

**Coffs Harbour City Council**

**Stage 2 Site Contamination Assessment**

**Proposed Cultural & Civic Space Project**

**23-31 Gordon Street, Coffs Harbour**

Report No. RGS31785.1-AG Rev.1

22 April 2020



RGS31785.1-AG Rev.1

22 April 2020

Coffs Harbour City Council  
2 Castle Street  
COFFS HARBOUR NSW 2450

**Attention: Ken Welham**

Dear Ken

**RE: Proposed Cultural & Civic Space Project – 23-31 Gordon Street, Coffs Harbour  
Stage 2 Site Contamination Assessment**

Regional Geotechnical Solutions Pty Ltd (RGS) has completed a Stage 2 Site Contamination Assessment (SCA) at the site of the proposed Cultural & Civic Space Project that is to be constructed at 23-31 Gordon Street, Coffs Harbour (Lot 20 DP758258, Lot B DP346105 and Lot 123 DP749233). This report presents the results of the Stage 2 Site Contamination Assessment.

A stage 1 SCA was completed by RGS in 2019 the results of which are presented in report no. RGS31784.1 – AB dated 12 April 2019.

This Stage 2 assessment includes a review of the Stage 1 assessment (including a desktop review, intrusive soil sampling and laboratory testing of recovered soil samples) as well as further sampling at additional locations as outlined in proposal RGS31785.1-AE. Based on the assessment undertaken the materials meet the requirements for a commercial/industrial site as detailed in the NEPM 2013 guidelines. Therefore, development of the site is considered appropriate without the need for further site contamination assessment or site remediation.

The work presented herein was reviewed by Dr David Tully CEnvP SC. A copy of Dr Tully's letter pertaining to his review is provided in Appendix D.



If you have any questions regarding this project, or require any further assistance with this project, please do not hesitate to contact the undersigned.

For and on behalf of

**Regional Geotechnical Solutions Pty Ltd**

Prepared by

**Joel Babbage**

Geotechnical Engineer

Reviewed by

**Adam Holzhauser**

Associate Geotechnical Engineer



## Table of Contents

1	INTRODUCTION.....	1
2	METHODOLOGY .....	1
3	SITE CONDITIONS .....	2
3.1	Surface Conditions .....	2
3.2	Subsurface Conditions .....	5
4	DESKTOP REVIEW .....	5
4.1	Site History .....	5
4.2	Groundwater.....	8
4.3	Contaminated Land Solutions Review.....	8
5	GUIDELINES & ASSESSMENT CRITERIA .....	9
5.1	Soil Investigation Levels .....	9
5.2	Areas of Environmental Concern and Chemicals of Concern.....	10
5.3	Site Investigation & Laboratory Analysis.....	11
5.3.1	Investigations and Sampling .....	11
5.3.2	Laboratory Analysis.....	11
5.3.3	Quality Control .....	12
5.3.4	Results of Assessment Analysis .....	12
6	ASSESSMENT & CONCLUSIONS REGARDING SITE CONTAMINATION.....	13
7	LIMITATIONS .....	14

## Figures

Figure 1            Sample Location Plan

## Appendices

Appendix A	Results of Field Investigations
Appendix B-1	Laboratory Test Result Sheets (Stage 1 assessment)
Appendix B-2	Laboratory Test Result Sheets (Stage 2 assessment)
Appendix B-3	Laboratory Results Summary Table Compared against Assessment Criteria
Appendix C	Results of Site History Study
Appendix D	Letter from Dr David Tully CEnvP SC



## 1 INTRODUCTION

This report presents the results of a Stage 2 Site Contamination Assessment (SCA) undertaken by Regional Geotechnical Solutions Pty Ltd (RGS) at the site of the proposed Cultural and Civic Space Project that is to be constructed at 23-31 Gordon Street, Coffs Harbour, NSW (Lot 20 DP758258, Lot B DP346105 and Lot 123 DP749233).

The SCA presented herein was undertaken to provide further assessment regarding the suitability of the site for the proposed development based on the findings and recommendations as presented in the Stage 1 SCA. The Stage 2 assessment included:

- Review of the desktop study involved in the Stage 1 SCA to assess the historical land use, the potential for contamination resulting from past land use and a general appraisal of the type and location of any contamination on the site;
- Review of preliminary soil sampling and laboratory analysis for a broad suite of common contaminants associated with the assessed site usage which was undertaken for the Stage 1 SCA;
- Additional soil sampling and laboratory analysis for a broad suite of common contaminants associated with the assessed site usage was undertaken in previously inaccessible areas such as under the slab of the existing buildings. This was identified as an area of environmental concern in the Stage 1 assessment.

The work was undertaken in general accordance with proposal number RGS31785.1 - AE dated 27 February 2020.

## 2 METHODOLOGY

The site contamination assessment was undertaken in accordance with the relevant sections of the NSW EPA, *Guidelines for Consultants Reporting on Contaminated Sites*, and involved the following process:

- Review of desktop study (to assess the historical land use, the potential for contamination resulting from past land use). The study included:
  - Review of local geology;
  - Review of government records of groundwater bores in the area;
  - Review of available recent and historical aerial photography for the last 50 years;
  - Land title search of the respective lots available from the Land Titles Office;
  - Search of Environmental Protection Authority (EPA) website for any contamination notices for the site;
  - SafeWork 'Site Search for Schedule 11 Hazardous Chemicals on Premises';
- Site walkover to assess visible surface conditions and identify any evidence of contamination, or past activities that may cause contamination;
- Review of Stage 1 sampling and laboratory test results; and
- Collection of soil samples in areas of potential environmental concern.

In the Stage 1 assessment, the site was characterised into Areas of Environmental Concern (AEC), in which the potential for contamination was identified, Chemicals of Concern that might be associated with those activities were nominated. The identified AECs are listed in Table 4 (Section



5.2) below. Samples were collected from the boreholes and from surface soils in areas with the potential of contamination. The samples collected were analysed for a suite of potential contaminants.

The Stage 2 SCA involved further sampling and testing in areas identified in the Stage 1 assessment which primarily included beneath the building floor slabs. The samples collected were analysed for a suite of potential contaminants based on soils types encountered and likely contaminants based on site usage.

The results of the laboratory analysis were evaluated against the health based investigation levels for a commercial / industrial development as outlined in National Environmental Protection (Assessment of Site Contamination) Measure 2013 (NEPM) guidelines.

### 3 SITE CONDITIONS

#### 3.1 Surface Conditions

The site comprises three adjoining lots and is situated in Coffs Harbour CBD within flat alluvial terrain. An aerial photograph that illustrates the site location and site setting is reproduced below.



*Site location and site setting as illustrated by NSW Government 'Six Maps'. The extent of the three lots that make up the site is shown by a red box.*

The majority of the three lots are occupied by buildings, concrete slabs, car parks, and garden beds surrounding the buildings. The building materials generally comprise of brick masonry and fibro clad (potential asbestos containing materials and lead based paints).

Most of the buildings appear to be run down, however, structurally they appear to be in fair condition. Extensive cracking was observed in the carpark in the centre lot.







The surrounding area consists of residential and commercial buildings. There is a large fig tree approximately 5m to the northwest of the proposed development.





Site photographs taken during the Stage 1 and Stage 2 assessments are presented below in Plate 1 and Plate 2 respectively.

**Plate 1: Site Photographs Illustrating Site Conditions**  
(from 2019 Stage 1 assessment)

 <p><i>Looking west at structures and grassed area in the northern end of the site.</i></p>	 <p><i>Garden bed adjacent to fibro clad structure in the northern end of the site.</i></p>
 <p><i>Looking west at the carpark and structures in the middle section of the site.</i></p>	 <p><i>Building and garden beds at southern end of the site.</i></p>
 <p><i>Looking southeast at vegetated area between structures in the southern end of the site.</i></p>	 <p><i>Large fig tree located to the north of the site.</i></p>





**Plate 2: Site Photographs Illustrating Site Conditions**  
(Current assessment)



*Inside building looking SW (Lot B DP346105).*



*Inside building looking NW (Lot B DP346105).*



*Inside garage attached to building on Lot 123  
DP749233.*



*Inside northern building on Lot 123 DP749233.*



*Inside southern building on Lot 123 DP749233.*



*Paved area between northern and southern  
buildings on Lot 123 DP749233.*





The site is currently vacant and unoccupied by personnel. The northern building on Lot 123 DP749233 is being utilised for archive storage.

### 3.2 Subsurface Conditions

The 1:100,000 Coffs Harbour Quaternary Geological Map indicates the site is underlain by a Pleistocene terrace comprising silt, clay, fluvial sand, and gravel. The 1:250,000 Dorrigo - Coffs Harbour Geology Map indicates that the alluvial materials are underlain by the Brooklana formation which comprises siliceous argillite, slate and rare siliceous greywacke.

A summary of the subsurface profile encountered within the Eight boreholes (BH1 to BH4 and BH101 to BH104) drilled during the two geotechnical site investigation undertaken by RGS (the results of which are summarised in Report No. RGS31785.1-AC and RGS31785.1-AF) is presented below:

- BH1 and BH104 in the eastern corner of the site encountered 0.2m of Clayey SILT fill, overlying stiff to hard alluvial Clayey SILT and Silty CLAY to 12m, overlying weathered argillite (i.e. bedrock) to at least 18.9m. Groundwater inflows were encountered at 6.5m depth;
- BH2 and BH101 in the western corner of the site encountered 0.2m of pavement gravel, overlying topsoil to 0.4m, over very stiff to hard alluvial Silty CLAY to 9.5m, overlying weathered argillite to at least 17.8m. Groundwater inflows were encountered at 8m depth;
- BH3 in the southeast of the site encountered 0.25m of pavement gravel overlying Silty CLAY Fill to 1.6m, overlying alluvial Clayey SILT and Silty CLAY to 10.5m, overlying residual Silty CLAY that grades into weathered argillite from 16m. Groundwater inflows were encountered at 10m depth;
- BH4 in the north of the site encountered 0.25m of topsoil overlying alluvial Clayey SILT and Silty CLAY to 9m, over weathered argillite to at least 17.4m. Groundwater inflows were encountered at 7m depth;
- BH102 central of the site encountered 0.65m of Sandy clay fill, overlying very stiff to hard alluvial silty CLAY to at least 4.5m; and
- BH103 in the central-eastern lawn area encountered 0.35m of Silty CLAY topsoil, overlying very stiff to hard alluvial silty CLAY to at least 4.5m.

Materials encountered below the floor slabs generally comprised fill; gravelly sand, sand, clayey sand with a trace to some clay. The fill was underlain by the natural alluvial clays as described in the boreholes above.

## 4 DESKTOP REVIEW

### 4.1 Site History

A search of the NSW EPA website (<http://www.epa.nsw.gov.au/prpoeoapp/>) revealed that no notices have been issued on the site under the Contaminated Land Management Act (1997).

A land title search was undertaken by Advanced Legal Searches Pty Ltd. A summary of the search is presented in Table 1. The detailed results of the title search are presented in Appendix C.






**Table 1: Summary of Land Title Search**

Lot / DP	Year	Owner / Occupation / Site usage
Lot 20 Section 6 DP 758258	1920 – 1926	George Bellingham Jarrett, grantee
	1926 – 1929	George Hedger Andrews, bank manager
	1929 – 1972	Elsie May Smith, wife of Irvine William Smith
	1972 – 1983	Marleen May Smith, spinster
	1983 – 1992	Inderjit Singh Harjeet Kaur Singh
	1992 – 2002	Inderjit Singh Harjeet Kaur Singh
	2002 – 2003	Francorp Pty Limited
	2003 – to date	Coffs Harbour City Council
Lot B DP 346105	1920 – 1926	George Bellingham Jarrett, grantee
	1926 – 1929	George Hedger Andrews, bank manager
	1929 – 1936	George Hedger Andrews, bank manager
	1936 – 1938	Mary Keevers, widow
	1938 – 1938	Walter Scott Smith, butter factory manager
	1938 – 1941	Hilda Mary Scott Smith, spinster
	1941 – 1953	Hilda Blanch May Smith, widow
	1953 – 1955	James Maze, engineer
	1955 – 1961	Stanley Ivan James, mechanic
	1961 – 1964	Reginald Eric Charles Maddox, garage proprietor Ailan Margaret Maddox, his wife
	1964 – 1983	Marie Minette Timms, wife of Lionel Edwin Hammond Timms, sawmillier
	1983 – 1985	Janice Faye Hefner
	1985 – 1984	Lockett and Montgomerie Pty. Limited
	1994 – 2004	The Salvation Army (New South Wales) Property Trust
	2004 – to date	Coffs Harbour City Council
Lot 123 DP 749233	1906 – 1930	Samuel Matten, farmer, grantee
	1930 – 1949	Horace William Matten, taxi driver Reuben Rodrick Matten, farmer Oswald Harold Matten, farmer
	1949 – 1966	Beatrice Daphne Reed, married woman
	1966 – 1971	Violet Gladys McCarthy, wife of Oswald Harold McCarthy
	1971 – 1972	William James Prisk, retired
	1972 – 1976	Peter Douglas Colless, surf board manufacturer
	1976 – 1978	Joseph William Gausepohl, fisherman
	1978 – 1980	Charles George Smith, company director Robert Victor Fletcher, agent
	1980 – 2004	The Salvation Army (New South Wales) Property Trust
	2004 – to date	Coffs Harbour City Council



Aerial photography of the site has been reviewed. Historical photographs have been sourced from the NSW Government Land and Property Information and from online sources including Google Earth. The purpose of this review was to assist in the identification of past land use activities that may contribute to site contamination. A summary of the observations is provided in Table 2.

**Table 2: Summary of Aerial Photograph Observations**

Photograph (Source)	Photograph Extract	Observations of Site Conditions	Observations of Surrounding Areas
1954 (NSW LPI)		Site appears to contain residential houses with a vacant block at the northern end.	As per site conditions.
1984 (NSW LPI)		Residential development of the site has occurred.	Residential developments upgrade of roads.
2004 (Google Earth)		Commercial and residential developments.	Commercial and residential developments.



2018 (Google Earth)		Similar to previous.	Similar to previous.
------------------------	---	----------------------	----------------------

Based on the above, it can be concluded that the three lots have likely been used for residential or commercial purposes for their life span with the following potential exceptions:

- Lot 123 DP 749233 may have been used for farming between 1906 and 1949; and
- Lot B DP 346105 may have been used as a mechanics workshop between 1955 and 1961. The existing buildings are likely to post-date this period of ownership and are therefore unlikely to have been used as a mechanics workshop.

Recent usage of the site and buildings has included:

- Lot 20 DP758258 – residential use until circa 2003 then owned by Council. Council are understood to have occupied the building until circa 2010 from when it was occupied by a consulting engineering business.
- Lot B DP 346105 and Lot 123 DP 749233 – understood to have been occupied by Salvation army from early 1980s until 2004 from when it has been Council. The buildings are understood to have been used as a gallery and file storage facility up until recently.

## 4.2 Groundwater

A groundwater bore search on the NSW Department of Primary Industries Office of Water website (<http://allwaterdata.water.nsw.gov.au/water.stm>) indicates there are sixteen licensed bores located within 500m of the site. The closest bore is located approximately 150m south of the site. The drill records indicate that groundwater was encountered at 6.5m depth and a water bearing zone at 44m depth.

## 4.3 Contaminated Land Solutions Review

By request of RGS, Contaminated Land Solutions Pty Ltd (CLS) was engaged to review and comment on the Stage 1 SCA Report. A copy of the letter from CLS is attached in Appendix D. CLS noted that the Stage 1 report had limited scope and identified the site constraints as:

- The presence of several low-rise buildings covering a significant proportion of the site significantly restricting access for investigation plant and equipment.
- The potential presence of hazardous material (e.g. asbestos and lead paint) within the fabric of the existing structures that could impact the site during demolition.
- The presence of live underground and overhead services at the site.

Due to the limitations of the Stage 1 report RGS and CLS recommended to:

- Undertake a hazardous materials survey prior to demolition of the existing structures at the site. An asbestos clearance certificate should also be obtained by the demolition contractor to certify that all asbestos has been appropriately removed from the site;





- Undertake further site assessment following the demolition of the buildings, floor slabs and pavements to assess possible contamination in these areas;
- Further evaluate potential risks to ecological receptors in relation to heavy metal concentrations in soils; and
- Assess the need for further work based on the conditions encountered following demolition.

We understand that a hazardous material survey has been completed. We have not witnessed this report or been provided a copy for review.

RGS recommended undertaking the Stage 2 assessment post demolition and site clean up. This view was supported by Contaminated Land Solutions. Due to project timing constraints the Stage 2 SCA (reported herein) was completed prior to the demolition of existing structures on the site.

## **5 GUIDELINES & ASSESSMENT CRITERIA**

### **5.1 Soil Investigation Levels**

The assessment was carried out in accordance with the National Environment Protection (Assessment of Site Contamination) Measure (NEPM 2013). The NEPM document provides a range of guidelines for assessment of contaminants for various land uses. The development involves a commercial development. Therefore, the investigation levels for "commercial / industrial" land use have been adopted as the primary investigation criteria. In accordance with the NEPM guidelines the following criteria were adopted for this assessment:

- Health investigation levels (HIL) for commercial / industrial land use were used to assess the potential human health impact of heavy metals and polycyclic aromatic hydrocarbons (PAHs);
- Health Screening Levels (HSL) for coarse textured (sand) or fine textured (silt or clay) soils on a commercial / industrial site were adopted as appropriate for the soils encountered to assess the potential human health impact of petroleum hydrocarbons including benzene, toluene, ethylbenzene and xylene (BTEX) compounds;
- Ecological Investigation Levels (EIL) for commercial / industrial land use were used for evaluation of the potential ecological / environmental impact of heavy metals and PAH; and
- Ecological Screening Levels (ESL) for coarse textured (sand) or fine textured (silt or clay) soils on a commercial / industrial site were adopted as appropriate for the soils encountered, to assess the potential ecological / environmental impact of petroleum hydrocarbons and BTEX compounds.

In accordance with NEPM 2013, exceedance of the criteria does not necessarily deem that remediation or clean-up is required but is a trigger for further assessment of the extent of contamination and associated risks. The adopted criteria are presented in Table 3.

In addition to the above soil investigation levels an assessment of risk of elevated heavy metals (namely zinc) that were identified during the Stage 1 SCA was undertaken as part of the Stage 2 SCA. The assessment was undertaken to determine potential ecological impacts of heavy metals within the upper soil profile. High levels within the upper profile can impede vegetation growth which is not considered critical on this site as the upper profile will be removed during bulk excavation but may impact material reuse off site. The environmental investigation levels (EILs) were assessed based on the methodology developed by the CSIRO.



**Table 3: Adopted Site Investigation Criteria**

Analyte	Adopted Soil Investigation Criteria	Analyte	Adopted Soil Investigation Criteria
Benzene	3	Chlordane	530
Toluene	135 <sup>(1)</sup>	Heptachlor	50
Ethyl-benzene	165 <sup>(1)</sup>	Copper	240,000
Xylene	180 <sup>(1)</sup>	Lead	1,500
TPH C6 – C10 (F1)	215 <sup>(1)</sup>	Zinc	35,000 (280) <sup>2</sup>
TPH C10 – C16 (F2)	170 <sup>(1)</sup>	Cadmium	900
TPH C16 – C34 (F3)	1700 <sup>(1)</sup>	Chromium (VI)	3600
TPH C34 – C40 (F4)	3300 <sup>(1)</sup>	Arsenic	3,000
Benzo-a-pyrene	40	Nickel	6,000
Phenol	240,000	Mercury	730
DDT+DDE+DDD	3600	Asbestos	Not Present
Aldrin / Dieldrin	45		

**Note:** 1 Based on ecological screening levels (ESL)  
 2 Site specific environmental investigation level calculated to assess soil investigation criteria for potential ecological impacts.

## 5.2 Areas of Environmental Concern and Chemicals of Concern

Based on the desktop assessment and our site walkover, three Areas of Environmental Concern have been identified and are summarised in Table 4.

**Table 4: Areas of Environmental Concern & Chemicals of Concern**

Areas of Environmental Concern	Mode of Potential Contamination	Chemicals of Concern	Key Potential Receptors
AEC-1 Building materials, including potential asbestos containing linings (Fibro sheeting), lead based paints etc.	Building materials from construction of house and any renovations.	Asbestos, lead.	Future site users, construction workers, future subsurface maintenance workers.  Flora and fauna within any future landscaped areas.
AEC-2 Carpark areas.	Oil spills or fuel spills.	TRH, BTEX, PAH, Heavy metals.	
AEC-3 Soil surrounding existing or former wooden buildings and vegetation around vacant areas of property.	Herbicides and pesticides (including termiticides) used for general landscape upkeep and building preservation	Pesticides.	



### 5.3 Site Investigation & Laboratory Analysis

#### 5.3.1 Investigations and Sampling

Field work was carried out in March 2020 and included:

- A site walkover assessment, observation and mapping of surface features and existing structures with aim of reassessing areas of potential contamination concern.
- Visual assessment for potential contaminating sources such as soil staining and fibro chips (potential asbestos containing material) from within garden areas around the existing buildings and below building with elevated floors such as that on Lot 20 DP758258.
- Collection of soil samples from the beneath the buildings which were inaccessible during the first investigation. This included:
  - core drilling through the floor slabs at nine locations;
  - removal of paving at two locations.

In consideration of the site conditions and assessed areas of environmental concern a sampling plan was prepared with the aim of targeting some of the previously inaccessible areas of concern, specifically beneath the floor slab of the existing main building. Soil samples were collected from eleven locations with eleven primary samples (plus two duplicates) being submitted for laboratory testing. The approximate sample locations are shown on Figure 1.

Samples were collected in acid-rinsed 125mL glass jars and placed in an ice-chilled cooler while on site and during transit to the laboratory where the samples were refrigerated.

A summary of the soil sampling is presented in Table 5.

**Table 5: Soil Sampling Summary**

Sample Location	Depth (m)	Area of Environmental Concern	Sample Description
S101	0.1 – 0.2	1	Fill: Gravelly Sand
S102	0.1 – 0.2	1	Fill: Gravelly Sand
S103	0.1 – 0.2	1	Fill: Gravelly Sand
S104	0.1 – 0.2	1	Fill: Gravelly Sand
S105	0.1 – 0.2	1	Fill: Gravelly Sand
S106	0.1 – 0.2	1	Fill: Sand
S107	0.1 – 0.2	1	Fill: Sand
S108	0.1 – 0.2	1	Fill: Clayey Sand
S109	0.1 – 0.2	1	Fill: Clayey Sand
S110	0.1 – 0.2	1	Fill: Clayey Sand
S111	0.1 – 0.2	1	Fill: Clayey Sand

#### 5.3.2 Laboratory Analysis

Fifteen soil samples were transported under chain-of-custody to ALS Laboratory Group, a NATA accredited specialist chemical testing laboratory. The samples included two duplicate soil samples, one trip spike sample and one blank sample. The samples were analysed for the following suite of contaminants;



- Asbestos
- Polycyclic Aromatic Hydrocarbons (PAH)
- Total Recoverable Hydrocarbons (TRH)
- Benzene, Toluene, Ethyl-benzene, Xylenes (BTEX)
- Organochlorine and Organophosphorus Pesticides (OCPs and OPPs)
- Polychlorinated biphenyls (PCBs)
- Heavy metals (arsenic, cadmium, chromium, cobalt, copper, lead, mercury, and zinc).

The results are presented in Appendix B.

### **5.3.3 Quality Control**

Samples were obtained using industry accepted protocols for sample treatment, preservation, and equipment decontamination. Two duplicate samples were submitted to the laboratory for analysis. Comparison of the test results on the primary and duplicate sample generally show good correlation. The primary and corresponding duplicate sample are identified below:

- Primary S103, duplicate D1.
- Primary S107, duplicate D2.

Comparison between the primary and duplicate sample results indicate that the Relative Percentage Difference (RPD) is below 30% where the concentrations are above 10 times the limit of analysis and below 50% where the concentrations are below 10 times the limit of analysis with the following exception:

- The RPD for aldrin and dieldrin between the primary and duplicate sample at S107 exceeds 30%

In addition to the field QC procedures, the laboratory conducted internal quality control testing including surrogates, trip spikes, blanks, and laboratory duplicate samples. The results are presented with the laboratory test results in Appendix B.

The laboratory quality control data is within acceptable limits for the tests carried out. Therefore, based on the results of the field and laboratory quality control procedures and testing the data is considered to reasonably represent the concentrations of contaminants in the soils at the sample locations at the time of sampling and the results can be adopted for this assessment.

### **5.3.4 Results of Assessment Analysis**

An evaluation of the Stage 2 laboratory test results against the adopted soil assessment criteria as presented in the laboratory results summary Table in Appendix B-3 is provided below:

- No asbestos was detected in any of the samples tested;
- Results of heavy metal analysis revealed some detectable levels, however, the concentrations encountered were below the adopted assessment criteria;
- Results of TRH (F1, F2, F3 and F4) analysis revealed concentrations either below the level of reporting or below the adopted assessment criteria in all samples;
- Results of BTEX analysis revealed concentrations below the level of reporting in all samples tested, and therefore below the adopted assessment criteria;
- Results of PAH analysis revealed concentrations below the level of reporting in all samples tested, and therefore below the adopted assessment criteria;





- Results of organochlorine and organophosphorus pesticide analysis revealed some elevated levels (particularly Aldrin and Dieldrin). The concentrations are however below the adopted assessment criteria in all samples tested; and
- Results of PCB analysis recorded values below level of recording for all samples tested and therefore below the adopted assessment criteria.

## **6 ASSESSMENT & CONCLUSIONS REGARDING SITE CONTAMINATION**

Regional Geotechnical Solutions has completed a Stage 1 and Stage 2 site contamination assessments for the proposed Coffs Harbour City Council Cultural and Civic Space Project. The site includes Lot 20 DP758258, Lot B DP346105 and Lot 123 DP749233.

The results of the Stage 1 assessment identified three areas of environmental concern as summarised in Table 4 of this report. The assessment concluded that for all samples tested analysis found that heavy metals, TPH, BTEX, PAH, OC/OP pesticides, PCBs and the presence of asbestos were either at concentrations below the laboratory detection limits or at concentrations below the adopted health assessment criteria for commercial / industrial land use. Concentrations of heavy metals (notably zinc) in some soil samples may present a potential risk to some ecological receptors.

The Stage 1 assessment provided the following recommendations:

- Undertake a hazardous materials survey prior to demolition of the existing structures at the site. An asbestos clearance certificate should also be obtained by the demolition contractor to certify that all asbestos has been appropriately removed from the site.
- Undertake further site assessment following the demolition of the buildings, floor slabs and pavements to assess possible contamination in these areas.
- Further evaluate potential risks to ecological receptors in relation to heavy metal concentrations in soils.
- Assess the need for further work based on the conditions encountered following demolition.

Some of the above have been addressed since the Stage 1 SCA was completed as outlined below:

- A hazardous material survey has been completed. We have not witnessed this report or been provided a copy for review. We understand that the survey has identified asbestos containing materials along with other potential contaminating sources within the buildings and building materials.
- RGS recommended undertaking the Stage 2 assessment post demolition and site clearance. Due to timing constraints the Stage 2 SCA was undertaken prior to the demolition of existing structures on the site. This report presents the results of the Stage 2 SCA which was of limited scope due to the constraints imposed by the structures remaining on the site.
- An assessment of risk of the elevated zinc levels identified during the Stage 1 SCA was undertaken as part of the Stage 2 SCA. The assessment indicates that Zinc levels exceed the calculated environmental investigation levels for ecological receptors. The high zinc levels encountered within the upper soil profile may impede growth of some plant species. This is unlikely to be an issue for this project as the upper 3 to 4m of the profile across the entire footprint of the site will be excavated and removed during basement excavations. It is understood that the upper soil profile, including topsoil and fill that contains the elevated Zinc will be removed from site. This material should not be used either onsite or offsite for



landscaping purposes where vegetation growth is required without further advice from an agronomist.

Several of the soil samples recovered from below the floor slabs as part of the Stage 2 assessment returned elevated levels of aldrin and dieldrin. The levels are below the adopted threshold levels; therefore on this basis no further testing, assessment or remediation is required for these analytes. The aldrin and dieldrin is likely to be associated with pesticides probably for the prevention and / or treatment of termites.

Based on the above and the findings of the Stage 1 and Stage 2 site contamination assessments the materials tested meet the requirements for a commercial/industrial site as detailed in the NEPM 2013 guidelines. Therefore, the site is considered suitable for the proposed development without the need for any significant further site contamination work or site remediation.

A detailed Remedial Action Plan (RAP) is not considered necessary for the proposed development. The following comments and recommendations should be considered during the planning and development stages of the project.

- Regional Geotechnical Solutions should be consulted if details of the proposed development differ from those discussed herein.
- All demolition works should be carried out in accordance with the development consent (Ref: 0199/20DA).
- Regional Geotechnical Solutions or an alternative consultant should be contacted if any unidentified potential contamination is encountered, (including odorous or stained soils and fragments of cement sheeting that may contain asbestos).
- Approximately 13,000m<sup>3</sup> of material excavated from the basement will require offsite disposal. The material must be assessed in accordance with the requirements of the 'Department of Environment and Climate Change NSW Waste Classification Guidelines Part 1 Classifying Waste' (July 2009) and / or the EPA Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014.

## 7 LIMITATIONS

The findings presented in the report and used as the basis for recommendations presented herein were obtained using normal, industry accepted geotechnical practises and standards. To our knowledge, they represent a reasonable interpretation of the general condition of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points. If site conditions encountered during construction vary significantly from those discussed in this report, Regional Geotechnical Solutions Pty Ltd should be contacted for further advice.

This report alone should not be used by contractors as the basis for preparation of tender documents or project estimates. Contractors using this report as a basis for preparation of tender documents should avail themselves of all relevant background information regarding the site before deciding on selection of construction materials and equipment.

If you have any questions regarding this project, or require any additional consultations, please contact the undersigned.



For and on behalf of

**Regional Geotechnical Solutions Pty Ltd**

Prepared by

**Joel Babbage**

Geotechnical Engineer

Reviewed by

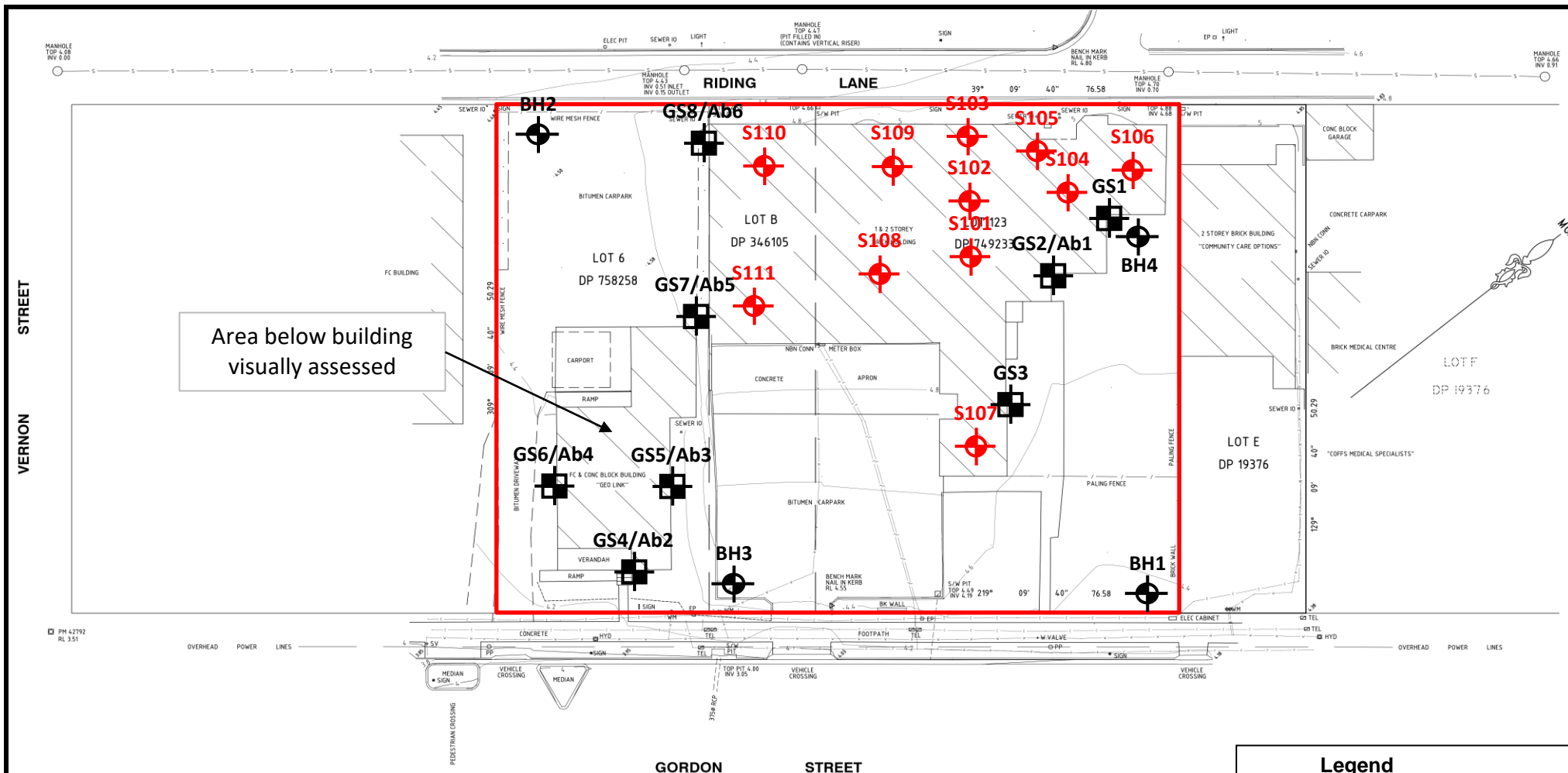
**Adam Holzhauser**


Associate Geotechnical Engineer



## Figures





	<b>Client:</b>	Coffs Harbour City Council	<b>Job No.</b>	RGS31785.1
	<b>Project:</b>	Proposed Cultural & Civic Space Project	<b>Drawn By:</b>	SK
		23-31 Gordon Street, Coffs Harbour	<b>Scale:</b>	NTS
	<b>Title:</b>	Sample Location Plan	<b>Date:</b>	24/03/2020
			<b>Drawing No.</b>	<b>Figure 1</b>



# **Appendix A**

## **Results of Field Investigations**

# ENGINEERING LOG - BOREHOLE

**CLIENT:** Coffs Harbour City Council  
**PROJECT NAME:** Cultural and Civic Centre  
**SITE LOCATION:** Gordon Street, Coffs Harbour  
**TEST LOCATION:** Refer to Figure 1

**BOREHOLE NO:** BH101

**PAGE:** 1 of 1  
**JOB NO:** RGS31785.1  
**LOGGED BY:** RW  
**DATE:** 23/3/20

**DRILL TYPE:** Ute Mounted Drill Rig  
**BOREHOLE DIAMETER:** 100 mm  
**INCLINATION:** 90°  
**EASTING:**  
**NORTHING:**  
**SURFACE RL:**  
**DATUM:** AHD

Drilling and Sampling					Material description and profile information					Field Test		Structure and additional observations
METHOD	WATER	SAMPLES	RL (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION: Soil type, plasticity/particle characteristics, colour, minor components	MOISTURE CONDITION	CONSISTENCY DENSITY	Test Type	Result	
AD/TC Bit	Not Encountered					GC	0.01m 0.12m <b>FILL:</b> Bitumen	D				FILL
						CL	0.20m <b>FILL:</b> Sandy GRAVEL, fine to coarse grained, grey/pale brown, sand fine to coarse grained, trace of clay fines	M	St			ALLUVIAL
		0.40m				CI						
		0.50m		0.5		CH	0.45m <b>Silty CLAY:</b> Low plasticity, dark grey/brown, with some sand fine to medium grained	M		HP	70	
		ASS					<b>Silty CLAY:</b> Medium plasticity, pale grey, grey/pale brown, with some sand fine grained	M		HP	200	
							<b>Silty CLAY:</b> Medium to high plasticity, pale brown, pale orange-brown with grey mottling, with some sand fine to medium grained	M				
		0.90m										
		1.00m		1.0								
		ASS										
		1.40m		1.5								
		1.50m										
		ASS										
		1.90m										
		2.00m		2.0								
		ASS										
		2.40m		2.5								
		2.50m										
		ASS										
		2.90m		3.0								
		3.00m										
		ASS										
		3.40m		3.5								
		3.50m				CH	3.50m <b>Silty CLAY:</b> Medium to high plasticity, dark red with grey mottling, with some sand and gravel fine to medium grained	M				RESIDUAL
		ASS										
		3.90m		4.0								
		4.00m										
		ASS										
		4.40m										
		4.50m		4.5			4.50m Hole Terminated at 4.50 m					
		ASS										

LEGEND:		Notes, Samples and Tests		Consistency		UCS (kPa)		Moisture Condition	
<b>Water</b>		U <sub>50</sub> 50mm Diameter tube sample		VS	Very Soft	<25		D	Dry
Water Level (Date and time shown)		CBR Bulk sample for CBR testing		S	Soft	25 - 50		M	Moist
Water Inflow		E Environmental sample		F	Firm	50 - 100		W	Wet
Water Outflow		ASS Acid Sulfate Soil Sample		St	Stiff	100 - 200		W <sub>p</sub>	Plastic Limit
<b>Strata Changes</b>		B Bulk Sample		VSt	Very Stiff	200 - 400		W <sub>L</sub>	Liquid Limit
Gradational or transitional strata		<b>Field Tests</b>		H	Hard	>400			
Definitive or distinct strata change		PID Photoionisation detector reading (ppm)		Fb	Friable				
		DCP(x-y) Dynamic penetrometer test (test depth interval shown)		<b>Density</b>		V	Very Loose	Density Index <15%	
		HP Hand Penetrometer test (UCS kPa)		L		L	Loose	Density Index 15 - 35%	
				MD		MD	Medium Dense	Density Index 35 - 65%	
				D		D	Dense	Density Index 65 - 85%	
				VD		VD	Very Dense	Density Index 85 - 100%	

# ENGINEERING LOG - BOREHOLE

**BOREHOLE NO:** BH102

**CLIENT:** Coffs Harbour City Council

**PAGE:** 1 of 1

**PROJECT NAME:** Cultural and Civic Centre

**JOB NO:** RGS31785.1

**SITE LOCATION:** Gordon Street, Coffs Harbour

**LOGGED BY:** RW

**TEST LOCATION:** Refer to Figure 1




















**DATE:** 23/3/20

**DRILL TYPE:** Ute Mounted Drill Rig

**EASTING:**
**SURFACE RL:**
**BOREHOLE DIAMETER:** 100 mm

**INCLINATION:** 90°

**NORTHING:**
**DATUM:** AHD

Drilling and Sampling					Material description and profile information					Field Test		Structure and additional observations
METHOD	WATER	SAMPLES	RL (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION: Soil type, plasticity/particle characteristics, colour, minor components	MOISTURE CONDITION	CONSISTENCY DENSITY	Test Type	Result	
AD/TC Bit	Not Encountered					GP	0.02m <b>BITUMEN</b>	M				FILL
		0.40m				CI	0.30m <b>FILL:</b> Sandy GRAVEL, fine to coarse grained, grey, sand fine to coarse grained, trace of clay fines, medium plasticity	M < w <sub>p</sub>	VSt - H			
		0.50m ASS		0.5			0.65m <b>FILL:</b> Sandy CLAY, medium plasticity, red/orange, sand fine to coarse grained, with some gravel fine to medium grained	M < w <sub>p</sub>	F - St	HP	60	ALLUVIAL
		0.90m				CH	0.80m <b>Silty CLAY:</b> Low to medium plasticity, grey/pale grey, with some sand fine grained	M > w <sub>p</sub>	VSt	HP	120	
		1.00m ASS		1.0		CH	<b>Silty CLAY:</b> Medium to high plasticity, pale brown, pale orange-brown, grey mottling, with some sand fine grained			HP	200	
		1.40m										
		1.50m ASS		1.5								
		1.90m										
		2.00m ASS		2.0								
		2.40m										
		2.50m ASS		2.5								
		2.90m										
		3.00m ASS		3.0								
		3.40m										
		3.50m ASS		3.5								
		3.90m										
		4.00m ASS		4.0								
		4.40m										
		4.50m ASS		4.5			4.50m					
						Hole Terminated at 4.50 m						

LEGEND:		Notes, Samples and Tests		Consistency		UCS (kPa)		Moisture Condition	
<b>Water</b>		U <sub>50</sub> 50mm Diameter tube sample		VS	Very Soft	<25		D	Dry
Water Level (Date and time shown)		CBR Bulk sample for CBR testing		S	Soft	25 - 50		M	Moist
Water Inflow		E Environmental sample		F	Firm	50 - 100		W	Wet
Water Outflow		ASS Acid Sulfate Soil Sample		St	Stiff	100 - 200		W <sub>p</sub>	Plastic Limit
<b>Strata Changes</b>		B Bulk Sample		VSt	Very Stiff	200 - 400		W <sub>L</sub>	Liquid Limit
Gradational or transitional strata		<b>Field Tests</b>		H	Hard	>400			
Definitive or distinct strata change		PID Photoionisation detector reading (ppm)		Fb	Friable				
		DCP(x-y) Dynamic penetrometer test (test depth interval shown)		Density	V	Very Loose	Density Index <15%		
		HP Hand Penetrometer test (UCS kPa)			L	Loose	Density Index 15 - 35%		
					MD	Medium Dense	Density Index 35 - 65%		
					D	Dense	Density Index 65 - 85%		
					VD	Very Dense	Density Index 85 - 100%		



# ENGINEERING LOG - BOREHOLE

**BOREHOLE NO: BH103**
**CLIENT:** Coffs Harbour City Council

**PAGE:** 1 of 1

**PROJECT NAME:** Cultural and Civic Centre

**JOB NO:** RGS31785.1

**SITE LOCATION:** Gordon Street, Coffs Harbour

**LOGGED BY:** RW

**TEST LOCATION:** Refer to Figure 1


**DATE:** 23/3/20

**DRILL TYPE:** Ute Mounted Drill Rig

**EASTING:**
**SURFACE RL:**
**BOREHOLE DIAMETER:** 100 mm

**INCLINATION:** 90°

**NORTHING:**
**DATUM:** AHD

Drilling and Sampling					Material description and profile information					Field Test		Structure and additional observations
METHOD	WATER	SAMPLES	RL (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION: Soil type, plasticity/particle characteristics, colour, minor components	MOISTURE CONDITION	CONSISTENCY DENSITY	Test Type	Result	
AD/TC Bit	Not Encountered	0.40m				CL	<b>FILL/TOPSOIL:</b> Silty CLAY, low to medium plasticity, brown/pale brown, pale orange, with some sand fine to medium grained, trace of gravel fine to coarse grained, trace grass roots	M > w <sub>p</sub>				FILL/TOPSOIL
		0.50m		0.5		CL	<b>Silty CLAY:</b> Low plasticity, dark grey/dark brown, with some sand fine to medium grained	M < w <sub>p</sub>				ALLUVIAL
		ASS				CL	<b>Silty CLAY:</b> Low to medium plasticity, pale brown/pale grey, with some sand fine grained	M < w <sub>p</sub>	VSt - H			
		0.90m		1.0		CH	<b>Silty CLAY:</b> Medium to high plasticity, pale brown/pale orange-brown, grey mottling, with some sand fine to medium grained	M > w <sub>p</sub>	VSt - H			
		1.00m										
		ASS										
		1.40m		1.5								
		1.50m										
		ASS										
		1.90m		2.0								
		2.00m										
		ASS										
		2.40m		2.5								
		2.50m										
		ASS										
		2.90m		3.0								
		3.00m										
		ASS										
		3.40m		3.5								
		3.50m										
		ASS										
		3.90m		4.0								
		4.00m										
		ASS										
		4.40m		4.5								
4.50m												
ASS												
							Hole Terminated at 4.50 m					

LEGEND:		Notes, Samples and Tests		Consistency		UCS (kPa)	Moisture Condition	
<b>Water</b>		U <sub>50</sub>	50mm Diameter tube sample	VS	Very Soft	<25	D	Dry
Water Level (Date and time shown)		CBR	Bulk sample for CBR testing	S	Soft	25 - 50	M	Moist
Water Inflow		E	Environmental sample	F	Firm	50 - 100	W	Wet
Water Outflow		ASS	Acid Sulfate Soil Sample	St	Stiff	100 - 200	W <sub>p</sub>	Plastic Limit
<b>Strata Changes</b>		B	Bulk Sample	VSt	Very Stiff	200 - 400	W <sub>L</sub>	Liquid Limit
Gradational or transitional strata				H	Hard	>400		
Definitive or distinct strata change				Fb	Friable			
<b>Field Tests</b>		PID	Photoionisation detector reading (ppm)	Density	V	Very Loose	Density Index <15%	
DCP(x-y)			Dynamic penetrometer test (test depth interval shown)		L	Loose	Density Index 15 - 35%	
HP			Hand Penetrometer test (UCS kPa)		MD	Medium Dense	Density Index 35 - 65%	
					D	Dense	Density Index 65 - 85%	
					VD	Very Dense	Density Index 85 - 100%	

# ENGINEERING LOG - BOREHOLE

**BOREHOLE NO:** BH104

**CLIENT:** Coffs Harbour City Council

**PAGE:** 1 of 1

**PROJECT NAME:** Cultural and Civic Centre

**JOB NO:** RGS31785.1

**SITE LOCATION:** Gordon Street, Coffs Harbour

**LOGGED BY:** RW

**TEST LOCATION:** Refer to Figure 1


**DATE:** 23/3/20

**DRILL TYPE:** Ute Mounted Drill Rig

**EASTING:**
**SURFACE RL:**
**BOREHOLE DIAMETER:** 100 mm

**INCLINATION:** 90°

**NORTHING:**
**DATUM:** AHD

Drilling and Sampling					Material description and profile information					Field Test		Structure and additional observations
METHOD	WATER	SAMPLES	RL (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION: Soil type, plasticity/particle characteristics, colour, minor components	MOISTURE CONDITION	CONSISTENCY DENSITY	Test Type	Result	
AD/TC Bit	Not Encountered					CL	<b>FILL/TOPSOIL:</b> Silty CLAY, low to medium plasticity, brown/pale brown, orange-brown, with some sand fine to medium grained, trace of gravel fine to coarse grained, trace of grass roots	M > w <sub>p</sub>				FILL
		0.40m			CL	0.20m		M > w <sub>p</sub>	St - VSt			ALLUVIAL
		0.50m ASS		0.5	CI	0.45m	<b>Silty CLAY:</b> Low plasticity, dark grey/brown, with some sand fine to medium grained, trace gravel fine grained	M > w <sub>p</sub>	St			
					CH	0.75m	<b>Silty CLAY:</b> Medium plasticity, pale orange-brown/pale grey, with some sand fine to medium grained		VSt - H			
		0.90m					<b>Silty CLAY:</b> Medium to high plasticity, pale brown/pale orange-brown, grey mottling, with some sand fine grained					
		1.00m ASS		1.0								
		1.40m										
		1.50m ASS		1.5								
		1.90m										
		2.00m ASS		2.0								
		2.40m										
		2.50m ASS		2.5								
		2.90m										
		3.00m ASS		3.0								
		3.40m										
		3.50m ASS		3.5								
		3.90m										
		4.00m ASS		4.0								
		4.40m										
		4.50m ASS		4.5				4.50m				
							Hole Terminated at 4.50 m					

LEGEND:		Notes, Samples and Tests		Consistency		UCS (kPa)		Moisture Condition	
<b>Water</b>		U <sub>50</sub> 50mm Diameter tube sample		VS	Very Soft	<25		D	Dry
Water Level (Date and time shown)		CBR Bulk sample for CBR testing		S	Soft	25 - 50		M	Moist
Water Inflow		E Environmental sample		F	Firm	50 - 100		W	Wet
Water Outflow		ASS Acid Sulfate Soil Sample		St	Stiff	100 - 200		w <sub>p</sub>	Plastic Limit
<b>Strata Changes</b>		B Bulk Sample		VSt	Very Stiff	200 - 400		w <sub>L</sub>	Liquid Limit
--- Gradational or transitional strata		<b>Field Tests</b>		H	Hard	>400			
— Definitive or distinct strata change		PID Photoionisation detector reading (ppm)		Fb	Friable				
		DCP(x-y) Dynamic penetrometer test (test depth interval shown)		Density	V	Very Loose			Density Index <15%
		HP Hand Penetrometer test (UCS kPa)			L	Loose			Density Index 15 - 35%
					MD	Medium Dense			Density Index 35 - 65%
					D	Dense			Density Index 65 - 85%
					VD	Very Dense			Density Index 85 - 100%



## **Appendix B-1**

### **Laboratory Test Result Sheets (Stage 1 assessment 2019)**

## CERTIFICATE OF ANALYSIS

**Work Order** : **ES1909963**  
**Client** : **REGIONAL GEOTECHNICAL SOLUTION**  
**Contact** : MR ADAM HOLZHAUSER  
**Address** : 44 BENT STREET  
                   WINGHAM NSW, AUSTRALIA 2429  
**Telephone** : +61 02 6553 5641  
**Project** : RGS31785.1 COFFS HARBOUR CULTURAL AND CIVIL  
                   CENTRE  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : GORDON STREET COFFS HARBOUR  
**Quote number** : EN/222  
**No. of samples received** : 25  
**No. of samples analysed** : 24

**Page** : 1 of 18  
**Laboratory** : Environmental Division Sydney  
**Contact** : Customer Services ES  
**Address** : 277-289 Woodpark Road Smithfield NSW Australia 2164  
**Telephone** : +61-2-8784 8555  
**Date Samples Received** : 01-Apr-2019 09:30  
**Date Analysis Commenced** : 02-Apr-2019  
**Issue Date** : 05-Apr-2019 16:37



Accreditation No. 825  
 Accredited for compliance with  
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Christopher Owler	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Raymond Commodore	Instrument Chemist	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				AB1	AB2	AB3	AB4	AB5
Client sampling date / time				28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit	ES1909963-001	ES1909963-002	ES1909963-003	ES1909963-004	ES1909963-005
				Result	Result	Result	Result	Result
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Sample weight (dry)	----	0.01	g	139	175	172	185	156
APPROVED IDENTIFIER:	----	-	--	C.OWLER	C.OWLER	C.OWLER	C.OWLER	C.OWLER
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	No	No
Organic Fibre	----	0.1	g/kg	No	No	No	No	No



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				AB6	D1	D2	GS1	GS2
Client sampling date / time				28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit	ES1909963-006	ES1909963-007	ES1909963-008	ES1909963-009	ES1909963-010
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	----	----	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	----	<0.05	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	<0.05	<0.05





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	AB6	D1	D2	GS1	GS2
Client sampling date / time					28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit		ES1909963-006	ES1909963-007	ES1909963-008	ES1909963-009	ES1909963-010
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	<50	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		----	----	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		----	----	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		----	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		----	----	----	<1	<1
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	80.1	116
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	101	64.6
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		----	----	----	110	65.0
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		----	----	----	83.5	79.8
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	87.8	84.7
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	72.5	69.7
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	95.4	92.8
Anthracene-d10	1719-06-8	0.5	%		----	----	----	84.8	83.8
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	----	79.4	80.2
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	78.4	75.5



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	GS3	GS4	GS5	GS6	GS7
Client sampling date / time					28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit		ES1909963-011	ES1909963-012	ES1909963-013	ES1909963-014	ES1909963-015
					Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		19.0	9.7	25.7	27.6	11.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		9	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		----	110	----	----	----
Beryllium	7440-41-7	1	mg/kg		----	<1	----	----	----
Boron	7440-42-8	50	mg/kg		----	<50	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		10	4	3	7	5
Cobalt	7440-48-4	2	mg/kg		----	<2	----	----	----
Copper	7440-50-8	5	mg/kg		27	21	35	42	8
Lead	7439-92-1	5	mg/kg		93	266	254	272	50
Manganese	7439-96-5	5	mg/kg		----	121	----	----	----
Nickel	7440-02-0	2	mg/kg		4	2	<2	5	<2
Selenium	7782-49-2	5	mg/kg		----	<5	----	----	----
Vanadium	7440-62-2	5	mg/kg		----	6	----	----	----
Zinc	7440-66-6	5	mg/kg		301	397	378	1120	107
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	<0.1	<0.1	<0.1
<b>EP068A: Organochlorine Pesticides (OC)</b>									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	0.09	0.09	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				GS3	GS4	GS5	GS6	GS7
Client sampling date / time				28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit	ES1909963-011	ES1909963-012	ES1909963-013	ES1909963-014	ES1909963-015
				Result	Result	Result	Result	Result

### EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued

Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	0.7	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	0.7	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	1.4	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	1.2	1.2	1.2

### EP080/071: Total Petroleum Hydrocarbons

C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	<50

### EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	----	120	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	120	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	<50	<50



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				GS8	BH1 1.5-1.95	2BH2 0.05-0.15	BH2 0.2-0.4	BH2 0.4-0.5
Client sampling date / time				28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit	ES1909963-016	ES1909963-017	ES1909963-018	ES1909963-019	ES1909963-020
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	23.8	19.3	4.3	18.1	17.6
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	12	<5	8	<5	<5
Barium	7440-39-3	10	mg/kg	----	20	60	20	20
Beryllium	7440-41-7	1	mg/kg	----	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	----	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	23	14	6	6	8
Cobalt	7440-48-4	2	mg/kg	----	<2	9	<2	<2
Copper	7440-50-8	5	mg/kg	34	<5	15	<5	<5
Lead	7439-92-1	5	mg/kg	13	9	17	19	8
Manganese	7439-96-5	5	mg/kg	----	<5	446	30	12
Nickel	7440-02-0	2	mg/kg	6	<2	10	<2	<2
Selenium	7782-49-2	5	mg/kg	----	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	----	38	13	18	22
Zinc	7440-66-6	5	mg/kg	330	<5	95	35	8
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				GS8	BH1 1.5-1.95	2BH2 0.05-0.15	BH2 0.2-0.4	BH2 0.4-0.5
Client sampling date / time				28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00
Compound	CAS Number	LOR	Unit	ES1909963-016	ES1909963-017	ES1909963-018	ES1909963-019	ES1909963-020
				Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	160	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	160	----	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	220	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	220	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH3 0.07-0.1	BH3 1-1.45	BH4 0-0.1	BH4 0.3-0.4	----
Client sampling date / time					28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	28-Mar-2019 00:00	----
Compound	CAS Number	LOR	Unit		ES1909963-021	ES1909963-022	ES1909963-023	ES1909963-024	-----
					Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		2.7	20.4	20.6	13.7	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		9	11	6	<5	----
Barium	7440-39-3	10	mg/kg		20	30	30	20	----
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	----
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg		4	15	6	4	----
Cobalt	7440-48-4	2	mg/kg		3	<2	2	<2	----
Copper	7440-50-8	5	mg/kg		9	10	8	<5	----
Lead	7439-92-1	5	mg/kg		15	16	30	7	----
Manganese	7439-96-5	5	mg/kg		260	58	237	17	----
Nickel	7440-02-0	2	mg/kg		4	2	2	<2	----
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	----
Vanadium	7440-62-2	5	mg/kg		8	37	9	14	----
Zinc	7440-66-6	5	mg/kg		37	6	71	<5	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.1	<0.1	<0.1	<0.1	----

## Analytical Results

### Descriptive Results

Sub-Matrix: SOIL		
Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	AB1 - 28-Mar-2019 00:00	Mid brown soil.
EA200: Description	AB2 - 28-Mar-2019 00:00	Mid brown soil.
EA200: Description	AB3 - 28-Mar-2019 00:00	Mid brown soil.
EA200: Description	AB4 - 28-Mar-2019 00:00	Mid brown soil.
EA200: Description	AB5 - 28-Mar-2019 00:00	Mid brown soil.
EA200: Description	AB6 - 28-Mar-2019 00:00	Mid brown soil.





## **Appendix B-2**

### **Laboratory Test Result Sheets (Stage 2 assessment 2020)**

## CERTIFICATE OF ANALYSIS

**Work Order** : **ES2010416**  
**Client** : **REGIONAL GEOTECHNICAL SOLUTION**  
**Contact** : MR SIMON KEEN  
**Address** : Unit 14 25-27 Hurley Drive  
                   COFFS HARBOUR NSW, AUSTRALIA 2450  
**Telephone** : +61 02 6553 5641  
**Project** : RGS31785.1 COFFS HARBOUR CULTURAL AND CIVIL  
                   CENTRE  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : Gordon Street, Coffs Harbour  
**Quote number** : EN/222  
**No. of samples received** : 16  
**No. of samples analysed** : 16

**Page** : 1 of 19  
**Laboratory** : Environmental Division Sydney  
**Contact** : Customer Services ES  
**Address** : 277-289 Woodpark Road Smithfield NSW Australia 2164  
**Telephone** : +61-2-8784 8555  
**Date Samples Received** : 26-Mar-2020 09:30  
**Date Analysis Commenced** : 27-Mar-2020  
**Issue Date** : 02-Apr-2020 13:46



Accreditation No. 825  
 Accredited for compliance with  
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Dian Dao		Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S101	S102	S103	S104	S105
Client sampling date / time					24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00
Compound	CAS Number	LOR	Unit		ES2010416-001	ES2010416-002	ES2010416-003	ES2010416-004	ES2010416-005
					Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>									
pH (CaCl2)	----	0.1	pH Unit		7.7	----	----	----	----
<b>EA002: pH 1:5 (Soils)</b>									
pH Value	----	0.1	pH Unit		8.5	----	----	----	----
<b>EA010: Conductivity (1:5)</b>									
Electrical Conductivity @ 25°C	----	1	µS/cm		127	----	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		8.0	9.1	8.2	8.6	6.8
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	5	Fibres		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	----	0.1	g/kg		No	No	No	No	No
Organic Fibre	----	0.1	g/kg		No	No	No	No	No
Sample weight (dry)	----	0.01	g		71.7	45.4	36.4	44.7	40.8
APPROVED IDENTIFIER:	----	-	--		B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER
<b>ED006: Exchangeable Cations on Alkaline Soils</b>									
Exchangeable Calcium	----	0.2	meq/100g		2.5	----	----	----	----
Exchangeable Magnesium	----	0.2	meq/100g		<0.2	----	----	----	----
Exchangeable Potassium	----	0.2	meq/100g		<0.2	----	----	----	----
Exchangeable Sodium	----	0.2	meq/100g		<0.2	----	----	----	----
Cation Exchange Capacity	----	0.2	meq/100g		2.5	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		7	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		40	40	----	----	40
Beryllium	7440-41-7	1	mg/kg		<1	<1	----	----	<1
Boron	7440-42-8	50	mg/kg		<50	<50	----	----	<50
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		5	3	4	8	8
Cobalt	7440-48-4	2	mg/kg		3	3	----	----	4
Copper	7440-50-8	5	mg/kg		13	7	7	23	16
Iron	7439-89-6	0.005	%		1.80	----	----	----	----
Lead	7439-92-1	5	mg/kg		11	8	9	10	13
Manganese	7439-96-5	5	mg/kg		430	223	----	----	208
Nickel	7440-02-0	2	mg/kg		5	3	3	6	6



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				S101	S102	S103	S104	S105
Client sampling date / time				24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00
Compound	CAS Number	LOR	Unit	ES2010416-001	ES2010416-002	ES2010416-003	ES2010416-004	ES2010416-005
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	14.5	6.50	16.1	<0.05	0.81
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	<0.5	<0.5	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S101	S102	S103	S104	S105
Client sampling date / time					24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00
Compound	CAS Number	LOR	Unit		ES2010416-001	ES2010416-002	ES2010416-003	ES2010416-004	ES2010416-005
					Result	Result	Result	Result	Result
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	80.4	74.4	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		102	111	87.7	101	99.6
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		92.0	96.6	67.5	91.8	88.4
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		----	----	69.4	64.3	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	68.6	71.5	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	42.5	41.7	----
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	88.8	90.1	----
Anthracene-d10	1719-06-8	0.5	%		----	----	81.7	82.9	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	86.1	91.5	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	95.8	90.0	----
Toluene-D8	2037-26-5	0.2	%		----	----	102	94.6	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	107	98.0	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				S106	S107	S108	S109	S110
Client sampling date / time				24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00
Compound	CAS Number	LOR	Unit	ES2010416-006	ES2010416-007	ES2010416-008	ES2010416-009	ES2010416-010
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	0.18
Aldrin	309-00-2	0.05	mg/kg	<0.05	1.19	0.59	0.79	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	1.55
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	1.40
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	0.15
Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.25	1.52	1.53	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	1.44	2.11	2.32	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S106	S107	S108	S109	S110
Client sampling date / time					24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00
Compound	CAS Number	LOR	Unit		ES2010416-006	ES2010416-007	ES2010416-008	ES2010416-009	ES2010416-010
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	<50	<50	----
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg		<1	----	<1	<1	----
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		74.0	----	78.0	72.4	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		96.9	76.4	104	107	84.2
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		93.2	67.3	102	99.8	74.3
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		68.9	----	63.5	64.2	----
2-Chlorophenol-D4	93951-73-6	0.5	%		67.6	----	66.8	71.6	----
2,4,6-Tribromophenol	118-79-6	0.5	%		42.6	----	43.1	40.8	----
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		88.9	----	87.4	92.8	----
Anthracene-d10	1719-06-8	0.5	%		82.5	----	81.5	84.3	----
4-Terphenyl-d14	1718-51-0	0.5	%		91.2	----	90.5	94.3	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		85.6	----	85.1	79.0	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	S111	D1	D2	Trip Spike - 7	Blank
Client sampling date / time					24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	16-Mar-2020 00:00	18-Mar-2020 00:00
Compound	CAS Number	LOR	Unit		ES2010416-011	ES2010416-012	ES2010416-013	ES2010416-014	ES2010416-015
					Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>									
pH (CaCl <sub>2</sub> )	----	0.1	pH Unit		7.4	----	----	----	----
<b>EA002: pH 1:5 (Soils)</b>									
pH Value	----	0.1	pH Unit		7.9	----	----	----	----
<b>EA010: Conductivity (1:5)</b>									
Electrical Conductivity @ 25°C	----	1	µS/cm		228	----	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		12.4	7.4	14.5	----	----
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>									
Asbestos Detected	1332-21-4	0.1	g/kg		No	----	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres		No	----	----	----	----
Asbestos Type	1332-21-4	-	--		-	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg		No	----	----	----	----
Organic Fibre	----	0.1	g/kg		No	----	----	----	----
Sample weight (dry)	----	0.01	g		29.5	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		B.SCHRADER	----	----	----	----
<b>ED006: Exchangeable Cations on Alkaline Soils</b>									
Exchangeable Calcium	----	0.2	meq/100g		1.7	----	----	----	----
Exchangeable Magnesium	----	0.2	meq/100g		<0.2	----	----	----	----
Exchangeable Potassium	----	0.2	meq/100g		<0.2	----	----	----	----
Exchangeable Sodium	----	0.2	meq/100g		<0.2	----	----	----	----
Cation Exchange Capacity	----	0.2	meq/100g		1.7	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		<5	<5	7	----	----
Barium	7440-39-3	10	mg/kg		20	----	<10	----	----
Beryllium	7440-41-7	1	mg/kg		<1	----	<1	----	----
Boron	7440-42-8	50	mg/kg		<50	----	<50	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		6	4	2	----	----
Cobalt	7440-48-4	2	mg/kg		10	----	4	----	----
Copper	7440-50-8	5	mg/kg		19	7	9	----	----
Iron	7439-89-6	0.005	%		1.20	----	----	----	----
Lead	7439-92-1	5	mg/kg		<5	9	<5	----	----
Manganese	7439-96-5	5	mg/kg		596	----	15	----	----
Nickel	7440-02-0	2	mg/kg		<2	3	<2	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				S111	D1	D2	Trip Spike - 7	Blank
Client sampling date / time				24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	16-Mar-2020 00:00	18-Mar-2020 00:00
Compound	CAS Number	LOR	Unit	ES2010416-011	ES2010416-012	ES2010416-013	ES2010416-014	ES2010416-015
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	15.1	0.50	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

				S111	D1	D2	Trip Spike - 7	Blank
Client sampling date / time				24-Mar-2020 00:00	24-Mar-2020 00:00	24-Mar-2020 00:00	16-Mar-2020 00:00	18-Mar-2020 00:00
Compound	CAS Number	LOR	Unit	ES2010416-011	ES2010416-012	ES2010416-013	ES2010416-014	ES2010416-015
				Result	Result	Result	Result	Result
<b>EP080: BTEXN - Continued</b>								
Naphthalene	91-20-3	1	mg/kg	----	<1	----	<1	<1
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	----	70.7	----	----	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>								
Dibromo-DDE	21655-73-2	0.05	%	83.8	98.8	91.6	----	----
<b>EP068T: Organophosphorus Pesticide Surrogate</b>								
DEF	78-48-8	0.05	%	78.1	89.7	83.5	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.5	%	----	63.5	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	67.4	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%	----	40.8	----	----	----
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.5	%	----	89.3	----	----	----
Anthracene-d10	1719-06-8	0.5	%	----	82.3	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	87.4	----	----	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	78.5	----	84.9	84.0
Toluene-D8	2037-26-5	0.2	%	----	103	----	95.0	88.8
4-Bromofluorobenzene	460-00-4	0.2	%	----	103	----	98.3	95.7



## Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	39	149
<b>EP068S: Organochlorine Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	49	147
<b>EP068T: Organophosphorus Pesticide Surrogate</b>			
DEF	78-48-8	35	143
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130



## **Appendix B-3**

### **Laboratory Results Summary Table Compared against Assessment Criteria**





## **Appendix C**

### **Results of Site History Study**



SafeWork NSW

Locked Bag 2906, Lisarow NSW 2252

Customer Experience 13 10 50

ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D19/097023

28 March 2019

Regional Geotechnical Solutions  
Mr Adam Holzhauser  
Unit 14  
25-27 Hurley Drive  
COFFS HARBOUR NSW 2450

Dear Mr Holzhauser

**RE SITE: 23-31 Gordon St, Coffs Harbour NSW 2450**

I refer to your site search request received by SafeWork NSW on 22 March 2019 requesting information on Storage of Hazardous Chemicals for the above site.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email [licensing@safework.nsw.gov.au](mailto:licensing@safework.nsw.gov.au)

Yours sincerely

Customer Service Officer  
Customer Experience - Operations  
SafeWork NSW

SAFEWORK NSW  
92 DONNISON STREET  
GOSFORD NSW 2250

22/03/19 7:52  
000030#7620 0001  
ROBYN

EFTPC		
SAFEL		
92 TC	OTHERX	\$305.50
GOSFC	OTHER	\$1.22
Austr	INV TTL	\$306.72
TIME	GST	\$27.77
MID		
TSP		
RRN	CR CARD	
Visa		
CARD.		\$306.72
AUTH		

MOTO \* indicates taxable  
TAX INVOICE  
81 913 830 179  
\*

## Title Tree

### Lot 20 Section 6 DP 758258

Folio Identifier 20/6/758258

Certificate of Title Volume 4319 Folio 156

Certificate of Title Volume 3006 Folio 58

\*\*\*\*\*

## Summary of proprietor(s)

### Lot 20 Section 6 DP 758258

Year	Proprietor(s)
	<b>(Lot 20 Section 6 DP 758258)</b>
2003 – todate	Coffs Harbour City Council
<i>(2010 – todate)</i>	<i>(current lease to Geolink Consulting Pty Limited shown on Folio Identifier 20/6/758258)</i>
2002 – 2003	Francorp Pty Limited
1992 – 2002	Inderjit Singh Harjeet Kaur Singh
<i>(1992 – todate)</i>	<i>(various leases shown on Historical Folio 20/6/758258)</i>
	<b>(Allotment 20 Section 6 Town Coffs Harbour – Area 1 Rood – CTVol 4319 Fol 156)</b>
1983 – 1992	Inderjit Singh Harjeet Kaur Singh
1972 – 1983	Marleen May Smith, spinster
1929 – 1972	Elsie May Smith, wife of Irvine William Smith
	<b>(Allotments 10, 19 &amp; 20 Section 6 Town Coffs Harbour – Area 3 Roods – CTVol 3006 Fol 58)</b>
1926 – 1929	George Hedger Andrews, bank manager
1920 – 1926	George Bellingham Jarrett, grantee

\*\*\*\*\*

## Summary of proprietor(s) Lot B DP 346105

Year	Proprietor(s)
	<b>(Lot B DP 346105)</b>
2004 – todate	Coffs Harbour City Council
1994 – 2004	The Salvation Army (New South Wales) Property Trust
1989 – 1994	Lockett and Montgomerie Pty. Limited
	<b>(Lot B DP 346105 – CTVol 15514 Fol 55)</b>
1987 – 1989	Lockett and Montgomerie Pty. Limited
	<b>(Lot B DP 346105 – Area 20 Perches – CTVol 6704 Fol 102)</b>
1985 – 1987	Lockett and Montgomerie Pty. Limited
1983 – 1985	Janice Faye Hefner
1964 – 1983	Marie Minette Timms, wife of Lionel Edwin Hammond Timms, sawmiller
1961 – 1964	Reginald Eric Charles Maddox, garage proprietor Ailan Margaret Maddox, his wife
1955 – 1961	Stanley Ivan James, mechanic
1953 – 1955	James Maze, engineer
	<b>(Allotment 19 Section 6 Town Coffs Harbour – Area 1 Rood – CTVol 4273 Fol 247)</b>
1941 – 1953	Hilda Blanch May Smith, widow
1938 – 1941	Hilda Mary Scott Smith, spinster
1938 – 1938	Walter Scott Smith, butter factory manager
1936 – 1938	Mary Keever, widow
1929 – 1936	George Hedger Andrews, bank manager
	<b>(Allotments 10, 19 &amp; 20 Section 6 Town Coffs Harbour – Area 3 Roods – CTVol 3006 Fol 58)</b>
1926 – 1929	George Hedger Andrews, bank manager
1920 – 1926	George Bellingham Jarrett, grantee

\*\*\*\*\*

## Lot 123 DP 749233

Year	Proprietor(s)
	<b>(Lot 123 DP 749233)</b>
2004 – todate	Coffs Harbour City Council
1987 – 2004	The Salvation Army (New South Wales) Property Trust

**See Notes (a), (b) & (c)**

### Note (a)























	<b>(Lot A DP 346105 – Area 20 Perches – CTVol 7164 Fol 157)</b>
1983 – 1987	The Salvation Army (New South Wales) Property Trust
1983 – 1983	Thelma Kingston, widow
1978 – 1983	Ronald Joseph Kingston, retired Thelma Kingston, his wife
1970 – 1978	Bruce Williams, sales representative Lorelle Kingston, hairdresser
1960 – 1970	Howard Edmond Herden, salesman Pearl Francis Ross Herden, his wife
1959 – 1960	Howard Edmond Herden, salesman Pearl Francis Herden, his wife
1956 – 1959	Stanley Ivan James, motor mechanic
	<b>(Allotment 19 Section 6 Town Coffs Harbour – Area 1 Rood – CTVol 4273 Fol 247)</b>
1941 – 1956	Hilda Blanch May Smith, widow
1938 – 1941	Hilda Mary Scott Smith, spinster
1938 – 1938	Walter Scott Smith, butter factory manager
1936 – 1938	Mary Keevers, widow
1929 – 1936	George Hedger Andrews, bank manager
	<b>(Allotments 10, 19 &amp; 20 Section 6 Town Coffs Harbour – Area 3 Roods – CTVol 3006 Fol 58)</b>
1926 – 1929	George Hedger Andrews, bank manager
1920 – 1926	George Bellinghen Jarrett, grantee

\*\*\*\*\*

**Note (c)**

	<b>(Lot D DP 19376 – Area 23 ¾ Perches – CTVol 6081 Fol 157)</b>
1952 – 1987	The Salvation Army (New South Wales) Property Trust
1950 – 1952	Lorna May Killmore, married woman
1950 – 1950	Erle Samuel George Brewis, farmer
	<b>(Lots C, D, E &amp; F DP 19376 – Area 2 Roods 16 Perches – CTVol 5239 Fol 66)</b>
1949 – 1950	Beatrice Daphne Reed, married woman
1941 – 1949	Horace William Matten, taxi driver Reuben Rodrick Matten, farmer Oswald Harold Matten, farmer
	<b>(Allotments 16, 17 &amp; 18 Section 6 Town Coffs Harbour – Area 3 Roods – CTVol 1741 Fol 204)</b>
1930 – 1941	Horace William Matten, taxi driver Reuben Rodrick Matten, farmer Oswald Harold Matten, farmer
1906 – 1930	Samuel Matten, farmer, grantee

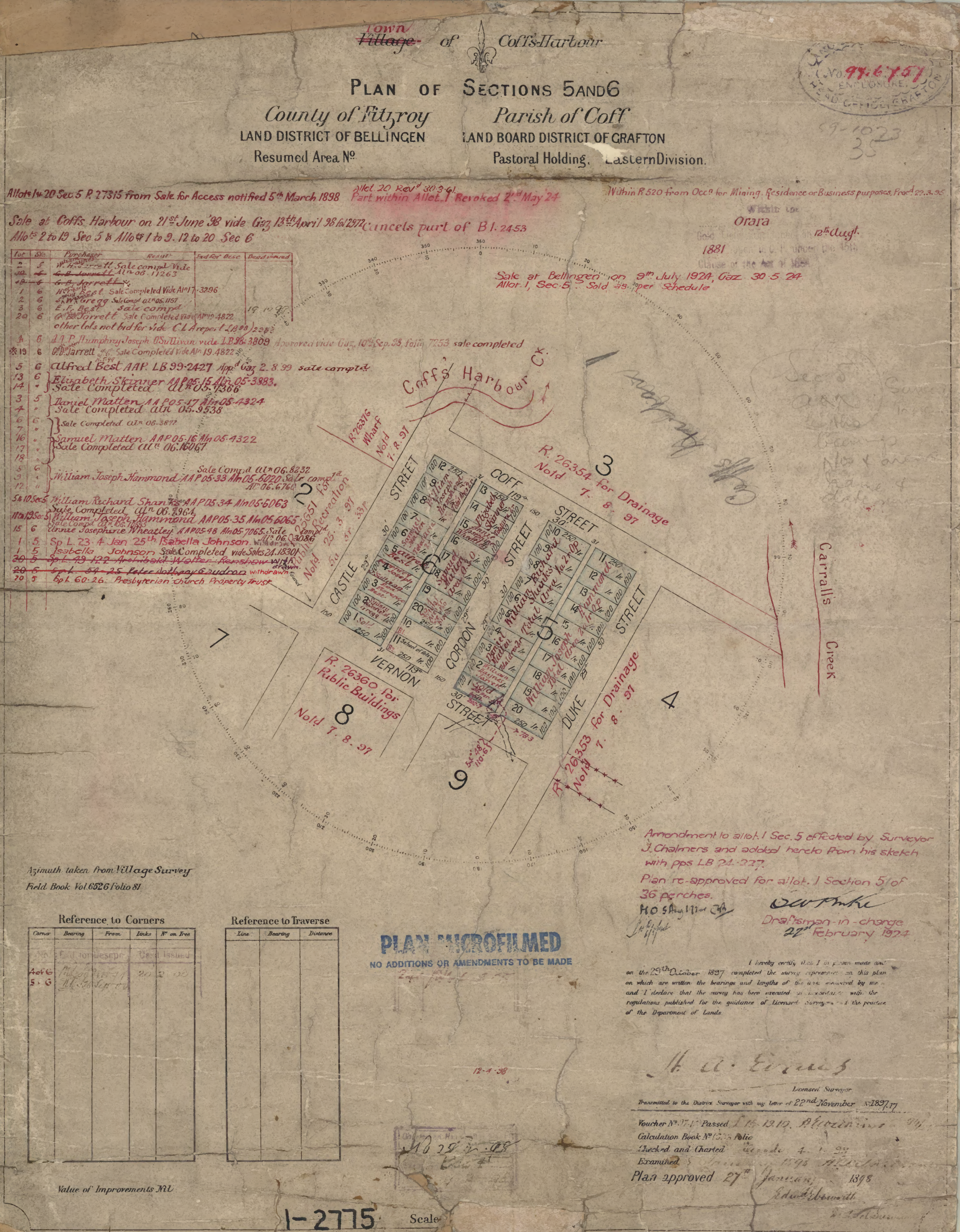
\*\*\*\*\*

	Status	Surv/Comp	Purpose
DP1031722 Lot(s): 13, 14  NSW GAZ. CLOSED ROAD LOTS 13-14 DP1031722		25-01-2002	Folio : 435
DP1034934 Lot(s): 78  DP5344	HISTORICAL	COMPILATION	UNRESEARCHED
DP1052469 Lot(s): 100, 101  DP562513	HISTORICAL	SURVEY	SUBDIVISION
DP1057401 Lot(s): 1  DP942999	HISTORICAL	SURVEY	UNRESEARCHED
DP1058414 Lot(s): 102  DP728228	HISTORICAL	SURVEY	CROWN FOLIO CREATION
DP1133064 Lot(s): 1  DP809575	HISTORICAL	SURVEY	UNRESEARCHED
 DP857103	HISTORICAL	SURVEY	SUBDIVISION
DP1173996 Lot(s): 1  DP758258	HISTORICAL	COMPILATION	CROWN ADMIN NO.
DP1188198 Lot(s): 10  DP758258	HISTORICAL	COMPILATION	CROWN ADMIN NO.
DP1220675 Lot(s): 1  DP1204362	HISTORICAL	SURVEY	CONSOLIDATION
 DP1218390	HISTORICAL	SURVEY	ROADS ACT, 1993
 NSW GAZ. CLOSED ROAD LOT 1 DP1218390		29-04-2016	Folio : 992
DP1235988 Lot(s): 1  DP421199	HISTORICAL	SURVEY	UNRESEARCHED
 DP721353	HISTORICAL	COMPILATION	CROWN FOLIO CREATION
 DP796866	HISTORICAL	COMPILATION	DEPARTMENTAL
 NSW GAZ. RENAMED "CITY SQUARE"		20-09-2002	Folio : 8354
SP52228  SP69266	REGISTERED	COMPILATION	STRATA SUBDIVISION PLAN
SP63891  DP332845	HISTORICAL	COMPILATION	UNRESEARCHED
Road Polygon Id(s): 107995730, 107995743  DP1181657	REGISTERED	SURVEY	SUBDIVISION
 CA168441 - LOT 15 DP1181657			
Polygon Id(s): 105567556, 105652957, 107995742  DP1248186	REGISTERED	SURVEY	SUBDIVISION
Polygon Id(s): 105567556, 105612906, 105652957, 105659840, 107995742  CA176414 - LOT 100 DP1248186			

**Caution:** This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL**

**ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.





Town of Coff's Harbour

PLAN OF SECTIONS 5 AND 6  
County of Fitzroy Parish of Coff  
LAND DISTRICT OF BELLINGEN LAND BOARD DISTRICT OF GRAFTON  
Resumed Area No. Pastoral Holding, Eastern Division.

94.6751  
ENCLOSURE  
1897

35

Allo 1-20 Sec 5 R 27315 from Sale for Access notified 5<sup>th</sup> March 1898  
Allo 20 Rev'd 30-3-61 Part within Allo 1 Revoked 2<sup>nd</sup> May 24  
Within R 520 from Occ<sup>n</sup> for Mining, Residence or Business purposes, Procl 22.3.95

Sale at Coff's Harbour on 21<sup>st</sup> June 98 vide Gaz 13<sup>th</sup> April 98  
Allo 2 to 19 Sec 5 & Allo 1 to 9. 12 to 20 Sec 6  
Cancels part of B1.2453

Lot	Area	Purchaser	Result	End for Desc	Deed issued
2	5	W. H. ...	...	...	...
10	6	G. B. Jarrett	...	...	...
1	6	H. ...	...	...	...
2	6	E. ...	...	...	...
3	6	E. ...	...	...	...
20	6	G. B. Jarrett	...	...	...
4	6	A. J. P. Humphrey Joseph O'Sullivan	...	...	...
19	6	G. B. Jarrett	...	...	...
5	6	Alfred Best AAP LB 99-2427	...	...	...
13	6	Elizabeth Skinner AAP 15-41-05-3883	...	...	...
14	6	Sale Completed	...	...	...
3	5	Daniel Matten AAP 15-41-05-4324	...	...	...
7	5	Sale Completed	...	...	...
6	5	Sale Completed	...	...	...
16	5	Samuel Matten AAP 15-41-05-4322	...	...	...
17	5	Sale Completed	...	...	...
18	5	Sale Completed	...	...	...
5	6	William Joseph Hammond AAP 15-41-05-6020	...	...	...
12	6	Sale Completed	...	...	...
5 & 10	5	William Richard Sharkey AAP 15-41-05-6063	...	...	...
11 & 12	5	William Joseph Hammond AAP 15-41-05-6065	...	...	...
15	6	Unice Josephine Wheatley AAP 15-41-05-7065	...	...	...
1	5	Sp L 23 4 Jan 25 <sup>th</sup> Isabella Johnson	...	...	...
1	5	Isabella Johnson	...	...	...
20	5	Sp L 49 122 Archibald Walter Renshaw	...	...	...
20	5	Sp L 54 25 Peter Nathaniel Renshaw	...	...	...
20	5	Sp L 60 26 Presbyterian Church Property Trust	...	...	...

Sale at Bellinghen on 9<sup>th</sup> July 1924, Gaz 30.5.24  
Allo 1, Sec 5 Sold as per Schedule

Orara  
1881  
Clause of the Act of 1884

Sec 5  
Sum  
Bearing  
Not a road  
Name &  
date

Handwritten notes and signatures.

Azimuth taken from Village Survey  
Field Book Vol 6526 Folio 81

Reference to Corners					Reference to Traverse		
Corner	Bearing	From	Links	N <sup>o</sup> on Tree	Line	Bearing	Distance
Act 6	...	...	...	...			
5. 6	...	...	...	...			

PLAN MICROFILMED  
NO ADDITIONS OR AMENDMENTS TO BE MADE

Amendment to allot 1 Sec 5 effected by Surveyor J. Chalmers and added hereto from his sketch with pps LB 24.227.  
Plan re-approved for allot 1 Section 5 of 36 perches.  
H. O. ...  
Draftsman-in-charge  
27<sup>th</sup> February 1924

I hereby certify that I have made and on the 29<sup>th</sup> October 1897 completed the survey represented on this plan on which are written the bearings and lengths of the lines measured by me and I declare that the survey has been executed in accordance with the regulations published for the guidance of Licensed Surveyors and the practice of the Department of Lands.

H. W. Evans  
Licensed Surveyor  
Transmitted to the District Surveyor with my letter of 22<sup>nd</sup> November 1897.  
Voucher No. 171 Passed 15.12.19. Allocation 171.  
Calculation Book No. 125 Folio  
Checked and Charted 4.1.98  
Examined 11.1.98  
Plan approved 27<sup>th</sup> January 1898  
Edw. ...

18 25 2 08

Value of Improvements Nil

1-2775 Scale



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

NOTATIONS AND UNREGISTERED DEALINGS		
PARTICULARS		
SECOND SCHEDULE (continued)		
	SEE AUTO FOLIO	
	CANCELLED	
	REGISTERED PROPRIETOR	
FIRST SCHEDULE (continued)		

97-01TP



# TRANSFER UNDER POWER OF SALE

Section 58 Real Property Act 1900



U  
217277 S

B

Office of State Revenue use only

00\*Z\$

10/SB/021104 40 1160 46E040

(A) **LAND TRANSFERRED**

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

Folio Identifier B/346105

(B) **LODGED BY**

L.T.O. Box

Name, Address or DX and Telephone

**COLEMAN & GREIG**  
SOLICITORS  
189 Y

REFERENCE (max. 15 characters): **SAL/ARMY**

(C) **TRANSFEROR AUSTRALIA & NEW ZEALAND BANKING GROUP LIMITED**

being the mortgagee in **MORTGAGE X139667** dated **11<sup>th</sup> September 1987** from  
the registered proprietor of the above Land, acknowledges receipt of the consideration of \$ **165,000.00**  
and in exercise of power of sale under that Mortgage transfers an estate in fee simple in the above Land to the Transferee

(D) subject to the following **ENCUMBRANCES** 1. .... 2. .... 3. ....

(E) **TRANSFEE**

TP

**THE SALVATION ARMY (NEW SOUTH WALES) PROPERTY TRUST**  
140 Elizabeth Street, Sydney

TENANCY:

(F)

(G) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATE 15<sup>th</sup> April 1994**

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

Signed in my presence on behalf  
of the said Bank by its Attorney  
**GREGORY CHARLES BRITNALL**  
who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Name, address and occupation  
of Witness (BLOCK LETTERS)

**AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED**  
(A.C.N. 005 357 522)  
by its Attorney

and, I, the said Attorney state that I have not received any notice of  
the revocation of the Power of Attorney registered in the Office of  
the Registrar General Sydney as No. 878 Book 4001 under which  
this document is executed.

Signature of Transferor

**Acting/District Manager/Senior Manager Retail Banking for the time  
being of Australia and New Zealand Banking Group Limited.**

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Solicitor for Signature of Transferee

**PAUL LUCAS**

CHECKED BY (office use only)

**OFF MT X139667**

PLAN FORM 1

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

\* OFFICE USE ONLY

B  
K  
I  
K  
O  
O  
N

Council Clerk's Certificate

I hereby certify that:

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

(b) the requirements of section 312 of the Metropolitan Water, Sewerage, and Drainage Act, 1924, as amended (other than the requirements for the registration of plans), and

have been complied with by the applicant in relation to the proposed "new road", "subdivision" or "consolidation" set out herein.

Subdivision No. 63/1987  
Date 10-7-1987

(Signature) *[Signature]*  
Council Clerk

\* This part of certificate is to be deleted where the application is only for a consolidated lot, or the opening of a new road or where the land to be subdivided is wholly within the areas of operations of the Metropolitan Water, Sewerage and Drainage Board and the Munster District Water Board. Delete if inapplicable.

Surveyor's Certificate

MICHAEL F. LAMONT

OF THE DISTRICT OF HARBOUR

I, MICHAEL F. LAMONT, of the District of Harbour, do hereby certify that the survey represented in this plan is accurate and has been made in accordance with the Survey Practice Regulations, 1932, and was completed on 17th JUNE 1987.

Signature *[Signature]*  
Surveyor registered under Surveyors Act, 1929, as amended.  
District of Harbour.  
Strike out either (1) or (2). Insert date of survey.

PLAN

CONSOLIDATION OF LOT A D.P. 346105  
AND LOTS C & D D.P. 19376

Man/Shire : COFFS HARBOUR Locality: COFFS HARBOUR

County: FITZROY

Reduction Ratio 1: 800 Lengths are in metres

DP 749233

Registered: *[Stamp]* 11/10/1987

C.A. No. 63/1987 OF 10-7-1987

Title System: TORENS

Purpose: CONSOLIDATION

Ref. Map: Y0942-42#

Last Plan: D.P. 346105, D.P. 19376

COFF ST

RIDING PLACE

GORDON STREET

VERNON ST

M. M.

M.P.D.

SURVEYOR'S REFERENCE 79142 / 87089

Plan Drawing only to appear in this space

Plan Drawing only to appear in this space

10	20	30	40	50	60	70	Table of mm	110	120	130	140
----	----	----	----	----	----	----	-------------	-----	-----	-----	-----

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day. 1st October, 1987





NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

19/3/2019 12:49PM

FOLIO: 123/749233

First Title(s): VOL 1741 FOL 204 VOL 3006 FOL 58  
Prior Title(s): VOL 6081 FOL 157 VOL 6421 FOL 72  
VOL 7164 FOL 157

Recorded	Number	Type of Instrument	C.T. Issue
7/10/1987	DP749233	DEPOSITED PLAN	FOLIO CREATED EDITION 1
25/3/2004	AA521320	TRANSFER	EDITION 2

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

advlegs

PRINTED ON 19/3/2019

Obtained from NSW LRS on 19 March 2019 11:49 AM AEST

© Office of the Registrar-General 2019



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 20/6/758258

SEARCH DATE	TIME	EDITION NO	DATE
19/3/2019	12:43 PM	4	2/8/2010

LAND

LOT 20 OF SECTION 6 IN DEPOSITED PLAN 758258  
AT COFFS HARBOUR  
LOCAL GOVERNMENT AREA COFFS HARBOUR  
PARISH OF COFF COUNTY OF FITZROY  
(FORMERLY KNOWN AS ALLOTMENT 20 OF SECTION 6)  
TITLE DIAGRAM CROWN PLAN 1.2775

FIRST SCHEDULE

COFFS HARBOUR CITY COUNCIL (T 9443779)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
- 2 AF664945 LEASE TO GEOLINK CONSULTING PTY LIMITED EXPIRES: 30/6/2012.

NOTATIONS

UNREGISTERED DEALINGS: NIL

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

advlegs

PRINTED ON 19/3/2019

Obtained from NSW LRS on 19 March 2019 11:43 AM AEST

\* 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.

© Office of the Registrar-General 2019



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: B/346105

SEARCH DATE	TIME	EDITION NO	DATE
19/3/2019	12:44 PM	2	25/3/2004

LAND

LOT B IN DEPOSITED PLAN 346105  
AT COFFS HARBOUR  
LOCAL GOVERNMENT AREA COFFS HARBOUR  
PARISH OF COFF COUNTY OF FITZROY  
TITLE DIAGRAM DP346105

FIRST SCHEDULE

COFFS HARBOUR CITY COUNCIL (T AA521320)

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 \*\*\*

advlegs

PRINTED ON 19/3/2019

Obtained from NSW LRS on 19 March 2019 11:44 AM AEST

\* 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.

© Office of the Registrar-General 2019





## **Appendix D**

**Letter from Dr David Tully CEnvP SC**

# Contaminated Land Solutions

20 April 2020

Ref: 0061.L03

Regional Geotechnical Solutions Pty Ltd  
Unit 4  
25-27 Hurley Drive  
Coffs Harbour  
NSW 2450

For the attention of Adam Holzhauser

Dear Adam,

## **RE: Report Review Stage 2 Site Contamination Assessment Report – Proposed Cultural & Civic Space Project, 23-31 Gordon Street, Coffs Harbour**

I, Dr David Tully of Contaminated Land Solutions Pty Ltd, am a Certified Environmental Practitioner Site Contamination Specialist (General Certified Environmental Practitioner certification no. 1138 and Site Contamination Specialist certification no. SC40084).

I confirm I have reviewed the Regional Geotechnical Solutions report entitled “Stage 2 Site Contamination Assessment Report – *Proposed Cultural & Civic Space Project, 23-31 Gordon Street, Coffs Harbour*” (Ref: RGS31785.1-AG), dated 17 April 2020 and a copy of which I have retained.

I can confirm that on the basis of the information contained within the report, I support the conclusions and recommendations provided therein.

Should the client, regulator or local authority have any queries regarding the report review, I can be contacted by e-mail via [david.tully@contaminatedlandsolutions.com.au](mailto:david.tully@contaminatedlandsolutions.com.au). Specific queries regarding the content of the report should be addressed to Adam Holzhauser at Regional Geotechnical Solutions.

For and on behalf of

**Contaminated Land Solutions Pty Ltd**

Dr David Tully CEnvP SC  
Director

Contaminated Land Solutions Pty Ltd



**Contaminated Land Solutions Pty Ltd**  
**10 Heath Road**  
**Crafs West SA 5152**  
0410 012 292

[david.tully@contaminatedlandsolutions.com.au](mailto:david.tully@contaminatedlandsolutions.com.au)