Proposed Redevelopment Preliminary Contamination Assessment

12 Sproule Street, Nelson Bay NSW

NEW19P-0150-AA
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Executive Summary

Qualtest Laboratory NSW Pty Ltd (Qualtest) carried out a Preliminary Contamination Assessment (PCA) at 12 Sproule Street, Nelson Bay NSW. The property is approximately 2.1ha in area and comprises Lot 2 DP 216064 (St Michaels School).

The Catholic Diocese is planning to redevelop part of St Michaels School and require a PCA for submission as part of the Development Application to Port Stephens Council. The proposed redevelopment will comprise three new buildings, several refurbished buildings, and a new car park. For the purposes of this report the 'site' is defined as the proposed redevelopment footprint.

The objectives of the assessment were to:

- Provide an assessment of the likelihood for contamination to be present on the site from past uses and activities; and
- Provide a preliminary assessment of soil contamination.

In order to achieve the above objectives, Qualtest carried out the following scope:

- A Phase 1 site history assessment and site walkover;
- Collection and laboratory analysis of 10 soil samples for identified chemicals of potential concern (CoPC);
- Data assessment and preparation of a Preliminary Contamination Assessment Report.

The Property has been a school for over 50 years. In that time new buildings have been constantly added, generally in the north west of the Property and in last 15 years, along the south western boundary. The site proposed for re-development has remained largely unchanged since the 1970s and comprises an area of native bushland, a carpark constructed in the 1970s and an open space sports field.

One Area of Environmental Concern (AECs) was identified within the proposed redevelopment site relating to the potential importation of fill of unknown quality used to construct the carpark. Sampling and analysis targeted this AEC as well as giving a broad coverage of the redevelopment site.

The laboratory results reported concentrations of contaminants below the adopted human health and ecological criteria. Given the lack of contamination in the soils, the Conceptual Site Model found that there were no complete exposure pathways to both human and ecological receptors.

Based on the site history, field observations, and laboratory results, it is considered that the site can be made suitable for the proposed redevelopment, if the following recommendations are implemented:

- Preparation of an Unexpected Finds Procedure, which would be included in the Construction Environmental Management Plan (CEMP) for the earthworks and construction.
- If soils are required to be disposed offsite, they will require further assessment in accordance with the NSW EPA (2014) Waste Classification Guidelines, prior to disposal.

This report was prepared in accordance with the relevant sections of the NSW OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites and Schedule B2 of National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (ASC NEPM 2013).

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Attachments:

1.0 Introduction

Qualtest Laboratory NSW Pty Ltd (Qualtest) carried out a Preliminary Contamination Assessment (PCA) on behalf of Catholic Diocese of Maitland & Newcastle, (Catholic Diocese) at 12 Sproule Street, Nelson Bay NSW (the Property). The property is approximately 2.1ha in area and comprises Lot 2 DP 216064.

The Catholic Diocese is planning to redevelop part of St Michaels School which is located on the property and require a PCA for submission as part of the Development Application to Port Stephens Council.

The proposed redevelopment, comprises three new buildings, one refurbished building and one new car park. For the purposes of this report the 'site' is defined as the redevelopment footprint. The location of the Property is shown on Figure 1, Appendix A and the site outline is shown on Figure 2, Appendix A.

This report was prepared in accordance with the relevant sections of the NSW OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites and Schedule B2 of National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (ASC NEPM 2013).

Qualtest also carried out a geotechnical assessment in conjunction with the PCA. This has been reported separately in report NEW19P-0150-AB.

1.1 Objectives

The objectives of the PCA were to:

- Provide an assessment of the likelihood for contamination to be present on the site from past uses and activities; and
- Provide a preliminary assessment of soil contamination.

1.2 Scope of Works

In order to achieve the above objectives, Qualtest carried out the following scope:

- A desk study and site history review and site walkover;
- Collection of soil samples from ten surface sample locations;
- Laboratory analysis of soil samples for identified chemicals of potential concern (CoPC);
- Data assessment and preparation of a Preliminary Contamination Assessment Report.

2.0 Site Description

2.1 Site Identification

General property and site information is provided below in Table 2.1.

Table 2.1: Summary of Property and Site Details

Property location:	Sproule Street, Nelson Bay NSW
Approximate property and site area:	2.1ha (property) 0.3ha (redevelopment site)
Title Identification Details:	Lot 2 DP 216064 within the Port Stephens local government area, parish of Tomaree, county of Gloucester.
Current Ownership:	Roman Catholic Church for the Diocese of Maitland
Previous Landuse:	Primary and Secondary School
Current and Proposed Landuse:	Primary and Secondary School
Adjoining Property Uses:	Residential properties
Site Coordinates:	32°43'20.78 S 152°08'13.25 E

2.2 Proposed Development

The proposed re-development is understood to comprise:

- Construction of a new single storey building facing Wahgunyah Road, in the central-southern part of the Property;
- Construction of a new single storey building adjacent to Block E, in the north-western part of the Property;
- Construction of a new two storey building for the St Nicholas Early Education Centre, in the eastern part of the Property;
- Refurbishment of a number of buildings, Block B, C, D & E; and,
- Construction of a new car park facing Wahgunyah Road, in the south-eastern part of the Property;

2.3 Topography and Drainage

Reference to the NSW Land and Property Information Spatial Information Exchange website (https://six.nsw.gov.au/wps/portal/) indicated the elevation of the site was about 30m AHD.

During field investigations the Property was observed to be situated on the crest of a low ridge. Along the Wahgunyah Road frontage the land sloped down towards the south east and south west. From the Sproule Street entrance to the school, the land sloped down to south east. Behind the administration building were steeper slopes down to the north-north east.

Rainfall would be expected to infiltrate into the site soils, or drain to municipal stormwater drains on site. The municipal stormwater is anticipated to eventually drain to Dutchmans Bay located about 350m north to north-west of the site. Dutchmans Bay is part of the Nelson Bay estuary.

2.4 Regional Geology

The 1:25,000 Nelson Bay Area Coastal Quaternary Geology Map shows that the site is underlain by Quaternary deposits, on the boundary of Pleistocene dune, marine sand, indurated sand; and Pleistocene bedrock-mantling dune, marine sand, indurated sand. The 1:250,000 Newcastle Geological Map indicates that the site is underlain by the Nerong Volcanics, comprising toscanite, dacite, andesite, ignimbrite, agglomerate conglomerate sandstone and siltstone. It is likely that the Nerong Volcanics underlie the Quaternary and/or Pleistocene deposits.

2.5 Hydrogeology

Groundwater beneath the site is anticipated to be present in an unconfined aquifer in sands greater than 10m below ground surface (bgs). Groundwater flow direction from beneath the site was potentially radial, given the surface topography, with components of flow to the south as well as the north and east. Possible discharge zones include Dutchmans Bay, located approximately 350m north west of the site.

It should be noted that groundwater conditions can vary due to rainfall and other influences including regional groundwater flow, temperature, permeability, recharge areas, surface condition, and subsoil drainage.

A search of the NSW Department of Primary Industries (Office of Water) registered groundwater bores located within a 500m radius of the site was undertaken. The search revealed that there was one registered bore within this radius. The results of the search are provided in Appendix C.

Bore ID	Installation Date	Purpose	Approx. Distance and Gradient from Site	Water Bearing Zones (mbgs)
GW200586	18/06/2007	N/A	350 W, Up-gradient	N/A

2.6 Acid Sulfate Soils

Reference to the Acid Sulfate Soil Risk Map for Port Stephens (1:25,000 scale, 1997 Edition 1, supplied by NSW Department of Land and Water Conservation) indicates that the site is located within an area of "no known occurrence" of acid sulfate soils.

3.0 Site History Review

A site history review was undertaken as part of the PCA, and included:

- A review of historical ownership of the property;
- A review of aerial photography from the past 56 years;
- A review of Section 10.7 Certificate from Port Stephens Council for the property;
- Search of the NSW EPA's list of contaminated sites applying to the property and nearby properties; and

- A site walkover to help identify current and previous activities carried out on the Property and the site, identify surrounding land uses, and assess AECs and COPCs.

The information provided from the above reviews is summarised in the sections below.

3.1 Historical Titles Search

A search of historical titles for the property was undertaken by Advanced Legal Searchers Pty Ltd. A list of past registered proprietors for Lot 2 DP 216064 was obtained dating back to 1883. The results of the search are included in Appendix D and presented below in Table 3.1.

Table 3.1: Summary of Historical Titles

Date	Proprietor
1967 – to date	The Trustees of the Roman Catholic Church for the Diocese of Maitland
1962 – 1967	Una Josephine Norburn, widow
1956 – 1925	Benjamin James Norburn, contractor
1925 – 1950	Perpetual Trustee Company Limited
1901 – 1925	Eliza Jane White, widow William Portus Cullen
1883 – 1901	Robert Hoddle Driberg White, esquire
1883 – 1883	Edward Davis, grantee

The historical title search indicated that the Property has been privately owned from 1883 to 1925. The Property was then owned by The Perpetual Trustee Company until 1950 where it then appears to be owned by individual members of the Norburn family until 1967. From 1967 to present, the Property has been owned by trustees of the Roman Catholic Church for the Diocese of Maitland.

3.2 Aerial Photograph Review

Aerial photographs from 1963, 1975, 1984 and 1993 were purchased from the spatial services of the Department of Finance, Innovation and Services. Satellite images from Google Earth for 2008 and 2018 were also assessed by a Qualtest Environmental Scientist.

The review of the aerials has concentrated on the proposed redevelopment 'site' rather than the whole property. The results of the aerial photograph review are summarised below in Table 3.2. The aerial photographs are presented in Appendix E.

Table 3.2: Aerial Photograph Review

Year	Property and Proposed Re-development Site	Surrounding Land
1963	The Property appears to be well vegetated native bushland. Minor access tracks appear to run through the north eastern and south western portions of the property. The site is undeveloped	The surrounding land comprises a residential property to the north west, north and east. The remaining surrounding land appears to be dense bushland and road infrastructure.

Year	Property and Proposed Re-development Site	Surrounding Land
1975	The property appears to have undergone some land clearing, particularly in the western half. Two buildings appear to have been constructed in the north western portion of the property, probably associated with the school. A road runs through the middle of the property from the south to the buildings in the north west. The proposed redevelopment site within the property is undeveloped	Large quantities of land appear to have been cleared to the west and south west of the site. The land clearing events appears to have been in preparation for road infrastructure and further residential development. The surrounding site also appears to have been subject to increased residential development and small-scale land clearing.
1984	The property has been cleared of bushland in the north and south with only a small area of bushland remaining in the central portion. A large building has been constructed in the northern portion of the property. Additional buildings/extensions of the current buildings can be seen on the western and eastern portions of these buildings. The road running through the central portion of the property from the south in aerial photograph 1975 appears to have been removed and a sporting oval is now observed in the south western and central south portions. The proposed re-development site appears covered in trees with a carpark and sports field located to the south.	The surrounding land to the south west of the site appears to have been cleared and residential properties have been constructed. Housing density in surrounding land appears to have increased slightly. Road surfaces are observed to be mostly asphalt sealed. Some unsealed roads are still observed to the south of the site.
1993	The building layout, carpark and sports field appears similar to the 1984 photograph. There have been further developments of buildings in the north western portion of the property. The proposed re-development site remains similar to 1984.	The surrounding land area appears similar to the 1987 aerial photograph. It appears all the roads in the surrounding land have been asphalt sealed.
2007	New buildings have been constructed to the south of the main buildings. The carparks and sports field are similar to the 1993 photograph and the proposed re-development site remains similar to 1993.	The surrounding land area appears similar to the 1998 aerial photograph.

Year	Property and Proposed Re-development Site	Surrounding Land
2018	Two large buildings have been constructed along the south west border of the property with another smaller building encroaching onto the sports field. The proposed re-development site remains similar to 2007	The surrounding land area appears similar to the 2007 aerial photograph.

3.3 Site Observations

A Qualtest Environmental Scientist visited the site on 1 October 2019. Selected photographs are presented in Appendix F and features are indicated on Figure 3, Appendix A.

The observations noted during the field works are summarised below:

- There is some dense vegetation and wood waste on the Northern boundary of the Property (see photograph 1);
- There was short well-maintained grass and seating next to the eastern boundary of the site (see photograph 2);
- There was possible asbestos sheeting in older buildings within the Property (see photograph 3);
- Small fill mounds were found in the eastern corner of the Property (see photograph 4);
- Bushland was found in the central part of the Property becoming thicker to the north (see photograph 5);

3.4 NSW EPA Records

A search of the NSW EPA databases revealed that there were no properties listed as contaminated, or notified to the EPA as contaminated, within the suburb of Nelson Bay. The results of the search are shown in Appendix G.

A search of sites that have been notified to NSW EPA as contaminated (as of 17 September 2019) was also carried out. The search identified two properties within the Nelson Bay area which had been notified to the NSW EPA as being contaminated. The property was:

- Shell Coles Express Service Station, 25 Stockton Street, Nelson Bay. Approximately 555m from the east of the site, down gradient.
- Former Caltex Service Station, 38 Stockton Street Nelson Bay. Approximately 490m from the east of the site, down-gradient.

Based on the distance from the site, it is considered that these properties would not impact the site.

A copy of the above searches is provided in Appendix G.

3.5 Section 10.7 Certificate

A Section 10.7 Certificate for the property was obtained from Port Stephens Council, and is presented in Appendix H. Relevant information is summarised below.

Lot 2 DP 216064

Zoning	R2 Low Density Residential
Critical Habitat	Not identified as including or comprising critical habitat
Heritage	*The land does not contain an item of Environmental Heritage*
Mine Subsidence	*The land has not been proclaimed to be within a Mine Subsidence District under the meaning of section 20 of the Coal Mine Subsidence Compensation Act 2017.*
Bushfire	*The land is not identified as being bushfire prone land*
Loose-fill Asbestos Insulation	*There are no premises on the subject land listed on the register.*
Contaminated Land Information	*The Council has adopted a Contaminated Lands Policy to provide a framework to appropriately manage land contamination risk through the land use planning process. This Policy seeks to ensure that changes in landuse will not increase the risk to human health or the environment. The Policy applies to all land in the Maitland Local Government Area.* *The land is not significantly contaminated land, subject to a management order, subject of an approved voluntary management proposal, or subject to an ongoing maintenance order, under the meaning of the Contaminated Land Management Act 1997. Council has not been provided with a site audit statement for the land.*
Potential acid sulfate soils	*All land within the Nelson Bay Local Government Area has the potential to contain acid sulfate soils. Clause 7.1 of the Nelson Bay Local Environmental Plan 2013 generally applies. Development consent is required where works described in the Table to this clause are proposed on land shown on the Nelson Bay LEP 2013 Acid Sulfate Soils Map as being of the class specified for those works.*

3.6 Previous Reports

Qualtest are not aware of previous contamination assessment reports for either the property or the re-development site.

3.7 Summary of Site History

The history of the Property and the proposed redevelopment site, has been summarised below:

- The Property has been owned by private individuals, until purchased by Catholic Diocese of Maitland & Newcastle in 1967. Since at least 1975 the Property has been used for St Michaels School;
- The aerial photographs indicate that the Property was native bushland until the late 1960s early 1970's when it was cleared and buildings were constructed.
- Since 1975, the building layout has changed with the steady addition of buildings each decade.
- The proposed redevelopment site comprises a central section of the property, the southern carpark and a portion of the sports field in the south. The central section has remained native bushland since the 1960s, the southern area has remained a paved car park and sports field (open space) since the mid 1970s.

3.8 Gaps in the Site History

With respect to the proposed redevelopment site within the Property, there are no gaps in the site history apart from what activities were carried out on the Property before the 1960's. It is probable, based on the surrounding land uses, that the Property and hence also the proposed redevelopment site, was covered in native bushland prior to 1960.

3.9 Areas of Environmental Concern and Chemicals of Potential Concern

Based on the results of the site history assessment and walkover, Table 3.3 shows the Area of Environmental Concern (AECs) and associated Chemicals of Potential Concern (COPCs) identified for the proposed redevelopment site.

Table 3.3 – Potential AECs and COCs

AEC	Potentially Contaminating Activity	Potential COCs	Likelihood of Contamination
1. Fill materials	There is a potential that imported materials were used in the construction of the southern carpark	TRH, BTEX, PAH, Metals, Asbestos	Low

4.0 Field and Laboratory Investigations

4.1 Sampling Plan

The NSW EPA (1995) Sampling Design Guidelines recommend a minimum of 9 sample locations to characterise a site of 0.3ha. The number of sampling locations exceeded the minimum required.

Based on the site history and the AEC identified for the site, 10 surface soil samples were collected as follows:

- SS2, BH01 0.0-0.01 and BH02 0.0-0.1 - located in central southern portion of Property, targeting area of proposed new building;
- SS1 and BH03 0.0-0.1 – located in south-eastern corner of Property targeting proposed area of new carpark;
- SS3, SS4, BH4 0.0-0.1 and BH5 0.0-0.1 - located in central eastern portion of Property, targeting area of proposed new building;
- BH8 0.0-0.1 - located in north western portion of Property, targeting area of a proposed new building;

It is noted that boreholes BH06 and BH07 were drilled on other parts of the Property as part of a geotechnical assessment. No environmental samples were collected from BH06 or BH07. The sampling locations are shown on Figure 2, Appendix A.

4.2 Soil Sampling

The surface samples were collected at 0.0-0.1m depth using hand tools. The samples from the boreholes drilled for the geotechnical investigation were collected at .0-0.1m bgs. The hand tools were decontaminated between sampling locations, and a clean pair of disposable nitrile gloves was used whilst handling each new sample.

The contamination soil samples were placed into 250mL laboratory supplied glass jars and zip locked bags for laboratory analysis. Each soil sample was placed directly into an ice-chilled esky and remained chilled during transportation to the laboratory.

4.3 Laboratory analysis

The samples were dispatched to the NATA-accredited Eurofins MGT laboratory in Dandenong, VIC under chain of custody conditions. Ten surface soil samples (SS1, SS2, SS4, BH1, BH2, BH4, BH5, BH8) were selected for analysis based on providing representative samples across the site (new building and car park areas). The soil samples were analysed for the following:

- Total Recoverable Hydrocarbons (TRH) - 5 primary samples;
- Benzene, toluene, ethylbenzene, xylenes (BTEX) – 5 primary samples;
- Polycyclic Aromatic Hydrocarbons (PAHs) - 5 primary samples;
- Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury) – 10 primary samples;
- Asbestos (presence/absence) – 10 primary soil samples.

5.0 Investigation Criteria

5.1 Health and Ecological Levels (Soil)

The health and ecological investigation levels for soil, presented in the *National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013*, Canberra (referred to as ASC NEPM 2013) are generally used in NSW when selecting investigation levels for chemical contaminants in soil.

The purpose of the ASC NEPM (2013) is to *'establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry'.*

ASC NEPM (2013) provides health and ecological investigation and screening levels for different exposure scenarios based on a proposed land use. Health and ecological investigation and screening levels are applicable to the first stage (Tier 1) of site assessment and are used to assist in the iterative development of a Conceptual Site Model (CSM). They are adopted as concentrations of a contaminant above which either further appropriate investigation and/or evaluation will be required, or development of an appropriate management strategy (including remediation).

Health Investigation Levels (HILs) and Health Screening levels (HSLs) are applicable for assessing human health risk via relevant exposure pathways.

The HILs were developed for a broad range of metals and organic substances. These are generic to all soil types.

The HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via inhalation and direct contact with soil and groundwater. The HSLs depend on specific soil physicochemical properties, building configurations, land use scenarios and the depth that groundwater is encountered.

Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) are applicable for assessing risk to terrestrial ecosystems under residential, open space and commercial/industrial land use scenarios. They apply to the top 2m of soil, which corresponds to the root zone and habitation zone of many species.

The EILs are associated with selected metals and organic compounds. The EILs are site specific and are determined by calculating an Ambient Background Concentration (ABC) and an Added Contaminant Limit (ACL) for the site, which are added together to get the EIL. In the absence of ambient background concentration data, a generic ACL, based on the soils pH, Cation Exchange Capacity (CEC) and clay content, has been adopted.

The ESLs are associated with petroleum compounds and fractions and are dependent on specific soil physical properties (i.e. coarse and fine-grained soil).

Based on the proposed site use the investigation and screening levels for residential land use with accessible soil have been adopted (HIL A EIL A, HSL A and ESL A), and are shown in Table 1, Appendix B.

5.2 Management Limits

The ASC NEPM (2013) provides management limits for petroleum hydrocarbons. The purpose of the Management Limits is to 'avoid or minimise' potential effects of petroleum hydrocarbons. NEPM (1999, amended 2013) Schedule B(1) provides these as effects as:

- Formation of observable Light Non-Aqueous Phase Liquid (LNAPL);
- Fire and explosive hazards; and,
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services by hydrocarbons.

As the management limits for residential land use are higher than the HSLs, these have not been included in Table 1, Appendix B.

5.3 Asbestos Materials in Soil

The assessment of known and suspected asbestos contamination in soil is based on:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (April 2013), NEPC 2013, Canberra; and
- *WA DoH 2009 Guidelines of the assessment and management of asbestos contaminated sites in Western Australia, WA Department of Health and Department of Environment and Conservation.*

Schedule B1, Section 4 NEPM (2013) provides guidance on the assessment of both friable and non-friable forms of asbestos in soil. This guidance is based on the WA DoH (2009) Guidelines that presented risk-based screening levels for asbestos in soil under various land use scenarios.

For the purpose of assessing asbestos impacts in soil, three groups are recognised:

- *Asbestos Containing Material (ACM)* - which is in sound condition although possibly broken or fragmented and the asbestos is bound in a matrix. This is restricted to material that cannot pass through a 7mm x 7mm sieve;
- *Fibrous asbestos (FA)* - friable asbestos material, such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products;
- *Asbestos fines (AF)* - includes free fibres of asbestos, small fibre bundles and also ACM fragments that pass through a 7mm x 7mm sieve.

The health screening levels for asbestos in soil for residential land use (applicable to primary schools, pre-schools and childcare centres), are shown in Table 5.1.

Table 5.1 Health Screening Levels for Asbestos contamination in soil (NEPM 2013)

Form of Asbestos	Health Screening Level
	HIL A
Bonded ACM (%)	0.01
FA and AF (%)	0.001
All forms of Asbestos	No visible evidence for surface soil (top 10cm)

It is noted that Qualtest have carried out asbestos sampling and analysis on a present/absent" basis, and therefore the guidelines above are not practical to apply. Therefore, a guideline of "detected" has been adopted.

5.4 Preliminary Waste Classification

In order to provide a preliminary waste classification, the laboratory results were compared to the Contaminant Threshold (CT) and Specific Contaminant Concentration (SCC) values for General and Restricted Solid Waste in the NSW EPA (2014) *Waste Classification Guidelines*.

The adopted waste classification criteria are presented in the attached Table 3, Appendix B.

6.0 Quality Assurance/Quality Control

Sampling activities were undertaken in accordance with normal, industry accepted practices and standards. The assessment of field and laboratory quality assurance / quality control (QA / QC) procedures is provided below, and a data validation report is presented in Appendix J.

In order to assess field quality assurance / quality control (QA/QC) procedures, the following quality control samples were collected and analysed:

QC Sample	Type	Lab	Analysis
D.1.10.19	Duplicate of BH2 0.0-0.1	Eurofins	TRH, BTEX, PAH, Metals

Primary and intra lab duplicate samples were analysed by the NATA-accredited Eurofins-MGT laboratory in Dandenong, VIC.

Table 2, Appendix B, presents the relative percentage differences (RPDs) between the primary and duplicate samples. A review of the Qualtest QA / QC results indicates that RPDs were within the acceptable range.

The laboratory internal QA/QC reports indicated that the appropriate laboratory QA / QC procedures and rates were undertaken for contamination studies, and that:

- Laboratory blank samples were free of contamination;
- Matrix spike recoveries were within the control limits;
- Laboratory duplicate RPDs were recorded within the control limits, with the exception of one RPD for TRH C10-C14. The lab quoted code Q15, which states: "*The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review*"; and
- Surrogates and laboratory control samples were within the laboratories acceptable range.

Based on the above, and the data validation report in Appendix J, it is considered that the field and laboratory methods for soil sampling are appropriate and that the data obtained is usable and considered to reasonably represent the concentrations at the sampling points at the time of sampling.

7.0 Results

7.1 Subsurface Conditions

As part of the geotechnical assessment (reported in ref: NEW19P-0150-AB), 8 boreholes were drilled. Boreholes BH01 to BH08 were drilled to depths of between 0.5m to 1.50m. The general soil profile observed in the boreholes is summarised in Table 7.1 below. The borehole logs are presented in the geotechnical report.

Table 7.1 – Summary of Subsurface Profile

Soil Type	Description	Approx. Depth Range
FILL – TOPSOIL	SAND – fine to coarse grained, grey brown, root affected. Silty SAND – fine to coarse grained, grey brown, root affected.	0.0 to 0.15
FILL	SAND – fine to medium grained, pale grey. SAND – fine to coarse grained, pale brown orange, brown to dark brown. Sandy GRAVEL – fine to medium grained angular, pale brown to brown, fine to coarse grained sand.	0.15 to 0.5/0.6
AEOLIAN	SAND – fine to medium grained, pale grey and grey, some dark grey.	0.5/0.6 to 1.0/1.5

No groundwater inflows were observed during drilling.

7.3 Laboratory Results

Human Health and Ecological Levels

Soil analytical results are summarised in Table 1, Appendix B. The laboratory analytical reports are also included in Appendix I.

The soil laboratory results were compared to the investigation levels described in Sections 5.1, 5.2 and 5.3. The analytical results indicated that concentrations of contaminants were reported below the adopted criteria, with the exception of:

- TRH >C10-C16 exceeds the EIL (120mg/kg) in SS4 (130mg/kg);
- TRH >C16-C34 exceeds the EIL (300mg/kg) in SS1 (310mg/kg), SS3 (520mg/kg) and SS4 (660mg/kg);

Given that there was no apparent source for the TRH exceedances, the sample with the highest concentrations (SS4) was subjected to a silica gel clean up to assess if the TRH concentrations were due to petroleum hydrocarbons or other organic hydrocarbons. The results of the silica gel clean up showed that the TRH concentrations were below the limits of reporting (LOR). This means that the previous elevated TRH concentrations were not due to presence of petroleum hydrocarbons.

Preliminary Waste Classification

Soil analytical results compared to waste classification criteria are summarised in Table 3, Appendix B. The laboratory analytical reports are also included in Appendix I.

The soil laboratory results were compared to the investigation levels described in Section 5.4. The analytical results indicated that concentrations of chemicals were reported below the general solid waste (CT1) criteria, and that asbestos was not detected in soil samples.

8.0 Preliminary Conceptual Site Model

Based on the results of the preliminary contamination assessment carried out on the site, a Conceptual Site Model (CSM) has been developed.

8.1 Potential Sources of Contamination

Table 8.1 (below) shows the area of environmental concern (AECs) and associated Chemicals of Potential Concern (COPCs) identified for the proposed development site.

Table 8.1 – Area of Environmental Concern and Chemicals of Potential Concern

AEC	Potentially Contaminating Activity	Potential COCs	Likelihood of Contamination	Sampling Undertaken
1. Fill materials	Small stockpiles of fill materials of unknown origin and quality.	TRH, BTEX, PAH, Metals, Asbestos	Medium	SS1, SS2, SS3, SS4, BH1, BH2, BH4, BH5, BH8

8.2 Potentially Affected Media, Receptors and Exposure Pathways

Table 8.2 summarises the potentially affected media, potential receptors to contamination, and potential and complete exposure pathways.

Table 8.2 – Summary of Potentially Affected Media, Receptors and Exposure Pathways

Consideration	Information
Potentially affected media	Soil Surface water Groundwater Air
Potential transport mechanisms & Exposure pathways	Leaching of soil contaminants to surface water and/or groundwater Direct dermal contact with contaminated soil and/or surface water Ingestion of contaminated soil and/or surface water Inhalation of asbestos fibres, or contaminated soil (as dust) Inhalation of hydrocarbon vapours Surface water discharge to Dutchmans Bay.
Potential receptors of contamination	***Site Occupants and construction/maintenance workers*** Potential exposure via dermal contact with soil and/or surface water, ingestion of soil and surface water, inhalation of hydrocarbon vapours,

Consideration	Information
	inhalation of soil (as dust), and inhalation of asbestos fibres. ***Surface water*** Contaminants could leach from soils into surface water that may migrate off-site to the north to north-west of the site. This is considered unlikely, due to the distance to Dutchmans Bay (about 350m) and likely infiltration of surface water into the site soils. ***Groundwater*** Contaminants could leach from soils into groundwater that may migrate off-site to Dutchmans Bay located about 350m north to north-west of the site. This is considered unlikely given the top down mode of contamination affecting the surface soils and the anticipated depth to groundwater of greater than 10m bgs.

8.3 Potential and Complete Exposure Pathways

Table 8.3 summarises the potential and complete exposure pathways.

Table 8.3 – Potential and Complete Exposure Pathways

Receptor/Media	Exposure Pathway	Comment
Site occupants and construction/maintenance workers	Incomplete	Contamination in the form of fragments of asbestos containing materials was not identified. No other contamination above the adopted human health guidelines was identified.
Soil biota and ecological receptors	Incomplete	Contamination was not found in the surface soils above the adopted ecological screening levels.
Surface water ecosystems and users	Incomplete	The nearest surface water body was Dutchmans Bay located approximately 300m north to north-west of the site. Soil contamination has not been identified so there is no impact to surface water
Groundwater users	Incomplete	Groundwater is anticipated to be at depths greater than 10m bgs, meaning a complete exposure pathway probably does not exist.

9.0 Conclusions and Recommendations

The property has been a school for over 50 years. In that time new buildings have been constantly added generally in the north west of the property and in last 15 years along the south western boundary. The site proposed for re-development has remained largely unchanged since the 1970s and comprises an area of native bushland, a carpark constructed in the 1970s and an open space sports field.

One Area of Environmental Concern (AEC) was identified within the proposed redevelopment site relating to the potential importation of fill of unknown origin and quality used to construct the carpark. Sampling and analysis targeted this AEC as well as giving a broad coverage of the proposed re-development site.

The laboratory results reported concentrations of contaminants below the adopted human health and ecological criteria. Given the lack of contamination in the soils, the CSM found that there were no complete exposure pathways to both human and ecological receptors.

Based on the site history, field observations, and laboratory results, it is considered that the site can be made suitable for the proposed redevelopment, if the following recommendations are implemented:

- Preparation of an Unexpected Finds Procedure, which would be included in the Construction Environmental Management Plan (CEMP) for the earthworks and construction.
- If soils are required to be disposed offsite, they will require further assessment in accordance with the NSW EPA (2014) Waste Classification Guidelines. It is noted that the natural residual soils below the topsoil/fill (about 0.5m bgs) may classify as Virgin Excavated Natural Material (VENM) in accordance with the NSW EPA (2014) Waste Classification Guidelines. The preliminary classification of the topsoil/fill is general solid waste (non-putrescible). It is recommended that confirmation of the waste classification is carried out prior to removal of soil from the site.

If during the development civil works, conditions other than those encountered during this assessment are uncovered, further assessment by an environmental consultant may be necessary.

10.0 Limitations

The findings presented in the report and used as the basis for recommendations presented herein were obtained using normal, industry accepted practices and standards. To our knowledge, they represent a reasonable interpretation of the general conditions of the site.

Data and opinions contained within the report may not be used in other contexts or for any other purposes without prior review and agreement by Qualtest. If this report is reproduced, it must be in full.

11.0 References

Friebel & Nadebaum (2011). *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater* (technical paper No.10) Guidelines, CRC for Contamination Assessment and Remediation of the Environment (CRC CARE).

NEPC (2013) *National Environmental Protection (Assessment of Site Contamination)* Measure 1999, as amended in 2013, National Environment Protection Council (ASC NEPM, 2013).

NSW Water Registered Groundwater Bore Map, accessed from https://realtimedata.waternsw.com.au/, accessed on 17 September 2019.

NSW Land and Property Information, Spatial Information eXchange (SIX) Maps - Topographic Map, accessed from https://maps.six.nsw.gov.au/, accessed on 29 September 2019.

NSW Department of Land and Water Conservation (1997) Acid Sulfate Soil Risk Map for Port Stephens (1:25,000 scale, 1997 Edition 1).

NSW OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites.

NSW EPA (1995) Sampling Design Guidelines.

NSW Department of Mineral Resources (1993) 1:100,000 Hunter Coalfield Regional Geology Sheet (Series Sheet 9033 and part of 9133, 9032 and 9132, Edition 2, 1993)

APPENDIX A:

Figures

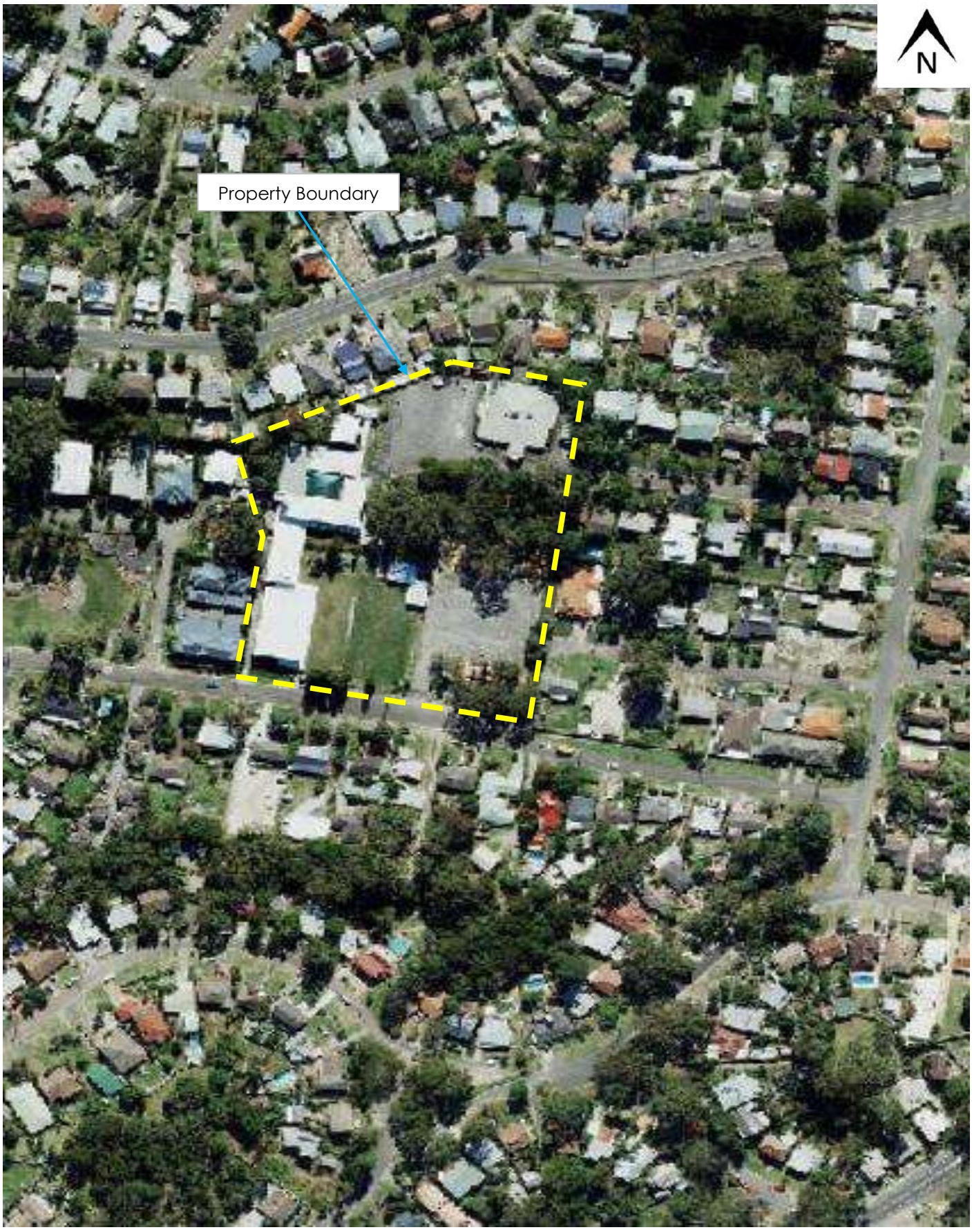


Image obtained from Sixmaps (https://maps.six.nsw.gov.au/) 19 September 2019

Qualtest LABORATORY (NSW) PTY LTD	Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Drawing No:	FIGURE 1
	Project:	PRELIMINARY CONTAMINATION ASSESMENT	Project No:	NEW19P-0150-AA
	Location:	12 SPROULE STREET,NELSON BAY, NSW	Scale:	N.T.S
	Title:	PROPERTY LOCATION PLAN	Date:	19/09/2019

Image obtained from Sixmaps (https://maps.six.nsw.gov.au/) 19 September 2019

Qualtest LABORATORY (NSW) PTY LTD

Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Drawing No:	FIGURE 2
Project:	PRELIMINARY CONTAMINATION ASSESSMENT	Project No:	NEW19P-0150-AA
Location:	12 SPROULE STREET,NELSON BAY, NSW	Scale:	N.T.S.
Title:	SITE PLAN	Date:	19/09/2019

Image obtained from Sixmaps (https://maps.six.nsw.gov.au/) 19 September 2019

Qualtest LABORATORY (NSW) PTY LTD

Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Drawing No:	FIGURE 3
Project:	PRELIMINARY CONTAMINATION ASSESSMENT	Project No:	NEW19P-0150-AA
Location:	12 SPROULE STREET,NELSON BAY, NSW	Scale:	N.T.S.
Title:	SITE FEATURES PLAN	Date:	19/09/2019

APPENDIX B:

Tables

Catholic Diocese of Maitland Newcastle
NEW19P-0150

Table 1: Soil Analytical Results -
12 Sproule Street, Nelsons Bay NSW

						Field ID	SS1	SS2	SS3	SS4	BH1 0.0-0.1	BH2 0.0-0.1	BH3 0.0-0.1	BH4 0.0-0.1	BH5 0.0-0.1	BH8 0.0-0.1
						Date	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019
Analytes		Units	EQL	HIL-A [1]	HSL A [2]	EIL A/ESL A [3]										
Metals	Arsenic	mg/kg	2	100		100	< 2	3.3	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	Cadmium	mg/kg	0.4	20			< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	Chromium	mg/kg	5	100		190*	< 5	9.5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	Copper	mg/kg	5	6000		95*	7.3	7.4	< 5	< 5	5.2	< 5	< 5	< 5	< 5	< 5
	Lead	mg/kg	5	300		1100	5	5.6	< 5	5.2	< 5	< 5	7	< 5	< 5	17
	Mercury	mg/kg	5	40			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	400		30*	< 5	8.3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	Zinc	mg/kg	5	7400		70*	14	29	11	17	25	17	18	25	6	17
PAHs	Acenaphthene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Acenaphthylene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Anthracene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benz(a)anthracene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(a)pyrene	mg/kg	0.5			0.7	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(a)pyrene TEQ	mg/kg	0.6	3			0.6	-	0.6	0.6	-	0.6	-	-	-	0.6
	Benzo(b&j)fluoranthene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(g.h.i)perylene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Chrysene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Dibenz(a.h)anthracene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Fluoranthene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Fluorene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Indeno(1.2.3-cd)pyrene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Naphthalene	mg/kg	0.5			170	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Phenanthrene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Pyrene	mg/kg	0.5				< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Total PAH	mg/kg	0.5	300			< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
BTEX	Benzene	mg/kg	0.1		0.7	50	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	-	-	< 0.1
	Ethylbenzene	mg/kg	0.1		NL	70	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	-	-	< 0.1
	Toluene	mg/kg	0.1		480	85	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	-	-	< 0.1
	Xylenes	mg/kg	0.3		110	105	< 0.3	-	< 0.3	< 0.3	-	< 0.3	-	-	-	< 0.3
TRH	Naphthalene	mg/kg	0.5		5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	TRH C6-C10	mg/kg	20			180	< 20	-	< 20	< 20	-	< 20	-	-	-	< 20
	TRH C6-C10 less BTEX (F1)	mg/kg	20		50		< 20	-	< 20	< 20	-	< 20	-	-	-	< 20
	TRH >C10-C16	mg/kg	50			120	56	-	94	130	-	< 50	-	-	-	< 50
	TRH >C10-C16 (After silica gel clean up)	mg/kg	50				-	-	-	< 50	-	-	-	-	-	-
	TRH >C10-C16 less Naphthalene (F2)	mg/kg	50		280		56	-	94	130	-	< 50	-	-	-	< 50
	TRH >C16-C34	mg/kg	100			300	310	-	520	660	-	200	-	-	-	140
	TRH >C16-C34 (After Silica gel clean up)	mg/kg	100				-	-	-	< 100	-	-	-	-	-	-
	TRH >C34-C40	mg/kg	100			2800	160	-	360	440	-	170	-	-	-	< 100
Asbestos	Asbestos (presence/absence	detected		Detected			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes

* Based on a pH of 4.5 a CEC of 5meq/100g and clay content of <1%.

\- Not analysed

NL Non Limiting

Result Concentration exceeds adopted human health critieria

Result Concentration exceeds adopted health screening level, vapour intrusion (Residential)

Result Concentration exceeds adopted ecological investigation/screening levels - Residential, Sand

1 NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure (NEPM 2013) - Table 1A(1): Health Investigation Levels (Residential)

2 NEPC (2013) Soil Health Screening Levels for Vapour Intrusion, Residential, Clay 0m to

3 NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure (NEPM 2013) - Ecological Investigation and Screening Levels (Residential)

Table 2: Quality Control Results - Soil Duplicates
12 Sproule Street, Nelson Bay NSW

			Field ID	BH2 0.0-0.1	D1.10.19	RPD%
			Date	1/10/2019	1/10/2019	
			Comments	Duplicate		
Analytes		Units	LOR			
Heavy Metals	Arsenic	mg/kg	2	< 2	< 2	**0**
	Cadmium	mg/kg	0.4	< 0.4	< 0.4	**0**
	Chromium	mg/kg	5	< 5	< 5	**0**
	Copper	mg/kg	5	< 5	< 5	**0**
	Lead	mg/kg	5	< 5	< 5	**0**
	Mercury	mg/kg	5	< 0.1	< 0.1	**0**
	Nickel	mg/kg	5	< 5	< 5	**0**
	Zinc	mg/kg	5	17	18	**6**
PAH	Acenaphthene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Acenaphthylene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Anthracene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Benz(a)anthracene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Benzo(a)pyrene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Benzo(b&j)fluoranthene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Benzo(g.h.i)perylene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Benzo(k)fluoranthene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Chrysene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Dibenz(a.h)anthracene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Fluoranthene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Fluorene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Indeno(1.2.3-cd)pyrene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Naphthalene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Phenanthrene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Pyrene	mg/kg	0.5	< 0.5	< 0.5	**0**
	Total PAH*	mg/kg	0.5	< 0.5	< 0.5	**0**
BTEX	Benzene	mg/kg	0.1	< 0.1	< 0.1	**0**
	Ethylbenzene	mg/kg	0.1	< 0.1	< 0.1	**0**
	Toluene	mg/kg	0.1	< 0.1	< 0.1	**0**
	Xylenes	mg/kg	0.3	< 0.3	< 0.3	**0**
TRH	Naphthalene	mg/kg	0.5	< 0.5	< 0.5	**0**
	TRH C6-C10	mg/kg	20	< 20	< 20	**0**
	TRH >C10-C16	mg/kg	50	< 50	< 50	**0**
	TRH >C16-C34	mg/kg	100	200	160	**22**
	TRH >C34-C40	mg/kg	100	170	190	**11**

Notes:
*RPDs have only been considered where a concentration is greater than 10 times the EQL.
**High RPDs are in bold (Acceptable RPD range is 30% (>10 x EQL))

Catholic Diocese of Maitland Newcastle Pty Ltd
NEW19P-0150

Table 3: Soil Analytical Results - Waste Classification
12 Sproule Street, Nelsons Bay NSW

				Field ID	SS1	SS2	SS3	SS4	BH1 0.0-0.1	BH2 0.0-0.1	BH3 0.0-0.1	BH4 0.0-0.1	BH5 0.0-0.1	BH8 0.0-0.1
				Date	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019	1/10/2019
Analytes		Units	LOR	General Solid Waste (CT1)1										
Metals	Arsenic	mg/kg	2	100	< 2	3.3	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	Cadmium	mg/kg	0.4	20	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	Chromium	mg/kg	5	100	< 5	9.5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	Copper	mg/kg	5		7.3	7.4	< 5	< 5	5.2	< 5	< 5	< 5	< 5	< 5
	Lead	mg/kg	5	100	5	5.6	< 5	5.2	< 5	< 5	7	< 5	< 5	17
	Mercury	mg/kg	0.1	4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	40	< 5	8.3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	Zinc	mg/kg	5		14	29	11	17	25	17	18	25	6	17
PAH	Acenaphthene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Acenaphthylene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Anthracene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benz(a)anthracene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	0.8	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(b&j)fluoranthene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(g.h.i)perylene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Chrysene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Dibenz(a.h)anthracene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Fluoranthene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Fluorene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Indeno(1.2.3-cd)pyrene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Naphthalene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Phenanthrene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Pyrene	mg/kg	0.5		< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
	Total PAH*	mg/kg	0.5	200	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	-	-	< 0.5
BTEX	Benzene	mg/kg	0.1	10	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	-	-	< 0.1
	Ethylbenzene	mg/kg	0.1	600	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	-	-	< 0.1
	Toluene	mg/kg	0.1	288	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	-	-	< 0.1
	Xylenes - Total	mg/kg	0.3	1000	< 0.3	-	< 0.3	< 0.3	-	< 0.3	-	-	-	< 0.3
TRH	TRH C6-C9	mg/kg	20	650	< 20	-	< 20	< 20	-	< 20	-	-	-	< 20
	TRH C10-C14	mg/kg	20		39	-	69	95	-	< 20	-	-	-	22
	TRH C15-C28	mg/kg	50		180	-	290	370	-	100	-	-	-	74
	TRH C29-C36	mg/kg	50		210	-	410	520	-	210	-	-	-	120
	TRH C10-36 (Total)	mg/kg	50	10000	429	-	769	985	-	310	-	-	-	216
Asbestos	Asbestos	Detect		Detected	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- Sample not analysed

Result Exceed NSW 2014 General Solid Waste (without TCLP)

Detected Asbestos detected

ND Not detected

[1] Contamination Threshold Value (CT1) for General Solid Waste

APPENDIX C:

Registered Groundwater Bores

WaterNSW
Work Summary

GW200586

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s):

Work Type: Bore
Work Status:
Construct.Method:
Owner Type: Local Govt

Commenced Date:
Completion Date: 18/06/2007
Final Depth:
Drilled Depth:

Contractor Name: (None)
Driller:
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A/ Licensed:	GLOUCESTER	TOMAREE	23//753204

Region: 20 - Hunter
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6379217.000
Easting: 418703.000
Latitude: 32°43'18.6"S
Longitude: 152°07'56.8"E

GS Map: -
MGA Zone: 56
Coordinate Source: Map Interpre

Remarks

08/05/2009: Nat Carling, 8-May-2009: Updated Lat's & Long's using existing Easting & Northing's.

***** End of GW200586 *****

APPENDIX D:

Historical Titles

ADVANCE LEGAL SEARCHERS PTY LTD

(ACN 147 943 842)
ABN 82 147 943 842

18/36 Osborne Road,
Manly NSW 2095

Telephone: +612 9977 6713
Mobile: 0412 169 809
Email: search@alsearchers.com.au

18th September 2019

QUALTEST LABORATORY (NSW) PTY LTD
8 Ironbark Close,
WARABROOK NSW 2304

Attention: Billy Snow

RE: **12 Sproule Street,**
Nelson Bay
PO NEW19P-0150

Current Search

Folio Identifier 2/216064 (title attached)
DP 216064 (plan attached)
Dated 17th September 2019
Registered Proprietor:
TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE DIOCESE OF MAITLAND

Title Tree
Lot 2 DP 216064

Folio Identifier 2/216064

Certificate of Title Volume 9478 Folio 74

Certificate of Title Volume 7155 Folio 12

Certificate of Title Volume 6657 Folio 107

Certificate of Title Volume 661 Folio 197

****

Summary of proprietor(s)
Lot 2 DP 216064

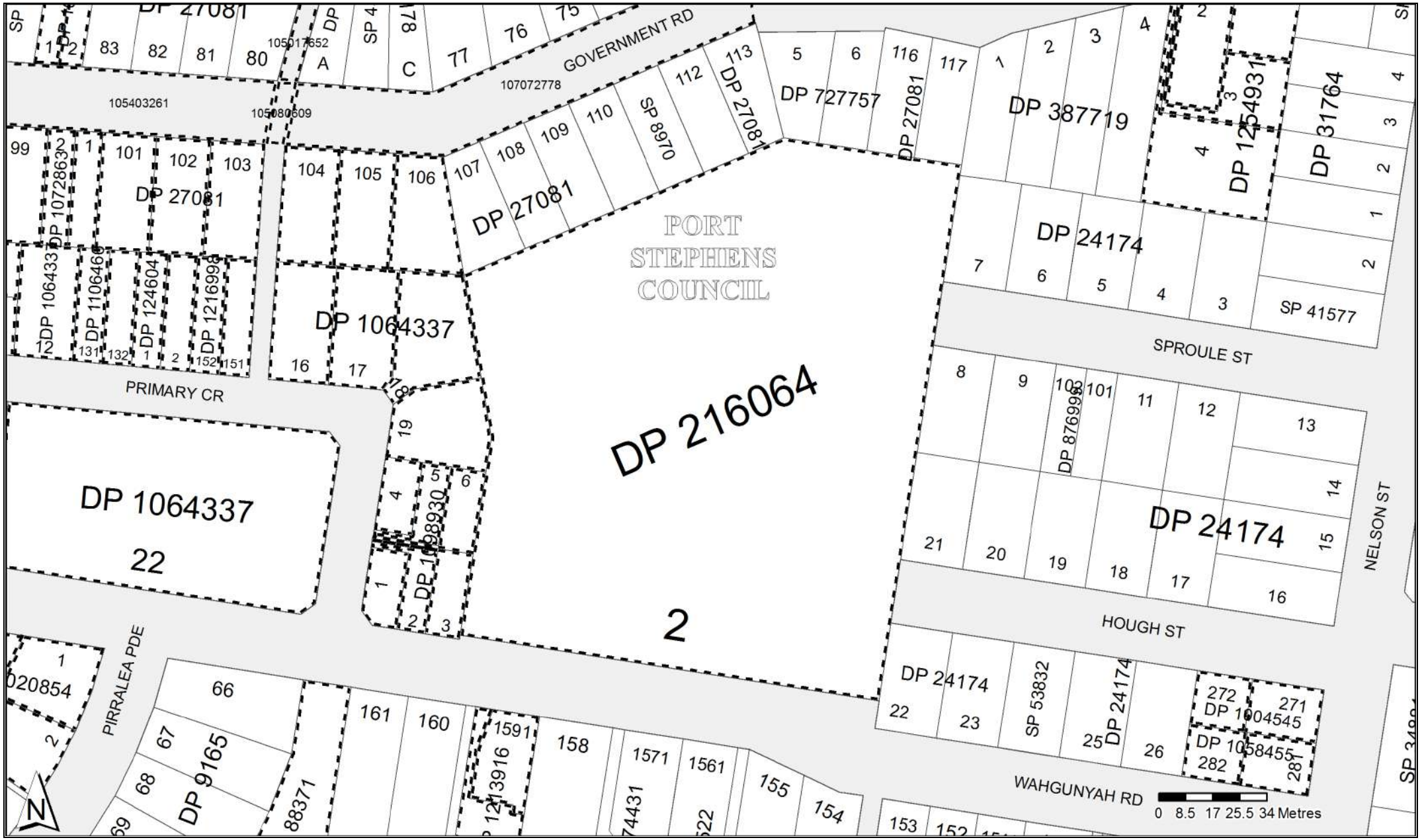
Year	Proprietor(s)
	(Lot 2 DP 216064)
1988 – todate	The Trustees of the Roman Catholic Church for the Diocese of Maitland
	(Lot 2 DP 216064 – CTVol 9478 Fol 74)
1967 – 1988	The Trustees of the Roman Catholic Church for the Diocese of Maitland
1963 – 1967	Una Josephine Norburn, widow
	(Part Portion 61 Parish Tomaree – Area 25 Acres 3 Roods 34 ¾ Perches – CTVol 7155 Fol 12)
1962 – 1963	Una Josephine Norburn, widow
1956 – 1962	Benjamin James Norburn, contractor
	(Part Portion 61 Parish Tomaree – Area 34 Acres 2 Roods 33 Perches – CTVol 6657 Fol 107)
1953 – 1956	Benjamin James Norburn, contractor
	(Portion 61 Parish Tomaree – Area 40 Acres – CTVol 661 Fol 197)
1950 – 1953	Benjamin James Norburn, contractor
1925 – 1950	Perpetual Trustee Company Limited
1901 – 1925	Eliza Jane White, widow William Portus Cullen
1883 – 1901	Robert Hoddle Driberg White, esquire
1883 – 1883	Edward Davis, grantee

****

Cadastral Records Enquiry Report : Lot 2 DP 216064

Ref : NOUSER

Locality : NELSON BAY
Parish : TOMAREE
LGA : PORT STEPHENS
County : GLOUCESTER



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

	Status	Surv/Comp	Purpose
DP27081			
Lot(s): 99, 101, 102, 103, 104, 105, 106			
DP1064337	REGISTERED	SURVEY	SUBDIVISION
DP216064			
Lot(s): 2			
DP1056051	REGISTERED	COMPILATION	EASEMENT
DP1004545			
Lot(s): 271, 272			
DP24174	HISTORICAL	SURVEY	UNRESEARCHED
DP1020854			
Lot(s): 1, 2, 3			
DP580648	HISTORICAL	SURVEY	SUBDIVISION
DP1052511			
Lot(s): 102			
DP9165	HISTORICAL	SURVEY	UNRESEARCHED
DP1058455			
Lot(s): 281, 282			
DP24174	HISTORICAL	SURVEY	UNRESEARCHED
DP1064337			
Lot(s): 12, 16, 17, 18, 19, 22			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1072863			
Lot(s): 1, 2			
DP27081	HISTORICAL	SURVEY	UNRESEARCHED
DP1098535			
Lot(s): 1, 2			
DP27081	HISTORICAL	SURVEY	UNRESEARCHED
DP1098930			
Lot(s): 1, 2, 3, 4, 5, 6			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1064337	HISTORICAL	SURVEY	SUBDIVISION
DP1106466			
Lot(s): 131, 132			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1064337	HISTORICAL	SURVEY	SUBDIVISION
DP1108861			
Lot(s): 3			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1064337	HISTORICAL	SURVEY	SUBDIVISION
DP1124831			
Lot(s): 1, 2			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1064337	HISTORICAL	SURVEY	SUBDIVISION
DP1213916			
Lot(s): 1591, 1592			
DP9165	HISTORICAL	SURVEY	UNRESEARCHED
DP1216998			
Lot(s): 151, 152			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1064337	HISTORICAL	SURVEY	SUBDIVISION
DP1246041			
Lot(s): 1, 2			
DP216064	HISTORICAL	SURVEY	RESUMPTION OR ACQUISITION
DP1064337	HISTORICAL	SURVEY	SUBDIVISION
DP1254931			
Lot(s): 1, 2, 3, 4			
DP585750	HISTORICAL	SURVEY	SUBDIVISION
DP727757	HISTORICAL	SURVEY	ROADS ACT, 1993
SP88371			
DP9165	HISTORICAL	SURVEY	UNRESEARCHED
DP1186043	HISTORICAL	SURVEY	REDEFINITION

Status	Surv/Comp	Purpose

Road

Polygon Id(s): 105017652, 105080609, 105403261, 107072778

- EX-SUR 74/54 DP982840
- EX-SUR 89/54 DP122578

Plan	Surv/Comp	Purpose
DP9165	SURVEY	UNRESEARCHED
DP24174	SURVEY	UNRESEARCHED
DP27081	SURVEY	UNRESEARCHED
DP31764	SURVEY	UNRESEARCHED
DP216064	SURVEY	RESUMPTION OR ACQUISITION
DP387719	SURVEY	UNRESEARCHED
DP403178	SURVEY	UNRESEARCHED
DP550929	SURVEY	SUBDIVISION
DP617522	COMPILATION	SUBDIVISION
DP727757	SURVEY	ROADS ACT, 1993
DP874431	SURVEY	SUBDIVISION
DP876999	SURVEY	SUBDIVISION
DP1004545	SURVEY	SUBDIVISION
DP1020854	SURVEY	SUBDIVISION
DP1052511	SURVEY	SUBDIVISION
DP1058455	SURVEY	SUBDIVISION
DP1064337	SURVEY	SUBDIVISION
DP1072863	SURVEY	SUBDIVISION
DP1098535	SURVEY	SUBDIVISION
DP1098930	SURVEY	SUBDIVISION
DP1106466	SURVEY	SUBDIVISION
DP1108861	SURVEY	SUBDIVISION
DP1124831	SURVEY	SUBDIVISION
DP1124831	UNRESEARCHED	SUBDIVISION
DP1213916	SURVEY	SUBDIVISION
DP1216998	SURVEY	SUBDIVISION
DP1246041	SURVEY	SUBDIVISION
DP1254931	SURVEY	SUBDIVISION
SP4519	COMPILATION	STRATA PLAN
SP7249	COMPILATION	STRATA PLAN
SP8970	COMPILATION	STRATA PLAN
SP17309	COMPILATION	STRATA PLAN
SP30824	COMPILATION	STRATA PLAN
SP31606	COMPILATION	STRATA PLAN
SP34881	COMPILATION	STRATA PLAN
SP41577	COMPILATION	STRATA PLAN
SP53832	COMPILATION	STRATA PLAN
SP88371	COMPILATION	STRATA PLAN

M

NEW SOUTH WALES

(For Grant and title reference prior to first edition see Deposited Plan.)

[redacted]IFICATE OF TITLE

[redacted]ERTY ACT, 1900, as amended.

09478074

Vol. 9478 Fol. 74

1st Edition issued 15-7-1963.

CANCELLED

Fol. 74 Vol. 9478 (Page 1)

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

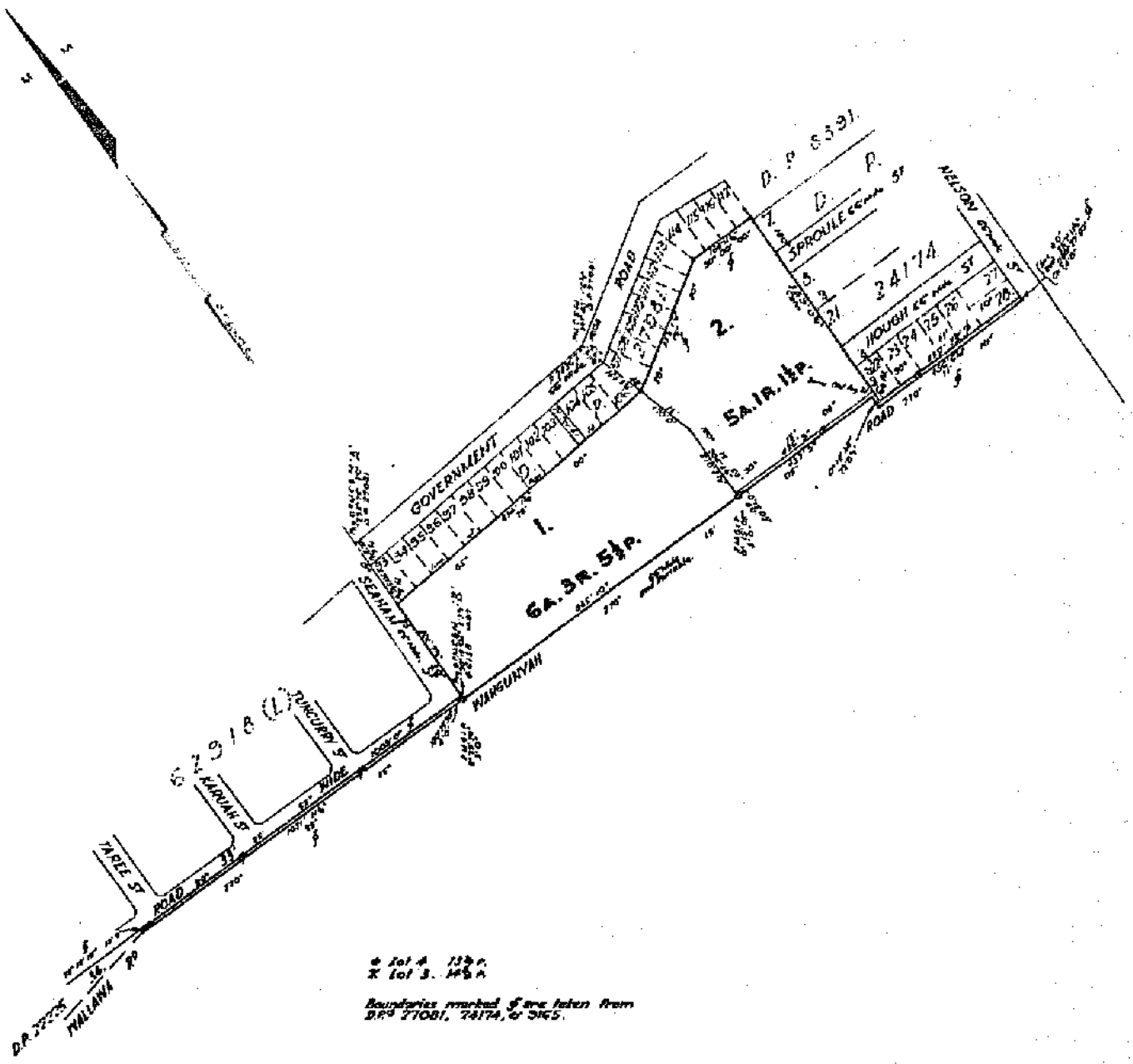
Witness B Bailey

SEE AUTO FOLIO

Registrar-General.

REGISTRAR GENERAL • NEW SOUTH WALES

PLAN SHOWING LOCATION OF LAND



* lot 1. 11½ P.
* lot 2. 1A. 1R. 4½ P.

Boundaries marked thus ~~~ are taken from D.P.s 71081, 78174, & 51615.

S

ESTATE AND LAND REFERRED TO.

Estate in Fee Simple in Lot 2 in Deposited Plan 216064 at Nelson Bay in the Shire of Port Stephens Parish of Tomaree and County of Gloucester excepting thereout the minerals reserved by the Crown Grant.

FIRST SCHEDULE (Continued overleaf)

~~UNA JOSEPHINE NORBURN, of Nelson Bay, Widow.~~

Registrar General.

SECOND SCHEDULE (Continued overleaf)

GRM

1. Reservations and conditions, if any, contained in the Crown Grant(s) referred to in the said Deposited Plan.

~~2. Caveat No. J205652 by the Registrar General. Entered 27-12-1962.~~ WITHDRAWN K862619

Registrar General.

ST 1609 V. C. N. BLIGHT, GOVERNMENT PRINTER

Vol. 9478 Fol. 74

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
Trustees of the Roman Catholic Church for the Diocese of Maitland	Transfer	K862619	12-10-1967	16-11-1967	

CANCELLED

SEE AUTO MAP

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		

(Page 2 of 2 pages)

FORM No. 184A

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

DP216064

Registered: 10.1.1963

Grd.:

Title System: Torrens

Purpose: Resumption

Ref. Map: Parish of Tamaree #

Last Plan: D.P.9165

PLAN OF Subdivision of Lot 678 Deposited Plan 9165 and part of the residue of C.T.Vol. 7155 Fol. 12

Scale: 200 feet to an Inch.

Shire: Port Stephens

Locality: Nelson Bay (Sandy Beach)

Parish: Tomaree.

County: Gloucester

I, William Walker Chapman of Sydney a surveyor registered under the Surveyors Act 1929 as amended hereby certify that the survey represented in this plan is accurate and has been made by me in accordance with the Survey Practice Regulations 1933 and was completed on 22nd. February 1962.

W.W. Chapman

Surveyor registered under the Surveyors Act 1929 as amend

Azimuth taken from A - B'

F.B. 2703.

Statements of Proposed Easements.

Approved by the Council and Certified in accordance with the Provisions of Sec. 327 of the Local Government Act 1919.

Date:

Subdivision No

Council Clerk.

S.B. 19765

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP: 216064

FEET	INCHES	METRES
1	6 1/2	0.470
3	-	0.914
3	3 1/2	1.003
4	-	1.219
13	7	4.140
29	0 1/2	8.852
33	-	10.058
66	-	20.117
66	3	20.193
67	11 1/8	20.704
120	5 3/4	36.722
123	5 3/4	37.636
170	-	51.816
184	11 3/4	56.382
206	5 1/2	62.878
210	5 1/2	64.097
257	11 3/4	81.680
301	7 1/2	91.935
359	1 1/4	109.455
432	9	131.902
436	9	133.121
452	7 1/4	137.954
456	6 3/4	139.160
559	0 7/8	170.405
834	1 3/4	254.248
885	10	270.002
1009	-	307.543
1021	11 3/4	511.499

AC	RD	P	HA
5	1	1 1/2	2.128
6	3	5 1/2	2.746

GOVERNMENT ROAD 66' wide. — D.P. 8331. — Z. D.P. SPROULE 66' wide. ST — NELSON 66' wide. ST — HOUGH 66' wide. ST — SEAHAM 66' wide. — TUNCURRY ST 55' WIDE. — KARUAH ST 25' — TAREE ST — ROAD 20' — WAHGUNYAH ROAD — WALLAWA RD — D.P. 22225 — D.P. 27081 — 24174 — 23774 — 21788 — 62918 (L) — 1. 5A.1R.1½P. — 2. 6A.3R.5½P. — Runs Old Hog Rail — Lot 4. 13¾ P. — Lot 3. 14¾ P.

Boundaries marked § are taken from D.P.s 27081, 24174, & 9165.

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 20th day of April, 1977

1

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 2/216064

SEARCH DATE	TIME	EDITION NO	DATE
17/9/2019	3:03 PM	1	15/10/2003

LAND

LOT 2 IN DEPOSITED PLAN 216064
AT NELSON BAY
LOCAL GOVERNMENT AREA PORT STEPHENS
PARISH OF TOMAREE COUNTY OF GLOUCESTER
TITLE DIAGRAM DP216064

FIRST SCHEDULE

TRUSTEES OF THE ROMAN CATHOLIC CHURCH FOR THE DIOCESE OF MAITLAND (T K862619)

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 9963153 EASEMENT FOR DRAINAGE OF WATER 2 WIDE AFFECTING THE PART SHOWN AS PROPOSED EASEMENT FOR DRAINAGE OF WATER 2 WIDE IN DP1056051

NOTATIONS

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

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 17/9/2019

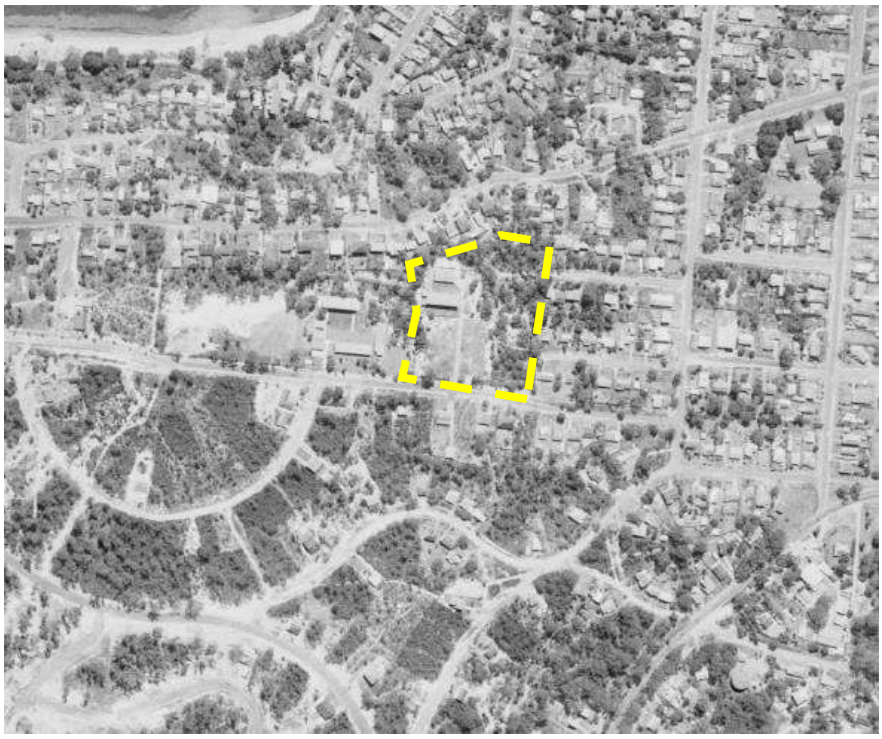
APPENDIX E:

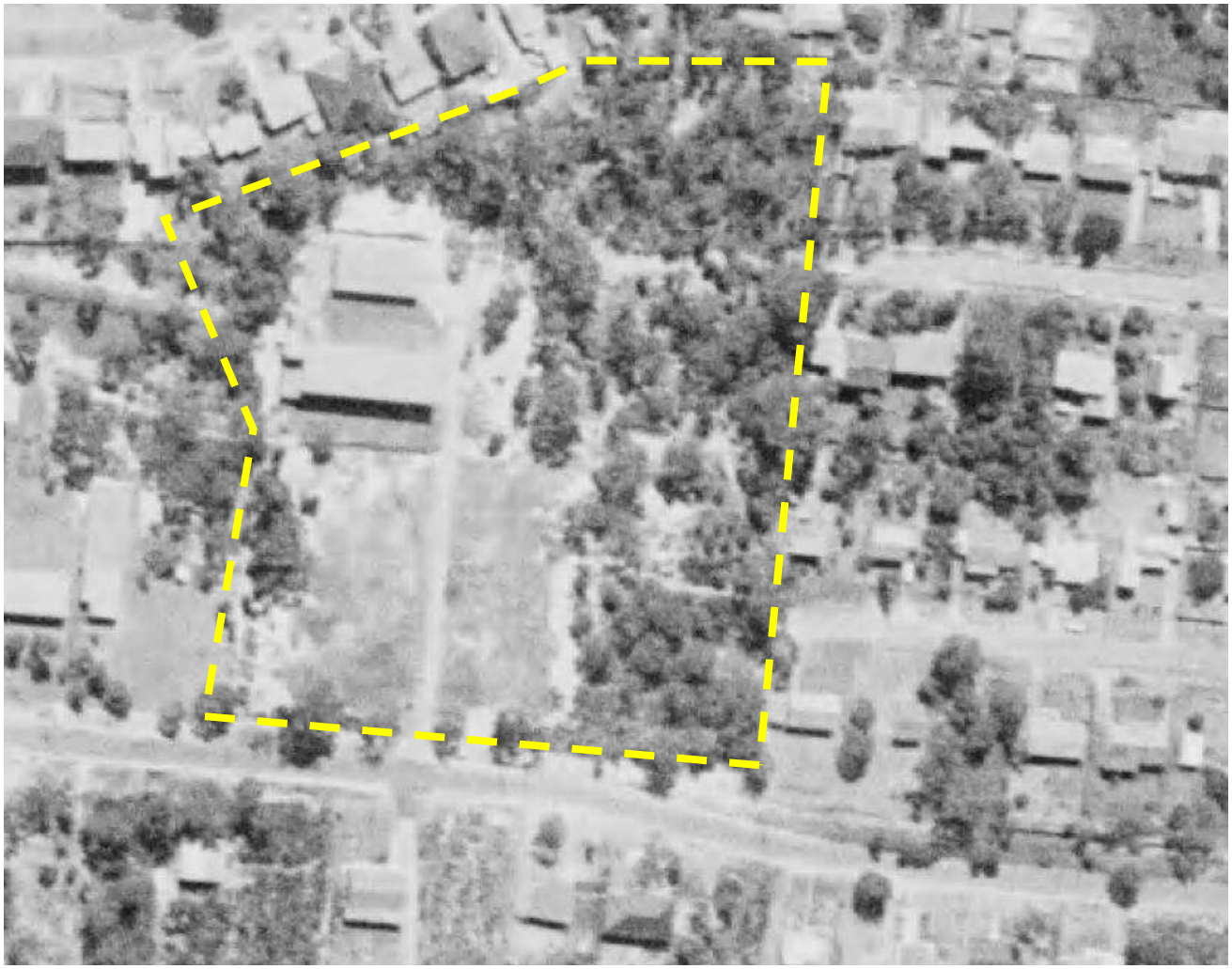
Aerial Photographs

Aerial photos - NEW19P-0150

1963

1975

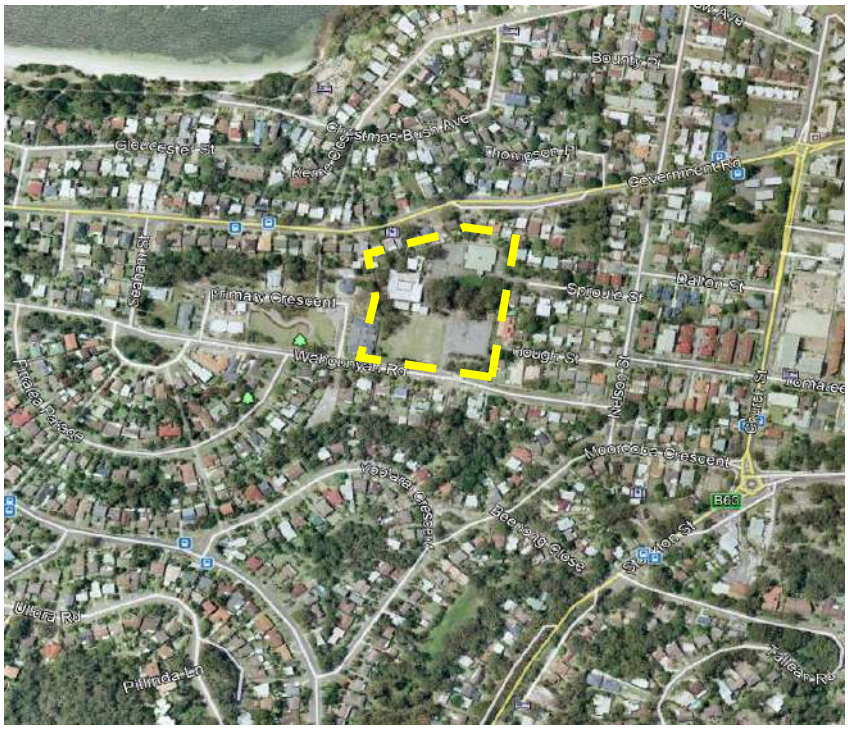




1984

1993

2007


Bounty St
Gloucester St
Government Rd
Primary Crescent
Sprouse St
Dalkeith St
Tough St
Moorcroft Crescent
B63
Ulira Rd
Pilinda Ln

2018

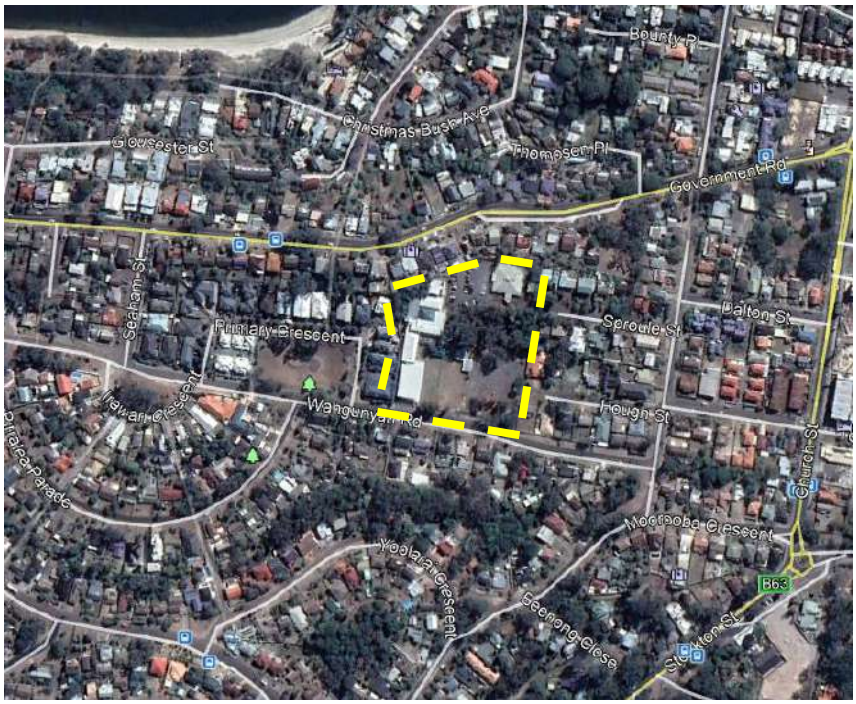

Bounty Pl
Christmas Bush Ave
Gloucester St
Thomson Pl
Government Rd
Seaham St
Primary Crescent
Sproule St
Dalton St
Wanguni Rd
Hough St
Church St
Mortimer Crescent
Yoolarri Crescent
Geelong Close
Stockton St
B63


Image © 2019 CNES / Airbus

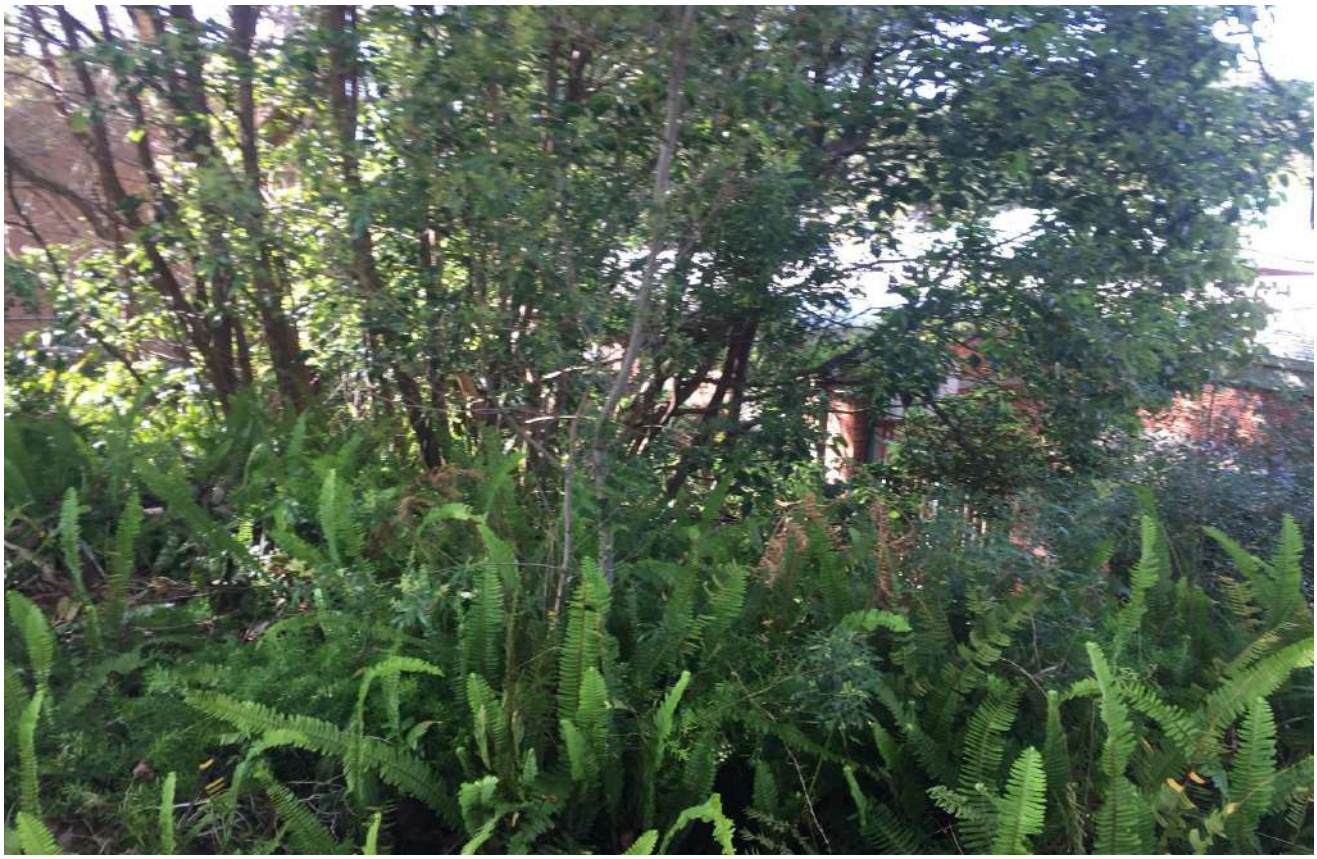
APPENDIX F:

Site Photographs

Photograph 1 - Storage shed chemical storage

Photograph 2 - Storage shed and concrete pad

Qualtest LABORATORY (NSW) PTY LTD	Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Project No:	NEW19P-0119-AA
	Project:	PRELIMINARY CONTAMINATION ASSESSMENT	Date:	22.08.19
	Location:	12 SPROULE STREET, NELSON BAY NSW	No:	**1 and 2**
	Title:	SITE PHOTOGRAPHS		



Photograph 3 - Dense vegetation along the northern boundary

Photograph 4 - Seating and grassed area

Qualtest LABORATORY (NEW) PTY LTD	Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Project No:	NEW19P-0119-AA
	Project:	PRELIMINARY CONTAMINATION ASSESSMENT	Date:	22.08.19
	Location:	12 SPROULE STREET, NELSON BAY NSW	No:	**3 and 4**
	Title:	SITE PHOTOGRAPHS		

Photograph 5 - Old building material

Photograph 6 - Small fill mounds

Qualtest LABORATORY (NSW) PTY LTD	Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Project No:	NEW19P-0119-AA
	Project:	PRELIMINARY CONTAMINATION ASSESSMENT	Date:	22.08.19
	Location:	12 SPROULE STREET, NELSON BAY NSW	No:	**5 and 6**
	Title:	SITE PHOTOGRAPHS		

Photograph 7 - Bushland in the central portion of the site.

Photograph 8 - Tin/corrugated iron storage shed

Qualtest	Client:	CATHOLIC DIOCESE OF MAITLAND & NEWCASTLE	Project No:	NEW19P-0119-AA
	Project:	PRELIMINARY CONTAMINATION ASSESSMENT	Date:	22.08.19
	Location:	12 SPROULE STREET, NELSON BAY NSW	No:	**7 and 8**
	Title:	SITE PHOTOGRAPHS		

APPENDIX G:

NSW EPA Records

Search results

Your search for: Suburb: NELSON BAY

Search Again

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

Search

To searcl
site, sear
governm
carefully
listed.

... more s

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 14
  Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

NELSON BAY	Shell Coles Express Service Station	25 Stockton STREET	Service Station	Regulation under CLM required
NELSON BAY	Former Caltex Service Station Nelson Bay	38 Stockton STREET	Service Station	Regulation under CLM required

APPENDIX H:

Section 10.7 Certificate

PORT STEPHENS COUNCIL

ABN 16 744 377 876

116 Adelaide Street, Raymond Terrace NSW 2324
PO Box 42, Raymond Terrace NSW 2324
Ph: (02) 4988 0255 Fax: (02) 4987 3612
Email: plancert@portstephens.nsw.gov.au
http://www.portstephens.nsw.gov.au

PLANNING CERTIFICATE PURSUANT TO SECTION 10.7 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

APPLICANT DETAILS:

Qualtest
8 Ironbark Close, Warabrook, NSW 2304

Reference: **NEW19P-0150**

Issue Date: **17/09/2019**

PROPERTY DESCRIPTION:

12 Sproule Street NELSON BAY NSW 2315 **Parcel No: 6167**
LOT: 2 DP: 216064

Disclaimer
Information contained in this certificate relates only to the land for which this certificate is issued on the day it is issued. This information is provided in good faith and Council shall not incur any liability in respect of any such advice. Council relies on state agencies for advice and accordingly can only provide that information in accordance with the advice. Verification of the currency of agency advice should occur. For further information, please contact Council by telephoning (02) 4988 0255 or email plancert@portstephens.nsw.gov.au.

Title Information
Title information shown on this Planning Certificate is provided from Council's records and may not conform to information shown on the current Certificate of Title. Easements, restrictions as to user, rights of way and other similar information shown on the title of the land are not provided on this planning certificate.

Inspection of the land
The Council has made no inspection of the land for the purposes of this Planning Certificate.

PART A: INFORMATION PROVIDED UNDER SECTION 10.7(2)

Matters contained in this certificate apply only to the land on the date of issue.

1. Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the development on the land.

State Environmental Planning Policies

State Environmental Planning Policy No 21 – Caravan Parks

State Environmental Planning Policy No 33 – Hazardous and Offensive Development

State Environmental Planning Policy No 36 – Manufactured Home Estates

State Environmental Planning Policy No 44 – Koala Habitat Protection

State Environmental Planning Policy No 50 – Canal Estate Development

State Environmental Planning Policy No 55 – Remediation of Land

State Environmental Planning Policy No 64 – Advertising and Signage

State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development

State Environmental Planning Policy (Affordable Rental Housing) 2006

State Environmental Planning Policy (Building Sustainability Index BASIX) 2004

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State Significant Precincts) 2005

State Environmental Planning Policy (Primary Production and Rural Development) 2019

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

State Environmental Planning Policy (Coastal Management) 2018

Local Environmental Plan

Port Stephens Local Environmental Plan 2013

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless Secretary has notified the Council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

Draft State Environmental Planning Policies

No draft State Environmental Planning Policies affect the site the subject of this Certificate.

Draft Local Environmental Plan

Port Stephens Council has prepared a Planning Proposal seeking to amend the Port Stephens Local Environmental Plan 2013 to address the following matters:

- Update the zoning of the following land from RU2 Rural Landscape to SP2 Defence to reflect its ownership by the Commonwealth Department of Defence: 2117 Nelson Bay Road, Williamtown (Lot 1 DP 665835); 2119 Nelson Bay Road, Williamtown (Lot 1 DP 665836);11A Lavis Lane, Williamtown (Lot 67 DP 753192);14 Lavis Lane, Williamtown (Lot 3 DP 853312); and 40 Lavis Lane, Williamtown (Lot 3 DP 741996);
- Update the zoning of 601 Cabbage Tree Road, Williamtown (Lot 1 DP 195630) from RU2 Rural Landscape to E1 National Parks and Nature Reserves to reflect its ownership by the Minister Administering the National Parks and Wildlife Act 1974 (NSW) for addition to the Hunter Wetlands National Park;
- Update the zoning label of 57 Slades Road, Williamtown (Lot 21 DP 1053667) from SP2 Defence to SP2 Defence (Air Transport Facility) to reflect its commercial airport lease conditions;
- Update the zoning at 1 Tuncurry Close, Nelson Bay (Lot 6 Section 4 DP 242131) from R2 Low Density Residential to RE1 Public Recreation to reflect its existing ownership, dedication and use as public open space;
- Within the IN1 General Industrial Zone - add 'storage premises' as permissible with consent;
- Within the IN2 Light Industrial Zone - add 'mortuaries' and 'recreation facilities (indoor)' as permissible with consent;
- Within the RU2 Rural Landscape Zone - add 'recreation facilities (outdoor)' as permissible with consent;
- Address various minor split zone map alignments from recent subdivision and cadastral map shifts for the following properties: 47 Martens Avenue, Raymond Terrace (Lot 3 DP 854853); 51 Martens Avenue, Raymond Terrace (Lot 4 DP 854853); 64B Joseph Sheen Drive, Raymond Terrace (Lot 271 DP 1162356); 40 Joseph Sheen Drive, Raymond Terrace (Lot 413 DP 1221430); 40A Joseph Sheen Drive, Raymond Terrace (Lot 414 DP 1221430); 3 Orton Cl, Heatherbrae (Lot 126 DP 1092660); 2 Orton Cl, Heatherbrae (Lot 127 DP 1092660); 47 Camfield Dr, Heatherbrae (Lot 128 DP 1092660); 49 Camfield Drive, Heatherbrae (Lot 501 DP 1240934); 51 Camfield Dr, Heatherbrae (Lot 508 DP 1246458); 343 Masonite Rd, Heatherbrae (Lot 1202 DP 1174968); 470 Masonite Road, Heatherbrae (Lot 510 1246458); and 3 Speedy Lock Lane, Heatherbrae (Lot 101 DP 708242); and
- Correct errors in the numbering, address descriptions and mapping of various heritage items. It also includes: correcting the location of “Eskdale House” from 792 Seaham Road, Eagleton (Lot 100 DP 1064980) to 794 Seaham Road, Eagleton (Lot 102 DP 1064980); updating the listed significance of “Nelson Head Lighthouse Group - Nelson Head Lighthouse, cottages and reserve, including Apex Park and Christmas Bush Avenue oil-burning street lamps” at 5A Lighthouse Road, Nelson Bay (Part Lot 427 DP 39728) from “State” to “ Local” heritage significance (note: this Item is not listed on the NSW State Heritage Register); and updating the listing of “Henry Halloran Group – stone wall west of Tanilba House at 30 Caswell Crescent (Lot 2 DP 548644) from “Local” to “State” significance (this Item is listed on the NSW State Heritage Register SHR 00029).

Development Control Plans

(3) The name of each development control plan that applies to the carrying out of development on the land.

Port Stephens Development Control Plan 2014.

2. Zoning and land use under relevant Local Environmental Plan(s)

What is the identity of the zoning for the land?

R2 Low Density Residential

Land Use Table – R2 Low Density Residential

(a) The land is zoned R2 Low Density Residential under the provisions of Part 2 in the Port Stephens Local Environmental Plan 2013.

(b) **Item 2 – Permitted without consent**

Home occupations

(c) **Item 3 – Permitted with consent**

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Exhibition villages; Flood mitigation works; Group homes; Health consulting rooms; Home-based child care; Home businesses; Home industries; Multi-dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Seniors housing; Tank-based aquaculture; Water reticulation systems

(d) **Item 4 - Prohibited**

Any development not specified in item 2 or 3

(e) **Development Standard for the erection of a dwelling-house**

No development standard that fixes a minimum land dimension for the erection of a dwelling-house applies to the land.

(f) Does the land include or comprise a critical habitat?

Port Stephens Local Environmental Plan 2013 does not identify the land as including or comprising critical habitat.

(g) Is the land in a heritage conservation area?

The land is not located within a heritage conservation area under the Port Stephens Local Environmental Plan 2013.

(h) Is an item of environmental heritage situated on the land?

The land is not identified as containing an item of environmental heritage significance under the provisions in Port Stephens Local Environmental Plan 2013.

Note. The land subject of this certificate does not have a site specific clause applying to it.

2A. Zoning and land use under *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*

Not applicable to the Port Stephens Local Government Area.

3. Complying Development

Whether or not the land to which the certificate relates is land on which complying development may be carried out under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*?

Housing Code
Complying development under the General Housing Code MAY be carried out on the land.

Inland Code
Complying development under the Inland Code MAY be carried out on the land.

Rural Housing Code
Complying development under the Rural Housing Code MAY be carried out on the land.

Low Rise Medium Denisty Housing Code
Complying development under the Low Rise Medium Density Housing Code MAY be carried out on the land.

Greenfield Housing Code
Complying development under the Greenfield Housing Code MAY be carried out on the land.

Housing Alterations Code
Complying development under the Housing Alterations Code MAY be carried out on the land.

General Development Code
Complying development under the General Development Code MAY be carried out on the land.

Commercial and Industrial Alterations Code
Complying development under the Commercial and Industrial alterations Code MAY be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code
Complying development under the Commercial and Industrial (New Buildings and Additions) Code MAY be carried out on the land.

Container Recycling Facilities Code
Complying development under the Container Recycling Facilities code MAY be carried out on the land.

Subdivisions Code
Complying development under the Subdivision Code MAY be carried out on the land.

Demolition Code
Complying development under the Demolition Code MAY be carried out on the land.

Fire Safety Code
Complying development under the Fire Safety Code MAY be carried out on the land.

Note. If the land is a lot to which the Housing Code, Rural Housing Code, Low Rise Medium Density Housing Code, Greenfield Housing Code, Housing Alterations Code, General Development Code, or Commercial and Industrial (New Buildings and Additions) Code (within the meaning of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* applies, complying development may be carried out on any part of the lot that is not affected by the provisions of clause 1.19 of that Policy

4. (Repealed)

4A. (Repealed)

4B. Annual charges under *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works

The land is not subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services relating to existing coastal protection works to which the owner (or any previous owner) of the land has consented.

Note. "existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993.*

5. Mine Subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Mine Subsidence Compensation Act 1961* or within an area declared to be a mine subsidence district under the *Coal Mine Subsidence Compensation Act 2017*.

The land is not within a proclaimed or declared mine subsidence district.

6. Road widening and road realignment

Council's records indicate that the land the subject of this Certificate is not affected by any road widening or road realignment under:- (1) Section 25 of the Roads Act 1993; or (2) any environmental planning instrument; or (3) any resolution of the Council.

7. Council and other public authority policies on hazard risk restrictions

Council's records indicate that the land subject of this certificate IS NOT affected by RAAF Base Williamtown & Salt Ash Weapons Range 2025 ANEF (10th August 2011); or the Aircraft Noise Planning Area within Port Stephens Development Control Plan 2014 - Chapter B7 Aircraft Noise for Buildings.

7A. Flood related development controls information

POTENTIALLY FLOOD PRONE LAND SUBJECT TO FURTHER INVESTIGATION - Development on the land or part of the land for the purposes of critical emergency response, recovery facilities and infrastructure and development which are particularly vulnerable to emergency response including group homes, seniors housing and child care facilities is subject to flood related development controls. Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings or any other purpose may be subject to flood related development controls. For further information please email floodrequests@portstephens.nsw.gov.au

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument makes provision in relation to the acquisition of the land by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979 (the Act).
The Port Stephens Local Environmental Plan 2013 DOES NOT provide for the acquisition of this land, or part thereof, by a public authority as referred to in Section 3.15 of the Act.

9. Contributions plans
The name of each contributions plan applying to the land

* Port Stephens Development Contributions Plan 2007.
* Port Stephens Fixed Development Contributions Plan 2006.

Note. These documents specify development contributions required towards the cost of providing additional community services or facilities if a property is developed. They are available on request from Council or can be viewed www.portstephens.nsw.gov.au.

9A. Biodiversity certified land
If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

No

Note. Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

10. Biodiversity stewardship sites
If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016*, a statement to that effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

No

Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

10A. Native vegetation clearing set asides
If the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section).

The land DOES NOT contain a set aside area under section 60ZC of the Local Land Services Act 2013.

11. Bush fire prone land
Whether or not some, all or none of the land is bush fire prone land.

The land is not shown as bush fire prone in Council's records.

12. Property vegetation plans

If the land is land to which a property vegetation plan under the *Native Vegetation Act 2003* (and that continues in force) applies, a statement to that effect (but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

Council has not been notified of any Property Vegetation Plans under the Native Vegetation Act 2003 (and that continues in force) that affect the land to which this certificate applies.

13. Orders under *Trees (Disputes Between Neighbours) Act 2006*

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if the council has been notified of the order).

The land is not affected by an order under the *Trees (Disputes Between Neighbours) Act 2006* (of which Council is aware).

14. Directions under Part 3A

Whether there is a direction by the Minister in force under section 75P(2)(c1) of the Act.

The land is not affected by a direction by the Minister, in force under section 75P(2)(c1) of the *Environmental Planning and Assessment Act 1979*.

15. Site compatibility certificates and conditions for seniors housing

If the land is land to which *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* applies:

(a) Whether or not Council is aware of a current site compatibility certificate (seniors housing), in respect of the proposed development on the land.

Council is not aware of a site compatibility certificate (seniors housing) issued in respect of the subject land.

(b) Whether or not any terms of a kind referred to in clause 18(2) of that Policy that have been imposed as a condition of consent to a development application granted after October 2007 in respect of the land.

No terms referred to in clause 18(2) of the policy have been imposed as a condition of development consent in respect of the land to which this certificate relates.

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

Whether or not Council is aware of a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools, or TAFE establishments) in respect of proposed development on the land.

Council is not aware of a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools, or TAFE establishments) in respect of proposed development on the land.

17. Site compatibility certificates and conditions for affordable rental housing

(1) Whether or not Council is aware of a current site compatibility certificate (affordable rental housing) in respect of proposed development on the land.

Council is not aware of a current site compatibility certificate issued under *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

(2) Whether or not any terms of a kind referred to in clause 17 (1) or 38 (1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as a condition of consent to a development application in respect of the land.

The land is not affected by any terms of a kind (of which Council is aware) referred to in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as conditions of consent to a development application granted after 11th October, 2007 in respect of the land.

18. Paper subdivison information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.
(2) The date of any subdivision order that applies to the land.
(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of *Environmental Planning and Assessment Regulation 2000*.

Not applicable.

19. Site verification certificates

Whether or not Council is aware of a current site verification certificate, in respect of the land.

Council is not aware of a current site verification certificate in respect of the land.

20. Loose-fill asbestos insulation

Whether or not the land includes any residential premises (as defined in Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on a register of residential premises that contain or have contained loose-fill asbestos insulation.

The land DOES NOT include any residential dwelling identified on the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation. For further information, please contact Department of Fair Trading by telephoning 13 77 88 or go to their website at www.fairtrading.nsw.gov.au.

21. Affected building notices and building product rectification orders

(a) Whether nor not there is any affected building notice of which the council is aware that is in force in respect of the land.
There is no affected building notice in force in respect of the land.

A statement of:

(b) Whether there is any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with.

No

(c) Whether any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

No

Additional matters

Note. The following matters are prescribed by section 59 (2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

(a) Whether or not the land to which the certificate relates is significantly contaminated land within the meaning of that Act.
(b) Whether or not the land to which the certificate relates is subject to a management order within the meaning of that Act.
(c) Whether or not the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of the Act.
(d) Whether or not the land to which this certificate relates is subject to an ongoing maintenance order within the meaning of that Act.
(e) Whether or not the land to which the certificate relates is the subject of a site audit statement within the meaning of that Act – if a copy of such statement has been provided at any time to the local authority issuing the certificate.

There are no prescribed matters under section 59(2) of the Contaminated Land Management Act 1997 to be disclosed.

PART B: INFORMATION PROVIDED UNDER SECTION 10.7(5)

This information is provided in accordance with section 10.7(5) of the *Environmental Planning and Assessment Act 1979*. Section 10.7(6) states that Council shall not incur any liability in respect of advice provided in good faith pursuant to section 10.7(5) of the Act. If this information is to be relied upon, it should be independently checked.

Heritage
Port Stephens Council must take into consideration the likely effect of proposed development on the heritage significance of a heritage item, heritage conservation area, archaeological site or potential archaeological site, and on its setting, when determining an application for consent to carry out development on land in its vicinity. Please contact Council's Development Assessment and Compliance Section by telephoning 49880115.

Aboriginal Archaelogy
When determining a development application on known or potential archaeological sites of both Aboriginal and non-Aboriginal heritage significance, Port Stephens Council must consider an assessment of how the proposed development would affect the conservation of the site and any relic known or reasonably likely to be located at the site. Please contact Council's Development Assessment and Compliance Section on 49880115 for more information.

Aircraft Noise
All areas of the Port Stephens Local Government Area are now, or are forecast to be, affected by aircraft noise from time to time. Further information concerning the degree of impact of noise from

aircraft can be obtained by contacting Council's Strategy and Environment Section by telephoning 49880326.

Koala Habitat
Parts of the Port Stephens Local government Area are affected by Koala Habitat and subject to the Port Stephens Comprehensive Koala Plan of Management 2002 made under State Environmental Planning Proposal No. 44. Further information can be obtained from Council's Strategy & Environment Section on 49880326 or email plancert@portstephens.nsw.gov.au.

Invasive Species
Parts of the Port Stephens Local Government Area contain plants that pose a risk according to the *Biosecurity Act 2015* which may restrict the use of the land. For further information please contact Council's Strategy & Environment Section on 4988 0326 or email weeds@portstephens.nsw.gov.au

Development consents relating to the land
Please contact Customer Relations on (02) 4988 0255, for any enquiries regarding development consent over the land in the past 5 years.

Issued by Port Stephens Council Development Services Group,
on behalf of **Wayne Wallis,General Manager**

APPENDIX I:

Laboratory Reports

eurofins | mgt

☐ **Sydney**
Unit F3 - 6 Building F, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
Email: EnviroSampleNSW@eurofins.com.au

☐ **Brisbane**
Unit 1-21 Smallwood Place, Murrarie
Phone: +617 3902 4600
Email: EnviroSampleQLD@eurofins.com.au

☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name :	Qualtest	Contact Name:	Emma Coleman	Purchase Order :	COC Number :
Office Address :	8 Ironbark Close	Project Manager :	Emma Coleman	PROJECT Number : NEW19P-0150	Eurofins | mgt quote ID : 180622QUA
Warabrook NSW 2304		Email for results :	billysnow@qualtest.com.au stephcullen@qualtest.com.au emmacoleman@qualtest.com.au	PROJECT Name : Catholic Diocese, Nelson Bay	Data output format:

Special Directions & Comments :

Eurofins | mgt DI water batch number:

	Sample ID	Date	Matrix	B7 (TRH, BTEX, PAH, Metals)	M8 (Metals)	Asbestos (presence/absence)	Containers: 1LP	250P	125P	1LA	40mL vial	125mL A	Jar	Bag	Sample comments:
1	SS1	1/10/2019	Soil	☒	☐	☒							1	1	
2	SS2	1/10/2019	Soil	☒	☐	☒							1	1	
3	SS3	1/10/2019	Soil	☒	☐	☒							1	1	
4	SS4	1/10/2019	Soil	☒	☐	☒							1	1	
5	BH01 0.0-0.1	1/10/2019	Soil	☐	☒	☒							1	1	
6	BH01 0.4-0.5	1/10/2019	Soil	☐	☐	☐							1	1	
7	BH01 0.9-1.0	1/10/2019	Soil	☐	☐	☐							1	1	
8	BH02 0.0-0.1	1/10/2019	Soil	☒	☒	☒							1	1	
9	BH02 0.4-0.5	1/10/2019	Soil	☐	☐	☐							1	1	
10	BH02 0.8-0.9	1/10/2019	Soil	☐	☐	☐							1	1	
11	BH03 0.0-0.1	1/10/2019	Soil	☐	☒	☒							1	1	
12	BH03 0.4-0.5	1/10/2019	Soil	☐	☐	☐							1	1	
13	BH03 0.8-0.9	1/10/2019	Soil	☐	☐	☐							1	1	
14	BH03 1.4-1.5	1/10/2019	Soil	☐	☐	☐							1		
15	BH04 0.0-0.1	1/10/2019	Soil	☐	☒	☒							1	1	
16	BH04 0.4-0.5	1/10/2019	Soil	☐	☐	☐							1	1	
17	BH04 0.5-0.6	1/10/2019	Soil	☐	☐	☐							1		

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Laboratory Staff

Relinquished By: E. Coleman
Date & Time:: 2/10/19
Signature:

Received By: RTIWBA
Date & Time: 2/10 3pm
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☑ 10 DAY ☐ Other: Standard

Method Of Shipment

☐ Courier
☐ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 9.87

Report number: 680660

Date/Time: 2/10 3pm
Holding Time: Yes / No
Correction: 8.4 9.4 10.0
Final Temp: FOR

eurofins | mgt

☐ **Sydney**
Unit F3 - 6 Building F, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
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☐ **Brisbane**
Unit 1-21 Smallwood Place, Murrarie
Phone: +617 3902 4600
Email: EnviroSampleQLD@eurofins.com.au

☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name :	Qualtest	**Contact Name:**	Emma Coleman	**Purchase Order :**	**COC Number :**
Office Address :	8 Ironbark Close	**Project Manager :**	Emma Coleman	**PROJECT Number :** NEW19P-0150	**Eurofins | mgt quote ID :** 180622QUA
	Warabrook NSW 2304	**Email for results :**	billysnow@qualtest.com.au stephcullen@qualtest.com.au emmacoleman@qualtest.com.au	**PROJECT Name :** Catholic Diocese, Nelson Bay	**Data output format:**

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	B7 (TRH, BTEX, PAH, Metals)	M8 (Metals)	Asbestos (presence/absence)
1	BH05 0.0-0.1	1/10/2019	Soil		\	\
2	BH05 0.4-0.5	1/10/2019	Soil			
3	BH05 0.6-0.7	1/10/2019	Soil			
4	BH08 0.0-0.1	1/10/2019	Soil	\		\
5	BH08 0.4-0.5	1/10/2019	Soil			
6	D.1.10.19	1/10/2019	Soil	\		
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	1LP	250P	125P	1LA	40mL vial	125mL A	Jar	Bag	Sample comments:
1							1	1	
2							1	1	
3							1		
4							1	1	
5							1		
6							1		
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									

	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival:
Relinquished By: E. Coleman	**Received By:** RTIWBA	1 DAY ☐ 2 DAY ☐ 3 DAY ☐	☐ Courier	9.87
Date & Time:: 2/10/19	**Date & Time:** 2/10 3pm	5 DAY ☑ 10 DAY ☐ Other: Standard	☐ Hand Delivered ☐ Postal	**Report number:**
Signature:	**Signature:**		**Courier Consignment # :**	680660

eurofins | Environment Testing

Melbourne
6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**Qualtest**
Contact name:	Emma Coleman
Project name:	CATHOLIC DIOCESE NELSON BAY
Project ID:	NEW19P-0150
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Oct 2, 2019 3:00 PM
Eurofins reference:	**680660**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

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

Andrew Black on Phone : (+61) 2 9900 8490 or by e.mail: AndrewBlack@eurofins.com

Results will be delivered electronically via e.mail to Emma Coleman - emmacoleman@qualtest.com.au.

Note: A copy of these results will also be delivered to the general Qualtest email address.

Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Qualtest
8 Ironbark Close
Warabrook
NSW 2304

Attention:	Emma Coleman
Report	680660-AID
Project Name	CATHOLIC DIOCESE NELSON BAY
Project ID	NEW19P-0150
Received Date	Oct 02, 2019
Date Reported	Oct 10, 2019

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name CATHOLIC DIOCESE NELSON BAY
Project ID NEW19P-0150
Date Sampled Oct 01, 2019
Report 680660-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SS1	19-Oc06791	Oct 01, 2019	Approximate Sample 167g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS2	19-Oc06792	Oct 01, 2019	Approximate Sample 252g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS3	19-Oc06793	Oct 01, 2019	Approximate Sample 134g Sample consisted of: Brown organic debris and sand residue	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS4	19-Oc06794	Oct 01, 2019	Approximate Sample 54g Sample consisted of: Brown organic debris and sand residue	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH1 0.0-0.1	19-Oc06795	Oct 01, 2019	Approximate Sample 144g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH2 0.0-0.1	19-Oc06796	Oct 01, 2019	Approximate Sample 133g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH3 0.0-0.1	19-Oc06797	Oct 01, 2019	Approximate Sample 73g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH4 0.0-0.1	19-Oc06798	Oct 01, 2019	Approximate Sample 83g Sample consisted of: Brown organic debris and sand residue	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH5 0.0-0.1	19-Oc06799	Oct 01, 2019	Approximate Sample 327g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH8 0.0-0.1	19-Oc06800	Oct 01, 2019	Approximate Sample 78g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Oct 03, 2019	Indefinite

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NATA # 1261
Site # 1254 & 14271

Sydney
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Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: Qualtest
Address: 8 Ironbark Close
Warabrook
NSW 2304

Project Name: CATHOLIC DIOCESE NELSON BAY
Project ID: NEW19P-0150

Order No.:
Report #: 680660
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Oct 2, 2019 3:00 PM
Due: Oct 10, 2019
Priority: 5 Day
Contact Name: Emma Coleman

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	SS1	Oct 01, 2019		Soil	S19-Oc06791	X			X	X
2	SS2	Oct 01, 2019		Soil	S19-Oc06792	X		X	X	
3	SS3	Oct 01, 2019		Soil	S19-Oc06793	X			X	X
4	SS4	Oct 01, 2019		Soil	S19-Oc06794	X			X	X
5	BH1 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06795	X		X	X	
6	BH2 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06796	X			X	X
7	BH3 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06797	X		X	X	
8	BH4 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06798	X		X	X	
9	BH5 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06799	X		X	X	

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NATA # 1261 Site # 20794

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Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: Qualtest
Address: 8 Ironbark Close
Warabrook
NSW 2304

Project Name: CATHOLIC DIOCESE NELSON BAY
Project ID: NEW19P-0150

Order No.:
Report #: 680660
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Oct 2, 2019 3:00 PM
Due: Oct 10, 2019
Priority: 5 Day
Contact Name: Emma Coleman

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	BH8 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06800	X			X	X
11	D.1.10.19	Oct 01, 2019		Soil	S19-Oc06801				X	X
12	BH1 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06802		X			
13	BH1 0.9-1.0	Oct 01, 2019		Soil	S19-Oc06803		X			
14	BH2 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06804		X			
15	BH2 0.8-0.9	Oct 01, 2019		Soil	S19-Oc06805		X			
16	BH3 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06806		X			
17	BH3 0.8-0.9	Oct 01, 2019		Soil	S19-Oc06807		X			
18	BH3 1.4-1.5	Oct 01, 2019		Soil	S19-Oc06808		X			
19	BH4 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06809		X			
20	BH4 0.5-0.6	Oct 01, 2019		Soil	S19-Oc06810		X			
21	BH5 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06811		X			

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Address: 8 Ironbark Close
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NSW 2304

Project Name: CATHOLIC DIOCESE NELSON BAY
Project ID: NEW19P-0150

Order No.:
Report #: 680660
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Oct 2, 2019 3:00 PM
Due: Oct 10, 2019
Priority: 5 Day
Contact Name: Emma Coleman

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
22	BH5 0.6-0.7	Oct 01, 2019		Soil	S19-Oc06812		X			
23	BH8 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06813		X			
Test Counts						10	12	5	11	6

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Qualtest
8 Ironbark Close
Warabrook
NSW 2304

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Emma Coleman**

Report **680660-S**
Project name CATHOLIC DIOCESE NELSON BAY
Project ID NEW19P-0150
Received Date Oct 02, 2019

Client Sample ID			**SS1**	**SS2**	**SS3**	**SS4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S19-Oc06791**	**S19-Oc06792**	**S19-Oc06793**	**S19-Oc06794**
Date Sampled			**Oct 01, 2019**	**Oct 01, 2019**	**Oct 01, 2019**	**Oct 01, 2019**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	< 20
TRH C10-C14	20	mg/kg	39	-	69	95
TRH C15-C28	50	mg/kg	180	-	290	370
TRH C29-C36	50	mg/kg	210	-	410	520
TRH C10-C36 (Total)	50	mg/kg	429	-	769	985
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	112	-	91	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	< 20
TRH >C10-C16	50	mg/kg	56	-	94	130
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	56	-	94	130
TRH >C16-C34	100	mg/kg	310	-	520	660
TRH >C34-C40	100	mg/kg	160	-	360	440
TRH >C10-C40 (total)*	100	mg/kg	526	-	974	1230
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5

Client Sample ID			SS1	SS2	SS3	SS4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Oc06791	S19-Oc06792	S19-Oc06793	S19-Oc06794
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	-	79	76
p-Terphenyl-d14 (surr.)	1	%	94	-	95	95
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.3	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	9.5	< 5	< 5
Copper	5	mg/kg	7.3	7.4	< 5	< 5
Lead	5	mg/kg	5.0	5.6	< 5	5.2
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	8.3	< 5	< 5
Zinc	5	mg/kg	14	29	11	17
% Moisture	1	%	15	5.2	27	56

Client Sample ID			BH1 0.0-0.1	BH2 0.0-0.1	BH3 0.0-0.1	BH4 0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Oc06795	S19-Oc06796	S19-Oc06797	S19-Oc06798
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	100	-	-
TRH C29-C36	50	mg/kg	-	210	-	-
TRH C10-C36 (Total)	50	mg/kg	-	310	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	114	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	200	-	-

Client Sample ID			BH1 0.0-0.1	BH2 0.0-0.1	BH3 0.0-0.1	BH4 0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Oc06795	S19-Oc06796	S19-Oc06797	S19-Oc06798
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C34-C40	100	mg/kg	-	170	-	-
TRH >C10-C40 (total)*	100	mg/kg	-	370	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Total PAH*	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	75	-	-
p-Terphenyl-d14 (surr.)	1	%	-	93	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	5.2	< 5	< 5	< 5
Lead	5	mg/kg	< 5	< 5	7.0	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	25	17	18	25
% Moisture	1	%	7.0	10	5.4	64

Client Sample ID			BH5 0.0-0.1	BH8 0.0-0.1	D.1.10.19
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S19-Oc06799	S19-Oc06800	S19-Oc06801
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	22	< 20
TRH C15-C28	50	mg/kg	-	74	72
TRH C29-C36	50	mg/kg	-	120	220
TRH C10-C36 (Total)	50	mg/kg	-	216	292

Client Sample ID			BH5 0.0-0.1	BH8 0.0-0.1	D.1.10.19
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S19-Oc06799	S19-Oc06800	S19-Oc06801
Date Sampled			Oct 01, 2019	Oct 01, 2019	Oct 01, 2019
Test/Reference	LOR	Unit			
BTEX					
Benzene	0.1	mg/kg	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	104	113
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	140	160
TRH >C34-C40	100	mg/kg	-	< 100	190
TRH >C10-C40 (total)*	100	mg/kg	-	140	350
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	71	70
p-Terphenyl-d14 (surr.)	1	%	-	93	90
Heavy Metals					
Arsenic	2	mg/kg	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5
Lead	5	mg/kg	< 5	17	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5
Zinc	5	mg/kg	6.0	17	18
% Moisture	1	%	6.4	4.6	6.0

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Oct 08, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Oct 08, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Oct 08, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Oct 08, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Oct 08, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Oct 08, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Oct 03, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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NATA # 1261
Site # 23736

Company Name: Qualtest
Address: 8 Ironbark Close
Warabrook
NSW 2304

Project Name: CATHOLIC DIOCESE NELSON BAY
Project ID: NEW19P-0150

Order No.:
Report #: 680660
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Oct 2, 2019 3:00 PM
Due: Oct 10, 2019
Priority: 5 Day
Contact Name: Emma Coleman

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	SS1	Oct 01, 2019		Soil	S19-Oc06791	X			X	X
2	SS2	Oct 01, 2019		Soil	S19-Oc06792	X		X	X	
3	SS3	Oct 01, 2019		Soil	S19-Oc06793	X			X	X
4	SS4	Oct 01, 2019		Soil	S19-Oc06794	X			X	X
5	BH1 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06795	X		X	X	
6	BH2 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06796	X			X	X
7	BH3 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06797	X		X	X	
8	BH4 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06798	X		X	X	
9	BH5 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06799	X		X	X	

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Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	BH8 0.0-0.1	Oct 01, 2019		Soil	S19-Oc06800	X			X	X
11	D.1.10.19	Oct 01, 2019		Soil	S19-Oc06801				X	X
12	BH1 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06802		X			
13	BH1 0.9-1.0	Oct 01, 2019		Soil	S19-Oc06803		X			
14	BH2 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06804		X			
15	BH2 0.8-0.9	Oct 01, 2019		Soil	S19-Oc06805		X			
16	BH3 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06806		X			
17	BH3 0.8-0.9	Oct 01, 2019		Soil	S19-Oc06807		X			
18	BH3 1.4-1.5	Oct 01, 2019		Soil	S19-Oc06808		X			
19	BH4 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06809		X			
20	BH4 0.5-0.6	Oct 01, 2019		Soil	S19-Oc06810		X			
21	BH5 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06811		X			

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Order No.:
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Fax: 02 4960 9775

Received: Oct 2, 2019 3:00 PM
Due: Oct 10, 2019
Priority: 5 Day
Contact Name: Emma Coleman

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
22	BH5 0.6-0.7	Oct 01, 2019		Soil	S19-Oc06812		X			
23	BH8 0.4-0.5	Oct 01, 2019		Soil	S19-Oc06813		X			
Test Counts						10	12	5	11	6

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	94			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	88			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	96			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	97			70-130	Pass	
Xylenes - Total	%	98			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	113			70-130	Pass	
TRH C6-C10	%	92			70-130	Pass	
TRH >C10-C16	%	86			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	92			70-130	Pass	
Anthracene	%	88			70-130	Pass	
Benz(a)anthracene	%	85			70-130	Pass	
Benzo(a)pyrene	%	91			70-130	Pass	
Benzo(b&j)fluoranthene	%	81			70-130	Pass	
Benzo(g.h.i)perylene	%	93			70-130	Pass	
Benzo(k)fluoranthene	%	94			70-130	Pass	
Chrysene	%	87			70-130	Pass	
Dibenz(a.h)anthracene	%	90			70-130	Pass	
Fluoranthene	%	90			70-130	Pass	
Fluorene	%	88			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	89			70-130	Pass	
Pyrene	%	89			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	112			70-130	Pass	
Cadmium	%	110			70-130	Pass	
Chromium	%	112			70-130	Pass	
Copper	%	112			70-130	Pass	
Lead	%	111			70-130	Pass	
Mercury	%	108			70-130	Pass	
Nickel	%	111			70-130	Pass	
Zinc	%	115			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Oc06792	CP	%	95			70-130	Pass	
Cadmium	S19-Oc06792	CP	%	98			70-130	Pass	
Chromium	S19-Oc06792	CP	%	93			70-130	Pass	
Copper	S19-Oc06792	CP	%	93			70-130	Pass	
Lead	S19-Oc06792	CP	%	94			70-130	Pass	
Mercury	S19-Oc06792	CP	%	100			70-130	Pass	
Nickel	S19-Oc06792	CP	%	91			70-130	Pass	
Zinc	S19-Oc06792	CP	%	104			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Oc06793	CP	%	84			70-130	Pass	
TRH C10-C14	S19-Oc06793	CP	%	77			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Oc06793	CP	%	89			70-130	Pass	
Toluene	S19-Oc06793	CP	%	88			70-130	Pass	
Ethylbenzene	S19-Oc06793	CP	%	85			70-130	Pass	
m&p-Xylenes	S19-Oc06793	CP	%	89			70-130	Pass	
o-Xylene	S19-Oc06793	CP	%	87			70-130	Pass	
Xylenes - Total	S19-Oc06793	CP	%	88			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Oc06793	CP	%	85			70-130	Pass	
TRH C6-C10	S19-Oc06793	CP	%	84			70-130	Pass	
TRH >C10-C16	S19-Oc06793	CP	%	78			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-Oc06793	CP	%	85			70-130	Pass	
Acenaphthylene	S19-Oc06793	CP	%	86			70-130	Pass	
Anthracene	S19-Oc06793	CP	%	82			70-130	Pass	
Benz(a)anthracene	S19-Oc06793	CP	%	85			70-130	Pass	
Benzo(a)pyrene	S19-Oc06793	CP	%	79			70-130	Pass	
Benzo(b&j)fluoranthene	S19-Oc06793	CP	%	75			70-130	Pass	
Benzo(g.h.i)perylene	S19-Oc06793	CP	%	75			70-130	Pass	
Benzo(k)fluoranthene	S19-Oc06793	CP	%	81			70-130	Pass	
Chrysene	S19-Oc06793	CP	%	81			70-130	Pass	
Dibenz(a.h)anthracene	S19-Oc06793	CP	%	77			70-130	Pass	
Fluoranthene	S19-Oc06793	CP	%	85			70-130	Pass	
Fluorene	S19-Oc06793	CP	%	82			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-Oc06793	CP	%	78			70-130	Pass	
Naphthalene	S19-Oc06793	CP	%	87			70-130	Pass	
Phenanthrene	S19-Oc06793	CP	%	84			70-130	Pass	
Pyrene	S19-Oc06793	CP	%	83			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Oc06791	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S19-Oc06791	CP	mg/kg	39	53	32	30%	Fail	Q15
TRH C15-C28	S19-Oc06791	CP	mg/kg	180	240	30	30%	Pass	
TRH C29-C36	S19-Oc06791	CP	mg/kg	210	270	21	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Oc06791	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-Oc06791	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-Oc06791	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-Oc06791	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-Oc06791	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-Oc06791	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-Oc06791	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S19-Oc06791	CP	mg/kg	56	75	29	30%	Pass	
TRH >C16-C34	S19-Oc06791	CP	mg/kg	310	400	26	30%	Pass	
TRH >C34-C40	S19-Oc06791	CP	mg/kg	160	200	21	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Oc06791	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Oc06520	NCP	mg/kg	11	18	<1	30%	Pass	
Cadmium	S19-Oc06520	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Oc06520	NCP	mg/kg	23	36	<1	30%	Pass	
Copper	S19-Oc06520	NCP	mg/kg	7.7	8.0	4.0	30%	Pass	
Lead	S19-Oc06520	NCP	mg/kg	24	27	12	30%	Pass	
Mercury	S19-Oc06520	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Oc06520	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-Oc06520	NCP	mg/kg	13	14	5.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Oc06791	CP	%	15	17	14	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Oc06801	CP	%	6.0	6.9	13	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

Qualtest
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Warabrook
NSW 2304

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Emma Coleman**

Report **682211-S**
Project name ADDITIONAL - CATHOLIC DIOCESE NELSON BAY
Project ID NEW19P-0150
Received Date Oct 14, 2019

Client Sample ID			**SS4**
Sample Matrix			**Soil**
Eurofins Sample No.			**S19-Oc18407**
Date Sampled			**Oct 01, 2019**
Test/Reference	LOR	Unit	
TRH - 2013 NEPM Fractions (after silica gel clean-up)			
TRH >C10-C16 (after silica gel clean-up)	50	mg/kg	< 50
TRH >C16-C34 (after silica gel clean-up)	100	mg/kg	< 100
TRH >C34-C40 (after silica gel clean-up)	100	mg/kg	< 100
TRH - 1999 NEPM Fractions (after silica gel clean-up)			
TRH C10-C36 (Total) (after silica gel clean-up)	100	mg/kg	< 100
TRH C10-C14 (after silica gel clean-up)	50	mg/kg	< 50
TRH C15-C28 (after silica gel clean-up)	100	mg/kg	< 100
TRH C29-C36 (after silica gel clean-up)	100	mg/kg	< 100
% Moisture	1	%	34

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Sydney	Oct 14, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Sydney	Oct 14, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Sydney	Oct 14, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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NATA # 1261
Site # 23736

Company Name:	Qualtest	**Order No.:**		**Received:**	Oct 14, 2019 9:55 AM
Address:	8 Ironbark Close Warabrook NSW 2304	**Report #:**	682211	**Due:**	Oct 17, 2019
		Phone:	02 4968 4468	**Priority:**	3 Day
		Fax:	02 4960 9775	**Contact Name:**	Emma Coleman
Project Name:	ADDITIONAL - CATHOLIC DIOCESE NELSON BAY				
Project ID:	NEW19P-0150				

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						TRH (after Silica Gel cleanup)	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	SS4	Oct 01, 2019		Soil	S19-Oc18407	X	X
Test Counts						1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	75			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	77			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Oc18701	NCP	%	6.2	6.0	2.0	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

APPENDIX J:

Data Validation Report

QA/QC DATA VALIDATION REPORT
Job No: NEW19P-0150 – PRELIMINARY CONTAMINATION ASSESSMENT

Eurofins report: 680660-AID, 680660-S, 682211-S

1. SAMPLE HANDLING

Item	Yes/No	Comments
Were the sample holding times met?	Yes	-
Were the samples in proper custody between collection in the field and reaching the laboratory?	Yes	-
Were the samples properly and adequately preserved?	Yes	-
Were the samples received by the laboratory in good condition?	Yes	-

Sampling Handling was:

Satisfactory :	✓	**Partially Satisfactory:**	**Unsatisfactory:**

2. PRECISION AND ACCURACY ASSESSMENT

Item	Yes/No	Comment
Was a NATA registered laboratory used?	Yes	-
Did the laboratory perform the requested tests?	Yes	-
Were the laboratory methods adopted NATA endorsed?	Yes	-
Were the appropriate test procedures followed?	Yes	-
Were the reporting limits satisfactory?	Yes	-
Was the NATA seal on the reports?	Yes	-
Were the reports signed by an authorised person?	Yes	-

Laboratory Precision and Accuracy was:

Satisfactory :	✓	**Partially Satisfactory:**	**Unsatisfactory:**

3. FIELD QA/QC

Soil Samples

No. Samples Analysed	10
Duplicates	1
Triplicates	0
Trip Blanks	0
Wash Blanks	0
Trip Spikes	0
Number of Days Sampling	1
Number of Sampling Events	1

Field Duplicates

Item	Yes/No	Comments
Were an adequate number of field duplicates collected?	Yes	One per 10 samples, 10%
Were RPDs within control limits? No Limit for 5-10 x EQL and 30% for >10 x EQL	Yes	

Trip Blanks/Trip Spikes

Item	Yes/No	Comments
Were an adequate number of trip blanks and trip spikes collected?	Yes	No trip blanks or spikes were collected, as volatiles were not a primary contaminant of concern
Were the trip blanks free of contaminants?	NA	
Were the trip spikes within recovery limits (between 80% and 120%)	NA	

Rinsate Samples

Item	Yes/No	Comments
Were an adequate number of rinsate samples used? (1 per day of using reusable sampling equipment – trowel, hand auger etc)	No	No rinsate was collected. Sampling equipment was decontaminated between locations, and results were below adopted criteria. Therefore, the absence of a rinsate is not considered to affect data usability.
Were the rinsate samples free of contaminants? (If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals).	NA	

Field QC was:

Satisfactory :	✓	**Partially Satisfactory:**	**Unsatisfactory:**

4. LABORATORY INTERNAL QUALITY CONTROL PROCEDURES

A) Type of QA/QC Sample	Yes/No	Comments
Laboratory Blanks/Reagent Blanks (at least 1 per batch)	Yes	
Laboratory Duplicates (at least 1 per batch or 1 per 10 samples)	Yes	
Matrix Spikes, Matrix Spike Duplicates (1 for each soil type)	Yes	
Laboratory Control Spike	Yes	
Surrogate (where appropriate)	Yes	

Item	Yes/ No	Comments
B) Were the laboratory blanks and/or reagent blanks free of contamination?	Yes	
C) Were the spike recoveries within control limits? *Phenols (20% to 130%), Organics/ inorganics/metals (50% to 150%)*	Yes	
D) Were the RPDs of the laboratory duplicates within control limits?	No	TRH C10-C14 reported an RPD outside of acceptable limits. The lab quoted code Q15, which states: "*The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review*".
E) Were the surrogate recoveries within control limits?	Yes	

Laboratory Internal QA/QC was:

Satisfactory : ✓	Partially Satisfactory:	Unsatisfactory:

5. DATA USABILITY

Item	Yes/No	Comments
Was the data directly usable?	Yes	
Was the data usable with the following corrections/modifications? (see comments)	NA	
Was the data not usable?	NA	