
ALSTONVILLE NSW 2477

Telephone (Not specified)  
Facsimile (Not specified)  
Email dane@csiaus.com.au

Project **2218 Myocum**  
Order Number (Not specified)  
Samples 10

### LABORATORY DETAILS

Manager Huong Crawford  
Laboratory SGS Alexandria Environmental  
Address Unit 16, 33 Maddox St  
Alexandria NSW 2015

Telephone +61 2 8594 0400  
Facsimile +61 2 8594 0499  
Email au.environmental.sydney@sgs.com

SGS Reference **SE211193 R0**  
Date Received 16 Sep 2020  
Date Reported 22 Sep 2020

### COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

1 item

### SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	10 Soil
Date documentation received	16/9/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	14.5°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

## Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MYL4	SE211193.001	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL2	SE211193.002	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL31	SE211193.003	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL30	SE211193.004	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL12	SE211193.005	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL15	SE211193.006	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
CY	SE211193.007	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
CY DUP	SE211193.008	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL23	SE211193.009	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020
MYL40	SE211193.010	LB209282	14 Sep 2020	16 Sep 2020	12 Oct 2020	16 Sep 2020	12 Oct 2020	21 Sep 2020

## Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MYL4	SE211193.001	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL2	SE211193.002	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL31	SE211193.003	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL30	SE211193.004	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL12	SE211193.005	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL15	SE211193.006	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
CY	SE211193.007	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
CY DUP	SE211193.008	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL23	SE211193.009	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020
MYL40	SE211193.010	LB209436	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	23 Sep 2020	21 Sep 2020

## OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MYL4	SE211193.001	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL2	SE211193.002	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL31	SE211193.003	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL30	SE211193.004	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL12	SE211193.005	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL15	SE211193.006	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
CY	SE211193.007	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
CY DUP	SE211193.008	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL23	SE211193.009	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020
MYL40	SE211193.010	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	22 Sep 2020

## OP Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MYL4	SE211193.001	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL2	SE211193.002	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL31	SE211193.003	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL30	SE211193.004	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL12	SE211193.005	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL15	SE211193.006	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
CY	SE211193.007	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
CY DUP	SE211193.008	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL23	SE211193.009	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020
MYL40	SE211193.010	LB209434	14 Sep 2020	16 Sep 2020	28 Sep 2020	18 Sep 2020	28 Oct 2020	21 Sep 2020

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-ENVJAN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MYL4	SE211193.001	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL2	SE211193.002	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL31	SE211193.003	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL30	SE211193.004	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL12	SE211193.005	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL15	SE211193.006	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
CY	SE211193.007	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
CY DUP	SE211193.008	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL23	SE211193.009	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020
MYL40	SE211193.010	LB209277	14 Sep 2020	16 Sep 2020	13 Mar 2021	16 Sep 2020	13 Mar 2021	21 Sep 2020

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	MYL4	SE211193.001	%	60 - 130%	101
	MYL2	SE211193.002	%	60 - 130%	97
	MYL31	SE211193.003	%	60 - 130%	95
	MYL30	SE211193.004	%	60 - 130%	102
	MYL12	SE211193.005	%	60 - 130%	99
	MYL15	SE211193.006	%	60 - 130%	96
	CY	SE211193.007	%	60 - 130%	99
	CY DUP	SE211193.008	%	60 - 130%	99
	MYL23	SE211193.009	%	60 - 130%	101
	MYL40	SE211193.010	%	60 - 130%	103

## OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	MYL4	SE211193.001	%	60 - 130%	99
	MYL2	SE211193.002	%	60 - 130%	98
	MYL31	SE211193.003	%	60 - 130%	99
	MYL30	SE211193.004	%	60 - 130%	94
	MYL12	SE211193.005	%	60 - 130%	96
	MYL15	SE211193.006	%	60 - 130%	95
	CY	SE211193.007	%	60 - 130%	89
	CY DUP	SE211193.008	%	60 - 130%	90
	MYL23	SE211193.009	%	60 - 130%	94
	MYL40	SE211193.010	%	60 - 130%	95
d14-p-terphenyl (Surrogate)	MYL4	SE211193.001	%	60 - 130%	84
	MYL2	SE211193.002	%	60 - 130%	87
	MYL31	SE211193.003	%	60 - 130%	86
	MYL30	SE211193.004	%	60 - 130%	85
	MYL12	SE211193.005	%	60 - 130%	84
	MYL15	SE211193.006	%	60 - 130%	89
	CY	SE211193.007	%	60 - 130%	85
	CY DUP	SE211193.008	%	60 - 130%	83
	MYL23	SE211193.009	%	60 - 130%	84
	MYL40	SE211193.010	%	60 - 130%	81

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB209282.001	Mercury	mg/kg	0.05	<0.05

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB209434.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	92

## OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB209434.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	97
	d14-p-terphenyl (Surrogate)	%	-	91
Surrogates				

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB209277.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE211193.010	LB209282.014	Mercury	mg/kg	0.05	0.10	0.11	79	6
SE211210.001	LB209282.019	Mercury	mg/kg	0.05	0.01895411970.0309373072		200	0

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE211193.002	LB209436.011	% Moisture	%w/w	1	36.8	36.1	33	2
SE211260.066	LB209436.022	% Moisture	%w/w	1	19.32543299907.7800616645		35	8
SE211260.069	LB209436.026	% Moisture	%w/w	1	28.95752895727.3764258555		34	6

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE211193.006	LB209434.029	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
SE211193.010	LB209434.031	Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	30	5
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE211193.010	LB209434.031	p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.15	30	4

## OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE211193.006	LB209434.029	Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	8	
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	8	

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE211193.010	LB209277.014	Arsenic, As	mg/kg	1	5	6	49	10
		Cadmium, Cd	mg/kg	0.3	<0.3	0.3	139	7
		Chromium, Cr	mg/kg	0.5	38	37	31	5
		Copper, Cu	mg/kg	0.5	6.7	6.4	38	4
		Nickel, Ni	mg/kg	0.5	13	13	34	3
		Lead, Pb	mg/kg	1	13	11	38	18
		Zinc, Zn	mg/kg	2	93	60	33	44 @
SE211210.001	LB209277.024	Arsenic, As	mg/kg	1	9.38899396619.6499646774		41	3
		Cadmium, Cd	mg/kg	0.3	0.04997099090.0777327419		200	0
		Chromium, Cr	mg/kg	0.5	11.21571130192.3600107255		34	10
		Copper, Cu	mg/kg	0.5	10.53883151541.0456207255		35	5
		Nickel, Ni	mg/kg	0.5	2.68278602922.8160452419		48	5
		Lead, Pb	mg/kg	1	14.119076351513.6602675		37	3
		Zinc, Zn	mg/kg	2	13.48661522394.7576115322		44	9

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB209282.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	105

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB209434.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	86
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	90
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	89
	Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	88
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
	p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	62
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	93

## OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB209434.002	Dichlorvos	mg/kg	0.5	2.2	2	60 - 140	110
	Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	98
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.2	2	60 - 140	108
	Ethion	mg/kg	0.2	1.4	2	60 - 140	68
Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	72

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB209277.002	Arsenic, As	mg/kg	1	320	318.22	80 - 120	100
	Cadmium, Cd	mg/kg	0.3	5.0	5.41	80 - 120	92
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	101
	Copper, Cu	mg/kg	0.5	290	290	80 - 120	101
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	270	273	80 - 120	101

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE211193.001	LB209282.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	86

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE211289.001	LB209434.030	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	0	-	-
		Alpha BHC	mg/kg	0.1	<0.1	0	-	-
		Lindane	mg/kg	0.1	<0.1	0	-	-
		Heptachlor	mg/kg	0.1	0.2	0	0.2	116
		Aldrin	mg/kg	0.1	0.2	0	0.2	103
		Beta BHC	mg/kg	0.1	<0.1	0	-	-
		Delta BHC	mg/kg	0.1	0.2	0	0.2	102
		Heptachlor epoxide	mg/kg	0.1	<0.1	0	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	0	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	0	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	0	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	0	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	0	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	0	-	-
		Dieldrin	mg/kg	0.2	0.2	0	0.2	100
		Endrin	mg/kg	0.2	0.2	0	0.2	107
		o,p'-DDD	mg/kg	0.1	<0.1	0	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	0	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	0	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	0	-	-
		p,p'-DDT	mg/kg	0.1	0.2	0	0.2	91
		Endosulfan sulphate	mg/kg	0.1	<0.1	0	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	0	-	-
		Methoxychlor	mg/kg	0.1	<0.1	0	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	0	-	-
		Isodrin	mg/kg	0.1	<0.1	0	-	-
		Mirex	mg/kg	0.1	<0.1	0	-	-
		Total CLP OC Pesticides	mg/kg	1	1	0	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.161	-	103

## OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE211290.002	LB209434.028	Dichlorvos	mg/kg	0.5	2.1	0	2	104
		Dimethoate	mg/kg	0.5	<0.5	0	-	-
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	0.02092063837	2	101
		Fenitrothion	mg/kg	0.2	<0.2	0.00561558003	-	-
		Malathion	mg/kg	0.2	<0.2	0	-	-
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.2	0	2	110
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	0	-	-
		Bromophos Ethyl	mg/kg	0.2	<0.2	0	-	-
		Methidathion	mg/kg	0.5	<0.5	0	-	-
		Ethion	mg/kg	0.2	1.5	0.00129300984	2	74
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	0.00227157492	-	-
		Total OP Pesticides*	mg/kg	1.7	7.8	0	-	-
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.49171949662	-	94
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.38907454989	-	79

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE211193.001	LB209277.004	Arsenic, As	mg/kg	1	50	2	50	96
		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	85
		Chromium, Cr	mg/kg	0.5	54	3.7	50	101
		Copper, Cu	mg/kg	0.5	51	2.1	50	97
		Nickel, Ni	mg/kg	0.5	49	0.6	50	97
		Lead, Pb	mg/kg	1	54	4	50	99
		Zinc, Zn	mg/kg	2	50	<2	50	97

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022\\_QA\\_QC\\_Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf)

- \* NATA accreditation does not cover the performance of this service.
- \*\* Indicative data, theoretical holding time exceeded.
- \*\*\* Indicates that both \* and \*\* apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- ⑩ LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

## APPENDIX C – HISTORICAL TITLE SEARCH INFORMATION



# LAND REGISTRY SERVICES

## NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 8/589795

SEARCH DATE	TIME	EDITION NO	DATE
12/10/2020	12:23 PM	6	8/2/2019

### LAND

LOT 8 IN DEPOSITED PLAN 589795  
LOCAL GOVERNMENT AREA BYRON  
PARISH OF BRUNSWICK COUNTY OF ROUS  
TITLE DIAGRAM DP589795

### FIRST SCHEDULE

BALANCE DESIGN CONSULTANTS LIMITED (T AP51494)

### SECOND SCHEDULE (1 NOTIFICATION)

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

### NOTATIONS

UNREGISTERED DEALINGS: NIL

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

HAZ-MARK-

PRINTED ON 12/10/2020

\* 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.

Hazlett Information Services 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 1900.

Date and Time of Search: Mon Oct 12 12:23:12 2020  
© Office of the Registrar-General 2018



Level 4, 122 Castlereagh Street, Sydney 2000 | DX 1078 SYDNEY | GPO Box 96, Sydney 2001  
Ph: 02 92615211 Fax: 02 92647752 | R Hazlett & Co. ABN 20 104 470 340 | www.hazlett.com.au



# LAND REGISTRY SERVICES

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

12/10/2020 2:35PM

FOLIO: 8/589795

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 13354 FOL 139

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/8/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
13/6/1989	Y423021	DISCHARGE OF MORTGAGE	
13/6/1989	Y423022	TRANSFER	EDITION 1
20/8/1991	Z859223	MORTGAGE	EDITION 2
14/6/1994		AMENDMENT: LOCAL GOVT AREA	
7/6/1999	5883551	DISCHARGE OF MORTGAGE	
7/6/1999	5883552	TRANSFER	
7/6/1999	5883553	MORTGAGE	EDITION 3
15/7/2013	AH876864	DISCHARGE OF MORTGAGE	
15/7/2013	AH876865	MORTGAGE	EDITION 4
15/9/2018	AN713159	DEPARTMENTAL DEALING	EDITION 5 CORD ISSUED
8/2/2019	AP51493	DISCHARGE OF MORTGAGE	
8/2/2019	AP51494	TRANSFER	EDITION 6

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

HAZ-MARK-

PRINTED ON 12/10/2020

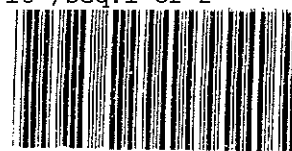
Hazlett Information Services hereby certifies that the information contained in this document has been provided electronically by the Registrar-General in accordance with Section 96B(2) of the Real Property Act 1900.

Date and Time of Search: Mon Oct 12 14:35:58 2020  
© Office of the Registrar-General 2018



Level 4, 122 Castlereagh Street, Sydney 2000 | DX 1078 SYDNEY | GPO Box 96, Sydney 2001  
Ph: 02 92615211 Fax: 02 92647752 | R Hazlett & Co. ABN 20 104 470 340 | www.hazlett.com.au

DATE	STATE OF TITLE
1961	1961
1962	1962
1963	1963
1964	1964
1965	1965
1966	1966
1967	1967
1968	1968
1969	1969
1970	1970
1971	1971
1972	1972
1973	1973
1974	1974
1975	1975
1976	1976
1977	1977
1978	1978
1979	1979
1980	1980
1981	1981
1982	1982
1983	1983
1984	1984
1985	1985
1986	1986
1987	1987
1988	1988
1989	1989
1990	1990
1991	1991
1992	1992
1993	1993
1994	1994
1995	1995
1996	1996
1997	1997
1998	1998
1999	1999
2000	2000
2001	2001
2002	2002
2003	2003
2004	2004
2005	2005
2006	2006
2007	2007
2008	2008
2009	2009
2010	2010
2011	2011
2012	2012
2013	2013
2014	2014
2015	2015
2016	2016
2017	2017
2018	2018
2019	2019
2020	2020
2021	2021
2022	2022
2023	2023
2024	2024
2025	2025
2026	2026
2027	2027
2028	2028
2029	2029
2030	2030
2031	2031
2032	2032
2033	2033
2034	2034
2035	2035
2036	2036
2037	2037
2038	2038
2039	2039
2040	2040
2041	2041
2042	2042
2043	2043
2044	2044
2045	2045
2046	2046
2047	2047
2048	2048
2049	2049
2050	2050
2051	2051
2052	2052
2053	2053
2054	2054
2055	2055
2056	2056
2057	2057
2058	2058
2059	2059
2060	2060
2061	2061
2062	2062
2063	2063
2064	2064
2065	2065
2066	2066
2067	2067
2068	2068
2069	2069
2070	2070
2071	2071
2072	2072
2073	2073
2074	2074
2075	2075
2076	2076
2077	2077
2078	2078
2079	2079
2080	2080
2081	2081
2082	2082
2083	2083
2084	2084
2085	2085
2086	2086
2087	2087
2088	2088
2089	2089
2090	2090
2091	2091
2092	2092
2093	2093
2094	2094
2095	2095
2096	2096
2097	2097
2098	2098
2099	2099
2100	2100
2101	2101
2102	2102
2103	2103
2104	2104
2105	2105
2106	2106
2107	2107
2108	2108
2109	2109
2110	2110
21	

**PROPERTY ACT, 1900**

1100

Vol. 13086 Fol. 146

**EDITION ISSUED**

8 7 1976



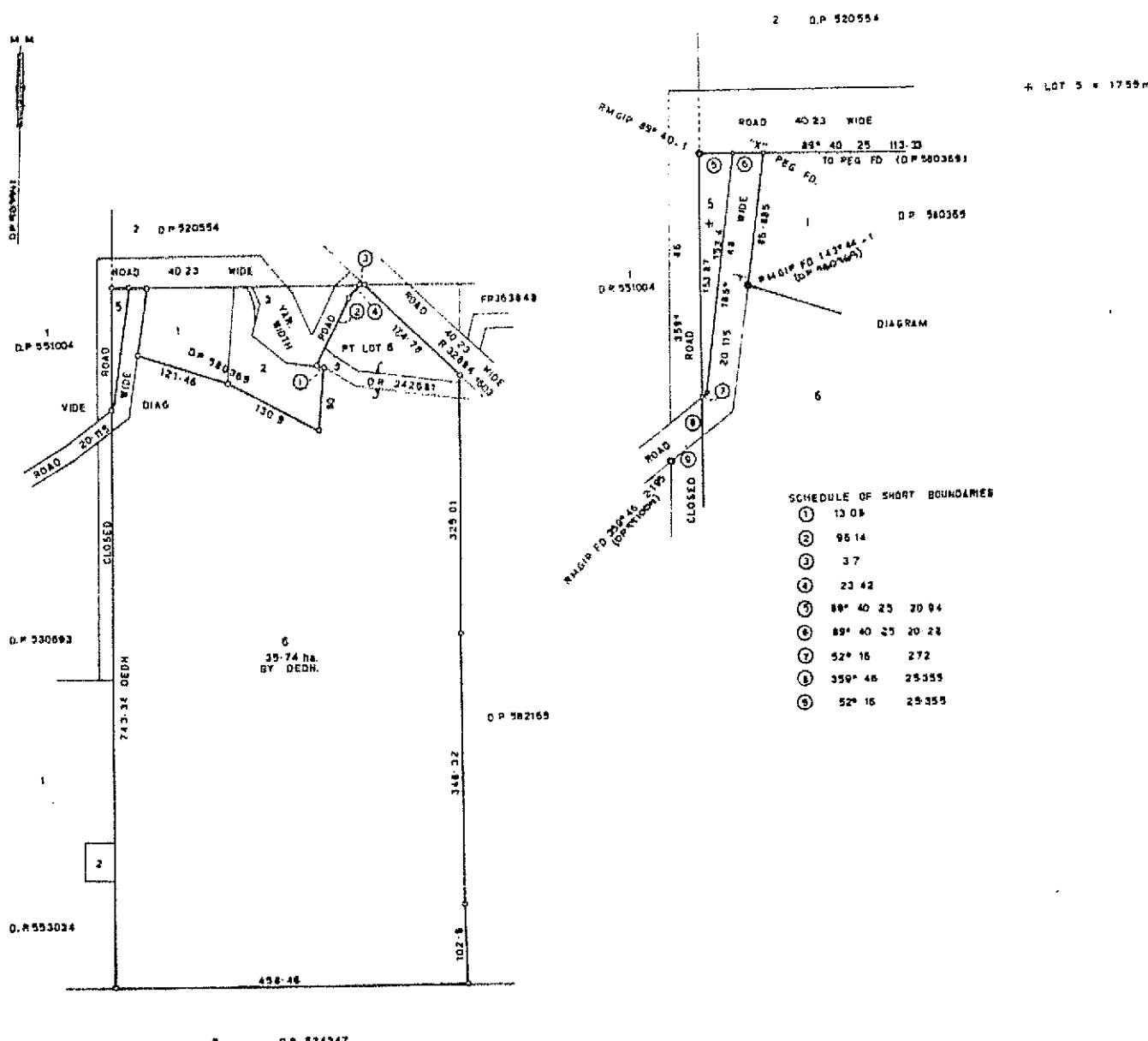
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.



### PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



## ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 6 in Deposited Plan 583941 at Mullumbimby in the Shire of Byron Parish of Brunswick and County of Rous. EXCEPTING THEREOUT the minerals reserved by the Crown Grants.

FIRST SCHEDULE

HARRY BERTIN HENDERSON of Mullumbimby, Farmer.

## SECOND SCHEDULE

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

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

13086 FOL. 146

Vol.

(Page 2 of 2 pages)

## FIRST SCHEDULE (continued)

[illegible]

## SECOND SCHEDULE (continued)

[illegible]

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



1354135

# DECLARATION OF TITLE

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. 13354 Fol. 139

Crown Grant Vol. 1894 Fol.227

Prior Title Vol.13086 Fol.146



**CANCELLED**

**EDITION ISSUED**

23 6 1977

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

## SEE AUTO FOLD

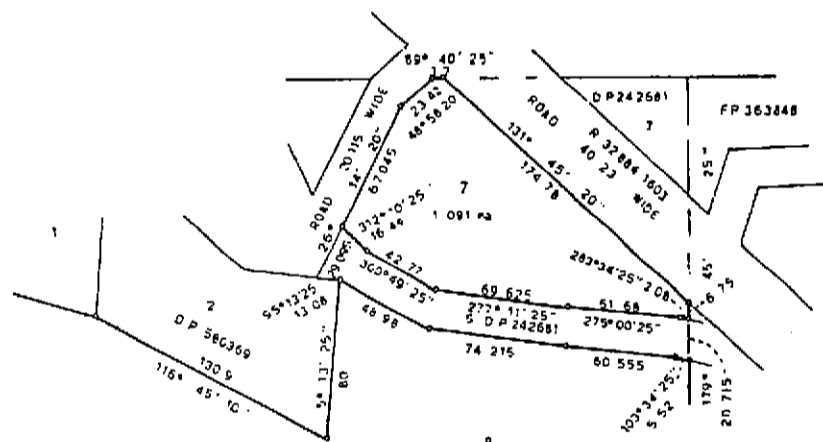
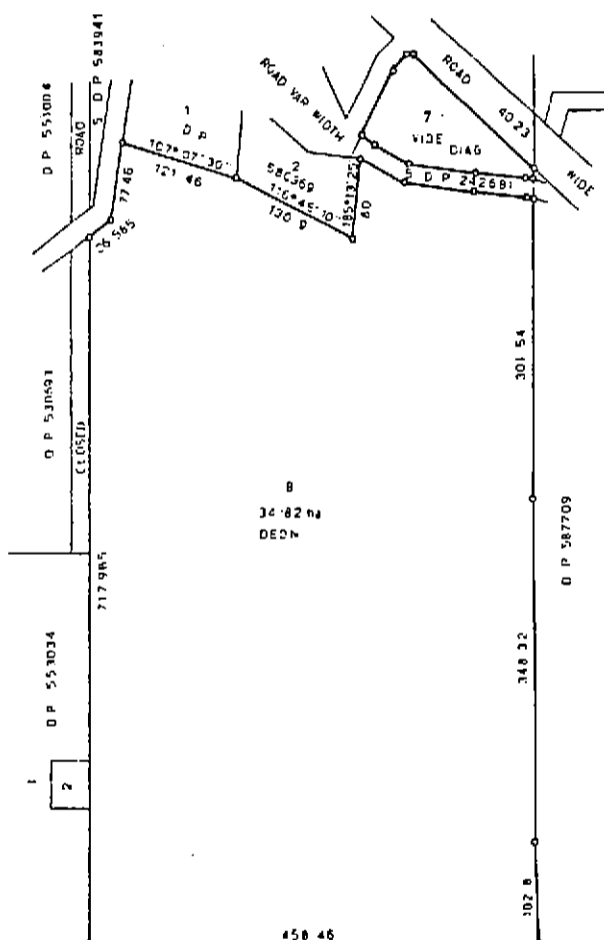
60

Registrar General.



**PLAN SHOWING LOCATION OF LAND**

LENGTHS ARE IN METRES



DB 514343

## ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 8 in Deposited Plan 589795 in the Shire of Byron Parish of Brunswick and County of Rous. EXCEPTING THEREOUT the minerals reserved by the Crown Grant.

FIRST SCHEDULE

~~HARRY BERTIN HENDERSON of Mullumbidgee, Farmer.~~

## SECOND SCHEDULE

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

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

**WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TILES OFFICE**

**FIRST SCHEDULE (continued)**

[illegible]

SEE ABOVE BUILD

DECLASSIFIED

## SECOND SCHEDULE (continued)

[illegible]

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

No. 1937 /3114

State of New South Wales

[LAND GRANT]



REGISTER BOOK

VOL. 4923. Fol. 220

CANCELLED R

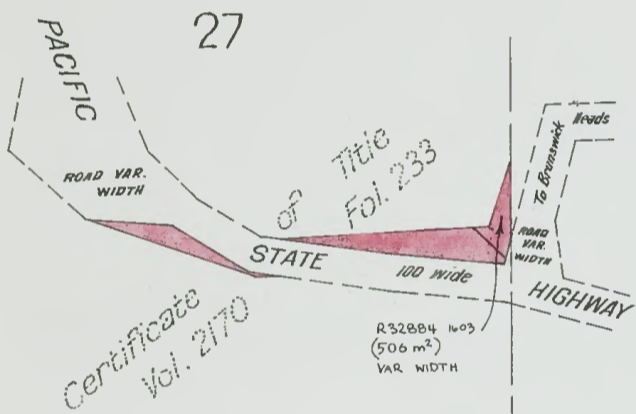
GRANT OF LAND AS COMPENSATION FOR LAND RESUMED FOR A PUBLIC ROAD.

(UNDER THE PUBLIC ROADS ACT 1902.)

GEORGE VI, by the Grace of God, of Great Britain, Ireland, and the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India:—

TO ALL to whom these Presents shall come, Greeting:—

Whereas by a Notification of Resumption published in the Gazette on the nineteenth day of March 1937 certain Land therein mentioned was resumed under the powers conferred by the Public Roads Act 1902 from ARTHUR BERTIN HENDERSON of Mullumbimby who held the same in fee simple And Whereas it has been agreed that the Land hereinafter described shall be granted in accordance with the provisions of the said Act in fee simple to the said ARTHUR BERTIN HENDERSON in part as compensation for the Land so resumed as aforesaid Now Know Ye That in consideration of the premises We for Us Our Heirs and Successors Do HEREBY GRANT unto the said ARTHUR BERTIN HENDERSON his Heirs and Assigns subject to the Reservations and Exceptions hereinafter contained ALL THAT Piece or Parcel of Land in Our said State containing by Admeasurement two roods be the same more or less situated in the County of Rous Parish of Brunswick Byron Shire



PART THEREOF Being the closed part of the road one chain wide originally reserved through portion twenty seven of one hundred and ninety six acres three roods and adjoining the South Western side of the Pacific State Highway of variable width and thence one chain wide as now surveyed AND ALSO OTHER PART THEREOF Being the closed part of the road one chain wide originally reserved through portion twenty seven aforesaid and extending from the Eastern boundary of the land comprised in Certificate of Title Volume 2170 Folio 233 in a South Westerly direction along the North Western side of the road of variable width to Brunswick Heads as now surveyed and thence in a Westerly direction along the North Eastern side of the Pacific State Highway one chain wide as now surveyed

— Total Area 2r. —  
Scale 4 Chains to an Inch

As per Plan in the margin hereof With all the Rights and Appurtenances whatsoever thereto belonging To Hold the same unto the said ARTHUR BERTIN HENDERSON his

Heirs and Assigns for ever Provided Nevertheless AND WE DO HEREBY RESERVE AND EXCEPT unto Us Our Heirs and Successors all minerals which the said Land contains with full power and authority for Us Our Heirs and Successors and such person or persons as shall from time to time be authorised by Us or them to enter upon the said Land and to search for mine dig and remove the said minerals And also all such parts and so much of the said Land as may hereafter be required for public ways viaducts canals railways tramways dams sewers or drains in over and through the same to be set out by Our Governor for the time-being of Our said State or some person by him authorised in that respect And also all sand clay stone gravel and indigenous timber and all other materials the natural produce of the said Land which may be required at any time hereafter for the construction and repair of any public ways bridges or canals or for naval purposes or railways and tramways or any fences embankments viaducts dams sewers or drains necessary for the same together with the right of taking and removing all such materials by such person or persons as may be authorised in that behalf by the Governor aforesaid Provided Lastly AND WE DO HEREBY RESERVE for Us Our Heirs and Successors and for Our Governor as aforesaid by such person or persons as shall be by Us them or him authorised in that behalf full power to make and conduct through in under upon or over the said Land or any portion thereof all public ways viaducts railways tramways canals and all common or public drains and sewers which may be deemed expedient And the right of full and free ingress egress and regress into out of and upon the said land for the several purposes aforesaid or any of them In Testimony Whereof We have caused this Our Grant to be Sealed with the Seal of Our said State

Witness Our Right Trusty and Well-beloved JOHN DE VERE, BARON WAKEHURST, Knight Commander of Our Most Distinguished Order of Saint Michael and Saint George, Captain in the Reserve of Officers of Our Territorial Army, Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney in Our said State, this nineteenth day of April in the second year of Our Reign, and in the year of Our Lord one thousand nine hundred and thirty-eight.

Wakehurst  
Governor.

RECORDED and ENROLLED in the Registrar General's Office, at Sydney, in New South

Wales, this 27<sup>th</sup> day of April 1938.

Registrar General.

Arthur Henderson and Harry Bertin  
Henderson both of Mullumbumby  
Farmers  
now the registered proprietors of the land within described.  
See Section 94 Application No. H131792  
Entered 27<sup>th</sup> April 1938  
Jawatson  
REGISTRAR GENERAL

Harry Bertin Henderson both of  
Mullumbumby, Farmer  
now the registered proprietor of the land within described.  
See TRANSFER No. H131793 dated 24<sup>th</sup> December 1938  
Entered 27<sup>th</sup> April 1938  
Jawatson  
REGISTRAR GENERAL

No. M855731 Resumption of land for Public Road Notice in  
Government Gazette dated 28th July 1972 Folio 3045  
whereby and by operation of the Public Roads Act of 1902 the  
road shown in the plan catalogued R 3284-1603 in the  
Department of Lands and shown as firm lines and notation  
(606 m<sup>2</sup>) var width on the plan hereon was declared  
to be a Public Road.  
Registered 14th December 1972.

Jawatson  
REGISTRAR GENERAL



NEW CERTIFICATE(S) OF TITLE ISSUING ON DP580369  
NO DEALING TO BE REGISTERED WITHOUT REFERENCE TO  
SURVEY DRAFTING BRANCH.

This deed is cancelled as to Part  
New Certificates of Title have Issued on 4-12-1975  
for lots in Deponent Plan No. 580369 as follows:-  
Lots 1 to 4 Vol. 12944 Fol. 80-83 respectively.

Jawatson  
REGISTRAR GENERAL



The residue of land in this folio comprises  
road

Jawatson  
REGISTRAR GENERAL



H131792 TA  
M855731  
DP580369  
14/11/75

No. 1908

State of New South Wales.

[LAND GRANT.] B



REGISTER BOOK,  
VOL. 1894 FOL. 227

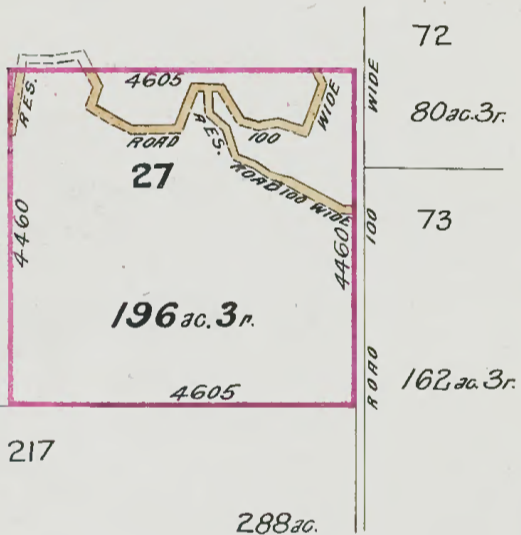
GRANT OF LAND PURCHASED BY CONDITIONAL SALE WITHOUT COMPETITION.

(UNDER THE CROWN LANDS ALIENATION ACT OF 1861.)

CANCELLED

EDWARD VII, by the Grace of God, of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith, and so forth:—  
TO ALL to whom these Presents shall come, Greeting:—

WHEREAS The Bank of New South Wales hereinafter called the said Bank in Our State of New South Wales, claims to be entitled, in respect of a purchase by Conditional Sale, without competition, under the 12<sup>th</sup> Section of the Crown Lands Alienation Act of 1861, to the Parcel of Land hereinafter described; and the declaration, as by law required, has been made, and the Minister for the time being charged with the administration of the public lands is satisfied that all things required by law to be done to entitle the said Bank to a grant of the fee simple of the said Lands, subject to the Reservations hereinafter contained, have been done and performed: And Whereas the sum of One hundred and ninety six pounds fifteen shillings sterling, being the purchase money payable for the said Land, has been duly paid into the Office of the Treasurer of Our said State: Now Know Ye, That for and in consideration of the said sum, for and on Our behalf well and truly paid into the Treasury of Our said State, before these Presents are issued, and of all and singular the premises, We, for Us, Our Heirs and Successors, Do HEREBY GRANT unto the said Bank and its Heirs and Assigns, subject to the several and respective Reservations hereinafter mentioned, ALL THAT piece or parcel of land in Our said State, containing by Admeasurement One hundred and ninety six acres three roods situated in the County of Ross and Parish of Brunswick



Scale. 20 Chains to an Inch.

Commencing on the Western side of a road one chain wide at the North Eastern corner of portion two hundred and seventeen of two hundred and eighty eight acres and bounded thence on the East by that road dividing it from portions seventy three and seventy two of one hundred and sixty two acres three roods and eighty acres three roods respectively bearing North forty four chains sixty links on the North by a line bearing West forty six chains five links on the West by a line bearing South forty four chains sixty links and on the South by part of the Northern boundary of portion two hundred and seventeen aforesaid bearing East forty six chains five links to the point of commencement thence in a South Westerly direction thence generally in a Westerly direction and thence generally in a North Westerly direction again of that road in a Southerly and thence in a South Westerly direction and of a road one chain wide from that road generally in a South Easterly direction the areas of which have been deducted from the total area.

As per plan in the margin hereof: with all the Rights and Appurtenances whatsoever thereto belonging: To Hold unto the said Bank and its Heirs and Assigns for ever: Subject, nevertheless, to the several and respective Reservations hereinafter contained, that is to say: Provided Nevertheless, And We do HEREBY RESERVE unto Us, Our Heirs and Successors, all Minerals which the said Land contains, with full power and authority for Us, Our Heirs and Successors, and such person or persons as may from time to time be authorised by Us, Our Heirs and Successors, or by the Governor for the time being of Our said State, to enter upon the said Land, and to search for, mine, dig, and remove the said Minerals, with full right of ingress, egress, and regress, for the purposes aforesaid: Provided Also, And We do HEREBY FURTHER EXCEPT AND RESERVE unto Us, Our Heirs and Successors, all such parts and so much of the said Land as may hereafter be required for a Public Way, or Public Ways, Canals, or Railroads, in, over, and through the same, to be set out by Our Governor for the time being of Our said State, or some person by him authorised in that respect: AND ALSO all Sand, Clay, Stone, Gravel, and Indigenous Timber, and all other Materials, the natural produce of the said Land, which may be required at any time or times hereafter by the Government of Our said State, for the construction and repair of any Public Ways, Bridges, or Canals, or for Naval Purposes, or Railroads, or any Fences, Embankments, Dams, Sewers, or Drains, necessary for the same, together with the right of taking and removing all such materials; AND ALSO the right of full and free ingress, egress, and regress, into, out of, and upon the said Land, for the several purposes aforesaid, or any of them: In Testimony Whereof, We have caused this Our Grant to be Sealed with the Seal of Our said State.

WITNESS Our Trusty and Well-beloved SIR HARRY HOLDSWORTH RAWSON, Admiral in Our Royal Navy, Knight Grand Cross of Our Most Honorable Order of the Bath, Our Governor of Our State of New South Wales and its Dependencies, in the Commonwealth of Australia, at Sydney, in Our said State, this fourth day of July in the eighth year of Our Reign, and in the year of Our Lord One thousand nine hundred and eight

H. Rawson

Governor.

RECORDED and ENROLLED in the Registrar General's Office, at Sydney, in New South

Wales, this

29th

day of

July

1908.

*G. Beaulieu*  
Deputy Registrar General.

No. 613354 TRANSFER DATED 9<sup>th</sup> May 1911  
FROM THE WITHIN NAMED *The Bank of New South Wales* To *William Amos Bassett of Mullumbumbby, Dairy farmer*  
OF THE LAND WITHIN DESCRIBED  
PRODUCED & ENTERED 3<sup>rd</sup> July 1911  
AT 4 O'CLOCK IN THE *after* NOON  
*Attest*  
REGISTRAR GENERAL

No. 613355 TRANSFER DATED 10<sup>th</sup> May 1911  
FROM THE WITHIN NAMED *William Amos Bassett* To *Archibald Henderson Senior of Port. Pir. 27*  
OF THE LAND WITHIN DESCRIBED  
PRODUCED & ENTERED 3<sup>rd</sup> July 1911  
AT 4 O'CLOCK IN THE *after* NOON  
*Attest*  
REGISTRAR GENERAL  
Cancelled & Certificate of Title issued Vol. 2170 Fol. 233

This Deed is Cancelled and Certificate of Title issued  
Vol. 2213. Fol. 126 for *Per. Deed*  
*Attest*  
025309  
Registrar General.

40899a  
40900a  
40901a  
40902a  
150 30946