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Attachment 1: Targeted Detailed Site Investigation

Targeted Detailed Site Investigation

14-16 George Street, Marulan NSW 2579

Lot 2/-/DP1053945 and Lot 3/-/DP1053945

N4806 and N4807

23rd September 2021

NEO Consulting Pty Ltd
admin@neoconsulting.com.au
www.neoconsulting.com.au

Report distribution

Targeted Detailed Site Investigation

Address: 14-16 George Street, Marulan NSW 2579

NEO Consulting Report No: N4806 and N4807

Date: 23rd September 2021

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Version	Prepared by	Reviewed by	Date issue
FINAL	Luke Breva Environmental Scientist	Nick Caltabiano Project Manager	23rd September 2021
Review			

Report Revision	Details	Report No.	Date	Amended By
1	FINAL Report	N4806 and N4807	23rd September 2021	-
		Issued By:	Nick Caltabiano	

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APPENDICES

Executive Summary

NEO Consulting were appointed by DIB Group Pty Ltd (the client) to undertake a Targeted Detailed Site Investigation (DSI) for the property located at 14-16 George Street, Marulan NSW 2579. The entire site consists of three (3) lots, legally identified as Lot 1, 2 and 3 / - / DP1053945. However this DSI is focused on the proposed developments within Lots 2 (Project Number: N4807) and Lots 3 (Project Number: N4806), with consideration given to the service station operations. The entire site has an area of approximately 7.2ha. Lot 2 and 3 have an area of approximately 3.9ha and 0.54ha, respectively. The site is currently zoned as IN1 - General Industrial. Only partial areas of Lots 2 and 3 have been validated.

The proposed development for the site includes:

1) The construction of an Industrial Park on Lot 1 (not included in the current assessment);
2) The construction of a fast-food outlet including drive-through, delivery and waiting bays, and carpark (Lot 2); and
3) The construction of a motel, with associated pool, gazebo, bar and carpark (Lot 3).

This DSI provides an assessment of current or historical potentially contaminating activities that may have impacted the site and will determine if the site is suitable for the proposed developments onsite.

The scope of work undertaken includes:

- A site inspection to identify potential sources of contamination;
- Sampling and chemical analysis of soil and groundwater on the site;
- Historical investigations relating to the site (if any);
- Review of current and historical Certificates of Title;
- Local Council records and planning certificates;
- NSW EPA Priority Sites Register;
- Dial-Before-You-Dig enquiry for an evaluation into local underground services and assets;
- Review of local geological and hydrogeological information, including an evaluation of the NSW Groundwater registered groundwater bore database;
- Review of Acid Sulfate Soil data maps.

The site investigation was conducted on the 23rd May 2021 by a qualified environmental consultant. Soil and groundwater samples were collected and submitted to a NATA accredited laboratory for chemical analysis. Chemical analyses targeted Contaminants of Potential Concern (CoPC), which may have impacted the site during historical or present activities.

NEO Consulting implemented a systematic sampling approach on the proposed development areas. Lot 3 had an approximate area of 5,363sqm, which indicates a minimum 13 sampling locations; and Lot 2 had an approximate

area of 3,604sqm, which indicates a minimum 9 sampling locations (NSW EPA, *Sampling Design Guidelines*, 1995). A minimum of two (2) soil samples were required from each borehole location, and one (1) groundwater monitoring well was installed on each lot. MW2 was installed on Lot 2, with a drill depth was 10.50m bgl. After purging and commissioning the well, the standing water level was recorded at 8.70m bgl. MW4 was installed on Lot 3 to a maximum depth of 7.5m bgl, with no indications ground water reached.

Additionally, NEO Consulting also installed MW1, located down gradient of the UPSS at the service station to determine the depth to ground water and intercept potential contamination migration. This well was commissioned at 9.00m bgl, with the standing water level recorded at 7.80m bgl.

Soil analytical results for Lot 2 did not exceed the NEPM Assessment Criteria for Commercial/Industrial site for all samples. Soil analytical results for Lot 3 exceeded the NEPM Assessment Criteria Residential A for Health Screening Level HSL-A Vapour Intrusion and Ecological Screening Level ESL (Urban, Residential and Public Open Spaces. The hotspot location was identified as borehole 9 (BH9), with exceedance in the Total Recoverable Hydrocarbon (TRH) fraction: $>C_{10}$-C_{16} and $>C_{10}$-C_{16} minus Naphthalene and $>C_{16}$-C_{34} for both BH9.1 (collected at 0.5m bgl) and BH9.2 (collected at 1.2m bgl).

This contamination requires remedial action for the site to be made suitable for the proposed development. All other analytical results were below the NEPM Assessment Criteria for Residential A sites for all samples.

Results for groundwater did not show any indications of petroleum-derived contamination, however, Copper and Zinc were slightly elevated above the NEPM Groundwater Investigation Levels. The exceedance of Zinc and Copper within the groundwater are likely to be representative of background concentrations attributed to local geology and are associated with typical shale and sandstone mineralogy. Additionally, the analytical results for groundwater may reflect suspended metal-containing particles. Future analyses should employ a dissolved metals analytical method. Groundwater will require future analyses if the proposed development is amended to include excavation.

Partial areas of Lots 2 and 3 have been validated. Based on this Targeted Detailed Site Investigation, NEO Consulting finds that the site can be made suitable for the proposed developments on both Lot 2 and Lot 3 providing the recommendations within **Section 16** are implemented.

1. Introduction

1.1 Background

NEO Consulting was appointed to undertake a Detailed Site Investigation (DSI) for the property located at 14-16 George Street, Marulan NSW 2579. The site consits of three (3) lots, legally identified as Lot 1, 2 and 3 / - / DP1053945, with an area of approximately 7.2ha. However, this DSI is focused on Lots 2 and 3, which have an area of approximately 4ha and 0.54ha, respectively. The site is currently zoned as IN1 - General Industrial.

The proposed development for the site includes:

1) The construction of an Industrial Park on Lot 1 (not included in the current assessment);
2) The construction of a fast-food outlet including drive-through, delivery and waiting bays, and carpark (Lot 2); and
3) The construction of a motel, with associated pool, gazebo, bar and carpark (Lot 3).

A site inspection was undertaken on the 23rd May 2021 by a qualified environmental consultant. Reporting, photographs and sampling were conducted on this day and with reference to the relevant regulatory criterial (**2. Scope of Work**). Further information of the inspection is described in **4. Site Condition** and regarding the sampling in **11. Sampling and Analysis Plan**.

1.2 Objectives

The objective of this DSI report was to provide a detailed assessment of current and/or historical potentially contaminating activities that may have impacted the soils and groundwater at the site and will determine if the site is suitable for the proposed land use.

1.3 Regulatory Framework

This DSI has been prepared in general accordance with the following regulatory framework:

- Goulburn Mulwaree Local Environmental Plan 2009;
- Department of Urban Affairs and Planning, NSW Environmental Protection Authority, *Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land,* 1998;
- National Environment Protection Measures, *Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater 2013*;
- National Environment Protection Measures, *Schedule B2 – Guideline on Site Characterisation,* 2013;
- National Environmental Protection Measures, Schedule B5c – *Guideline on Ecological Investigation Levels for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel and Zinc, 2013;*
- National Environment Protection Measures, Schedule B7 – *Guideline on Derivation of Health – Based Investigation Levels, 2013;*

- National Environment Protection Measures, *Appendix 1 – The Derivation of HILS for Metals and Inorganics, 2013;*
- NSW EPA, *Contaminated Land Management, Guidelines for the NSW Site Auditor Scheme,* 2017 (3rd Edition);
- NSW EPA, *Waste Classification Guidelines Part 1: Classifying Waste,* 2014;
- NSW EPA, *Sampling Design Guidelines*, 1995;
- The Contaminated Land Management Act 1997;
- NSW EPA, *Guidelines on the Duty to Report Contamination under Contaminated Land Management Act,* 1997;
- NSW EPA, *Technical Note: Investigation of Service Station Sites,* 2014;
- NSW Department of Environment and Conservation, *Guidelines for the Assessment and Management of Groundwater Contamination,* 2007;
- NSW EPA, *Guidelines for Consultants Reporting on Contaminated Sites,* 2020;
- Protection of the Environment and Operation Act 1997;
- Protection of the Environment Operations (Waste) Regulations, 2005;
- SafeWork SNW Code of Practice, How to Safely Remove Asbestos, 2016;
- SafeWork NSW Code of Practice, How to Manage and Control Asbestos in the Workplace, 2016;
- SafeWork NSW, *Managing Asbestos in or On Soil,* 2014
- State Environment Protection Policy 55 (SEPP 55). *Remediation of Land Under the Environmental Planning and Assessment Act,* 1998;
- Work Health and Safety Act, 2011; and
- Work Health and Safety Regulation, 2011.

2. Scope of Work

To meet the requirements in Section 1.3 of this report, the following scope of works were included:

- A site inspection to identify potential sources of contamination on site;
- A site inspection to identify potential sources of contamination on neighbouring properties;
- Sampling and chemical analysis of soil and groundwater on the site;
- Historical investigations relating to the site (if any);
- Review of current and historical Certificates of Title;
- Local Council records and planning certificates;
- NSW EPA Priority Sites Register;
- Dial-Before-You-Dig enquiry for an evaluation into local underground services and assets;
- Review of local geological and hydrogeological information, including an evaluation of the NSW Groundwater registered groundwater bore database;

- Review of Acid Sulfate Soil data maps;
- Development of a Conceptual Site Model (CSM) to identify the connections between potential sources of contamination and exposure pathways, human and/or ecological receptors; and
- Recommendations for additional investigations (if any), based on the identified data gaps and findings of this DSI.

3. Site Details

Table 1. Site Details

Address	14-16 George Street, Marulan NSW 2579
Deposited plan	Lot 2 and 3 / - / DP1053945
Zoning	IN1: General Industrial
Locality map	Figure 1, Appendix A
Site Boundary	Figure 2, Appendix A
Area	4.5ha

Table 2. Surrounding land-use adjacent to the site

Direction from site	Land-use
North	Rural vacant land
East	Rural residential property
South	Portland Avenue and George Street intersecting
West	Rural residential property

4. Site Condition

During the site inspection, the following observations were noted (photographs in **Appendix A**):

Lot 2 in 14 George Street Marulan NSW

- Lot 2 contained a truck stop, an active fuel station and a retail shop;
- The lot was located on the corner of George Street and Portland Avenue, with the entrance and exit points on George Street;
- The fuel station contained two metal canopies;
- The larger metal canopy sheltered five (5) DSL self-service fuel bowsers;
- The smaller canopy shelters Four (4) ULP, E10 and DSL self-service fuel bowsers;
- A metal shed used as a generator room was observed near the central west portion of the site, fuel oil storage drums were also observed inside the generator room;

- Oil drums were observed at the rear of the retail shop;
- Seven (7) USTs, one (1) Adblue Above Storage Tank (AST), two (2) LPG Storage Cylinders and six vents were observed on site;
- The lot consisted of a mix groundcover including grass, concrete, bitumen, and pavement and was overall flat, with a slight gradient of approximately 5% down towards the south east;
- No visual or aromatic indications of contamination were identified during the inspection;
- The lot contained two (2) pre-existing wells, NEO installed an additional well during the site inspection.

Lot 3 in 16 George Street Marulan NSW

- Lot 3 was an irregular-shaped lot and contained of open grass areas and two wooden sheds with metal roofing;
- Lot 3 contained three (3) unused storage tanks, two (2) old out of service bowsers and a metal shed near the north-east portion;
- The lot had grass and gravel groundcover;
- No visual or aromatic indications of contamination were identified during the inspection;
- Lot 3 was on an upward gradient to the service station on Lot 2.

The surrounding sites within a 500m radius include residential and commercial properties including Straw Services Australia, Marulan Motor Inn, Alis Motel and some food retails. The closest water body is the water tributary of Marulan Creek and Jaorimin Creek. These water tributaries are located approximately 370m south east of the site and 680m north west of the site respectively.

5. Site History

5.1 History of site

Table 3. Historical aerial images of the site and surrounding area.

Year	Proprietor(s)
	Lot 2 in DP 1053945 (14 George Street Marulan NSW)
2014-Current	DIB Group Pty Ltd
	Prior: Vol.199, Fol.38
2011-2014	Helen Margaret Millis
	Prior: Vol.13737, Fol.38
1995-2011	Malcolm Edward Biddlecombe, service station propertier
	Prior: Vol.10641, Fol.151
1985-1995	1985-1995 Melhem Ayoub
	Prior: Vol.7303, Fol.127
1968-1985	Kemria Concrete Haulage Pty Ltd
	Prior: Vol.7303, Fol.127
1957-1968	Robert Stanley Shepherd, Haulage Contractor and Kathleen Stella Shepherd
	Prior: Vol.7444, Fol.214
1936-1957	Cecil Stanley Shepherd
	Lot 3 in DP 1053945 (16 George Street, Marulan NSW)
2014-Current	DIB Group Pty Ltd
	Prior: Vol.199, Fol.38
2011-2014	Helen Margaret Millis
	Prior: Vol.13737, Fol.38
1985-2011	Malcolm Edward Biddlecombe, service station proprietor
	Prior: Vol.7303, Fol.127
1968-1985	Kemria Concrete Haulage Pty Ltd
	Prior: Vol.7303, Fol.127
1957-1968	Robert Stanley Shepherd, Haulage Contractor and Kathleen Stella Shepherd
	Prior: Vol.7444, Fol.214
1936-1957	Cecil Stanley Shepherd

5.2 Section 10.7 (2) Planning Certificate

A Section 10.7 Planning Certificate describes how a property may be used and the restrictions on development. The Planning Certificate is issued under Section 149 of the Environmental Planning and Assessment Act 1979. At the time of reporting. A search has been undertaken, results can be found within **Appendix C**.

5.3 NSW EPA Priority Sites Register

A search within the NSW EPA contaminated land register was undertaken for the site. No results were found for the site or within 200m of the site.

5.4 Protection of the Environment Operation Act (POEO) Public Register

A search on the POEO public register of licensed and delicensed premises (DECC) was undertaken for the site. No results were found for the site or within 200m of the site.

5.5 SafeWork NSW Hazardous Goods

A search was undertaken with SafeWork NSW for historical dangerous goods stored onsite. However the results have not been received yet.

5.6 Product Spill and Loss History

The visual site inspection did not find evidence of chemical contamination within the site (i.e. chemical staining, unhealthy vegetation).

5.7 Dial Before You Dig

A review of assets and services via a Dial-Before-You-Dig request suggests the following assets could be affected or act as an off-site pathway for transportation of contamination: Essential Energy; Jemena Gas Country; NBN Co, NSW Act; and Telstra NSW.

6. Environmental Setting

6.1 Hydrology

A groundwater bore search was conducted on the 23rd May 2021 and it is found that seven (7) (GW022357, GW023891, GW113742 (9m bgl), GW113743 (10m bgl), GW113744, GW113745, GW113756 (11m bgl)) borehole were present within a 500m radius of the site.

The closest registered ground water bore offsite is GW022357, which was installed in 1964 to a depth of 26.5m bgl. Drilling encountered clay and granite, the standing water level was recorded at 18.5m bgl. This well is to the North of the site on an upward gradient.

To the south of the site, other registered bores are located on the BP service station. These wells were drilled to a maximum depth of 11.0m bgl, however ground water level was not recorded.

6.2 Geology

Data obtained from the Geological Survey of NSW and the Geoscience Australia Stratigraphic Units Database indicate the site to be underlain by sediments comprising residual deposits of unconsolidated clay and fine-grained sands to partially consolidated clay layers. Previous investigations encountered natural Clays to 4.5 m bgl. With granite identified beyond 10m below ground level within nearby bore logs.

6.3 Acid Sulfate Soil

To determine whether there is any possibility for Acid Sulfate Soils to be present at the site, information was reviewed utilising the eSPADE map viewer. The data obtained indicated there was "no known occurrence" of Acid Sulfate Soils at this site or in the immediate vicinity.

7. Areas of Environmental Concern

Based on the above information, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Potential Concern (CoPC) for the site were identified and summarised (**Table 4**).

Table 4. Potential Areas and Contaminants of Concern

Potential Areas of Concern	Potentially Contaminating / Hazardous Activity	CoPCs	Likelihood of Site Impact	Comments
Entire site	Importation of fill material from unknown origin	Metals, TPH, BTEX, PAH, OCP, Asbestos	Low	Based on site observations, the presence of imported fill material is unlikely.
USTs	Storage of petroleum products underground	Heavy Metals, TRH, BTEX and PAH	Moderate	Due to soil properties and unknown condition of storage tank, migration of contaminants is possible.
Self-service area	Dispensing of petroleum products	Heavy Metals, TRH, BTEX and PAH	Low	Due to the sealed groundcover, migration of contaminants is unlikely.

Potential Areas of Concern	Potentially Contaminating / Hazardous Activity	CoPCs	Likelihood of Site Impact	Comments
Building structures	Hazardous materials	ACM, SMF, ODS, Lead (paint and/or dust), PCBs	Moderate	Based on site observations, it cannot be concluded that any of the hazardous materials mentioned here are present at this location. A HMS is required to identify these contaminants.

Abbreviations: Asbestos Containing Materials (ACM), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Ozone Depleting Substances (ODS), Polychlorinated biphenyls (PCBs), Polycyclic Aromatic Hydrocarbon (PAH), Total Petroleum Hydrocarbons (TPH), Synthetic Mineral Fibres (SMF), Hazardous Materials Survey (HMS).

8. Conceptual Site Model

A CSM was developed to provide an indication of potential risks associated with contamination source and contamination migration pathways, receptors and exposure mechanisms. The CSM provides a framework for the review of the reliability and useability of the data collected and to identify data gaps in the existing site characterisation. Here, we consider the connections between the following elements:

- Potential contamination sources and associated CoPCs;
- Potential human receptors that may be impacted by the site contamination are current and future site users including occupants to the dwelling/infrastructures onsite, site workers and the general public within the immediate vicinity of the site;
- Potential environmental receptors to the site including but not limited to: groundwater and surface water bodies, residual soils at and/or nearby the site;
- Potential exposure pathways; and
- Whether source-pathway-receptor connections are complete based on current and future suite conditions.

Table 5. Conceptual Site Model

Potential Sources	Potential Receptor	Potential Exposure Pathway	Complete connection	Risk	Justification/ Control Measures
Contaminated soil from importation of uncontrolled fill across the site.	Site occupants, workers, general public	Dermal contact, inhalation/ingestion of particulates	Limited (current)	Low	Direct contact with potentially contaminated soils is limited.
			No (Future)	Low	If present, impacted soils are likely to be disposed of off-site.
Contaminated soil from current and/or historical onsite operations. Multiple hydrocarbon spills Heavy vehicle traffic causing soil contamination (BTEX, TRH, Heavy Metals)	Underlying aquifer	Leaching and migration of contaminants through groundwater infiltration.	Limited (current)	Low	Due to existing sealed surfaces, expected shallow bedrock, leachability of CoPCs, migration of CoPCs is likely to be limited.
			Limited (Future)	Low	If present, contaminated soil and/or groundwater is likely to be remediated.
Unassessed potential structural dwelling	Site occupants, workers, general public	Vapours, dermal contact, inhalation/ingestion of particulates	Limited (current)	Medium	Assessment to be undertaken within the onsite buildings to determine if there is any potential contamination.
			No (future)	High	If present, areas will be remediated.

Potential Sources	Potential Receptor	Potential Exposure Pathway	Complete connection	Risk	Justification/ Control Measures
USTs	Site occupants, workers, general public	Dermal contact, inhalation/ingestion of particulates	Limited (current)	Medium	Assessment should be undertaken onsite of USTs. If potential contamination is identified a risk assessment and removal plan to be implemented.

9. Data Gaps

The following data gaps have been identified at the site:

- Groundwater flow direction;

10. Assessment Criteria

10.1 Lot 2 Assessment Criteria

The following assessment criteria were adopted for the investigation on Lot 2.

10.1.1 NEPM Health Investigation Level D (HIL-D)

HILs are scientific, risk-based guidance levels to be used as in the primary stage of assessing soil contamination to evaluate the potential risks to human health from chronic exposure to contaminants. HILs are applicable to a broad range of metals and organic substances, and generally apply to depths up to 3m below the surface for residential use.

Tier 1 HILs are divided into the following sub-criteria:

- HIL A – residential with garden/accessible soils
- HIL B – residential with minimal opportunities for soil access
- HIL C – public open space/recreational areas
- HIL D – commercial/industrial premises

Table 6. Health Investigation Levels

Analyte	NEPM 2013 Commercial/Industrial HIL-D, mg/kg
Metals	
Arsenic, As	3,000
Cadmium, Cd	900
Chromium, Cr	3,600
Copper, Cu	240,000
Lead, Pb	1,500
Nickel, Ni	6,000
Zinc, Zn	400,000
Mercury, Hg	730

10.1.2 NEPM Health Screening Level D (HSL-D)

HSLs have been developed for selected petroleum compounds and fractions and are used for the assessment of potential risks to human health from chronic inhalation and direct contact pathways of petroleum vapour emanating off petroleum contaminated soils (Vapour Risk). HSLs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to depths below surface to >4m.

Tier 1 HSLs are divided into the following sub-criteria:

- HSL A – residential with garden/accessible soils
- HSL B – residential with minimal opportunities for soil access
- HSL C – public open space/recreational areas
- HSL D – commercial/industrial premises

Table 7. Health Screening Level for Soil

Analyte	NEPM 2013 Commercial/Industrial HSL-D for Vapour Intrusion 0-<1m Sand, mg/kg	NEPM 2013 Commercial/Industrial HSL-D for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 Commercial/Industrial HSL-D for Vapour Intrusion 2-<4m Sand, mg/kg	NEPM 2013 Commercial/Industrial HSL-D for Vapour Intrusion 4m+ Sand, mg/kg	NEPM 2013 Commercial/Industrial HSL-D for direct contact, mg/kg
Monocyclic Aromatic Hydrocarbons					
Benzene	3	3	3	3	430

Toluene	NL	NL	NL	NL	99,000
Ethylbenzene	NL	NL	NL	NL	27,000
Xylenes	230	NL	NL	NL	81,000
Polycyclic Aromatic Hydrocarbons					
Naphthalene	NL	NL	NL	NL	11,000
Total Recoverable Hydrocarbons					
C6-C10					26,000
C6-C10 - BTEX (F1)	260	370	630	NL	
>C10-C16					20,000
>C10-C16 - N (F2)	NL	NL	NL	NL	
>C16-C34 (F3)					27,000
>C34-C40 (F4)					38,000

Table 8. Health Screening Level for Groundwater

Analyte	NEPM 2013 Commercial/Industrial Groundwater HSL-D for Vapour Intrusion 2-<4m Sand, mg/L	NEPM 2013 Commercial/Industrial Groundwater HSL-D for Vapour Intrusion 4-<8m Sand, mg/L	NEPM 2013 Commercial/Industrial Groundwater HSL-D for Vapour Intrusion 8m+ Sand, mg/L
Benzene	5	5	5
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	NL	NL	NL
Naphthalene	NL	NL	NL
C6-C10 - BTEX (F1)	6	6	7
>C10-C16 - N (F2)	NL	NL	NL

10.1.3 NEPM Ecological Investigation Level D (EIL-D)

Ecological investigation levels (EILs) have been developed to assess the risk for the presence of metals and organic substance in a terrestrial ecosystem. EILs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to the top 2m of soil. EILs can be applied for arsenic (As), copper (Cu), chromium III (Cr(III)), dichlorodiphenyltrichloroethane (DDT), naphthalene, nickel (Ni), lead (Pb) and zinc (Zn). The NEPM Soil Quality Guidelines (SQG) for EILs are calculated using the Added Contamination Limit (ACL) to determine the amount of contamination that had to be added to the soil to cause toxicity, including ambient background concentration (ABC).

Table 9. Ecological Investigation Level

Analyte	NEPM 2013 Soil Generic EIL Commercial/Industrial, mg/kg
Metals	
Arsenic, As	160
Pesticides	
DDT	640
Polycyclic Aromatic Hydrocarbons	
Naphthalene	370

10.1.4 NEPM Ecological Screening Level (ESL) – Commercial and Industrial

ESLs have been developed for selected petroleum hydrocarbons (BTEX, benzo(a)pyrene, TRH F1 and F2) in soil, based on fresh contamination. These parameters are applicable to coarse and fine-grained soil and apply from the surface of the soil to 2m below ground level, which corresponds with the root and habitat zone for many species.

Table 10. Ecological Screening Level

Analyte	NEPM 2013 Soil ESL Commercial/Industrial for coarse-grained soil, mg/kg
Monocyclic Aromatic Hydrocarbons	
Benzene	75
Toluene	135
Ethylbenzene	165
Xylenes	180
Polycyclic Aromatic Hydrocarbons	
BaPyr (B(a)P)	0.7

Total Recoverable Hydrocarbons	
C6-C10	215
>C10-C16	170
>C16-C34 (F3)	1,700
>C34-C40 (F4)	3,300

10.1.5 NEPM Management Limits – Commercial and Industrial

Management Limits for petroleum have been developed for prevention of explosive vapour accumulation, prevention of the formation of observable Light Non-Aqueous Phase Liquids (LNAPL) and protection against effects on buried infrastructure. Commercial and Industrial limits have been adopted based on the proposed land use.

Table 11. Management Limits

Analyte	NEPM 2013 Management Limits Commercial/Industrial for coarse-grained soil, mg/kg
Total Recoverable Hydrocarbons	
C6-C10	700
>C10-C16	1,000
>C16-C34 (F3)	3,500
>C34-C40 (F4)	10,000

10.1.6 NEPM Guidelines for Asbestos

The assessed soil must not contain Asbestos Containing Materials (ACM) in the excess of 0.01%w/w and surface soil within the site must be free of visible ACM, Asbestos Fines (AF) and Fibrous Asbestos (FA).

10.1.7 NEPM Groundwater Investigation Levels (GIL)

Groundwater Investigation Levels (GILs) are the concentration of a contaminant in the groundwater above which further investigation or a response is required. These levels are based on Australian water quality guidelines and drinking water guidelines and are applicable for assessing human health risk and ecological risk (fresh water or marine water) from direct contact within groundwater.

Table 12. Groundwater Investigation Level

Analyte	NEPM 2013 GIL Drinking Water, mg/L	NEPM 2013 GIL Marine Waters, µg/L	NEPM 2013 GIL Fresh Waters, µg/L
Monocyclic Aromatic Hydrocarbons			
Benzene	0.001	500C	950

Toluene	0.8	-	-
Ethylbenzene	0.3	-	-
Xylenes	0.6	-	350 as o-x; 200 as p-x
Polycyclic Aromatic Hydrocarbons			
Naphthalene	-	50C	16
Benzo(a)pyrene	0.00001	-	-
Metals			
Arsenic, As	0.01	-	24 A(III); 13 As(V)
Cadmium, Cd	0.002	0.7	0.2
Chromium, Cr	0.05	4.4	1
Copper, Cu	2	1.3	1.4
Lead, Pb	0.01	4.4	3.4
Nickel, Ni	0.02	7	11
Zinc, Zn	-	15	8
Mercury	0.001	0.1	0.06

10.2 Lot 3 Assessment Criteria

The following soil assessment criteria were adopted for the investigation on Lot 3.

10.2.1 NEPM Health Investigation Level A (HIL-A)

HILs are scientific, risk-based guidance levels to be used as in the primary stage of assessing soil contamination to evaluate the potential risks to human health from chronic exposure to contaminants. HILs are applicable to a broad range of metals and organic substances, and generally apply to depths up to 3m below the surface for residential use.

Tier 1 HILs are divided into the following sub-criteria:

- HIL A – residential with garden/accessible soils.
- HIL B – residential with minimal opportunities for soil access.
- HIL C – public open space/recreational areas.
- HIL D – commercial/industrial premises.

Table 13. HIL-A Guidelines for Pesticides, Metals and Polycyclic Aromatic Hydrocarbons

Analyte	NEPM 2013 Residential Soil HIL-A, mg/kg
Pesticides	
HCB	10
Heptachlor	6
Chlordane	50
Aldrin & Dieldrin	6
Endrin	10
DDT+DDE+DDT	240
Endosulfan	270
Methoxychlor	300
Mirex	10
Metals	
Arsenic, As	100
Cadmium, Cd	20
Chromium, Cr	100
Copper, Cu	6,000
Lead, Pb	300
Nickel, Ni	400
Zinc, Zn	7,400
Mercury, Hg	40
Polycyclic Aromatic Hydrocarbons	
Carcinogenic PAHs (as BaP TEQ)	3
Total PAH (18)	300

10.2.2 NEPM Health Screening Level A (HSL-A)

HSLs have been developed for selected petroleum compounds and fractions and are used for the assessment of potential risks to human health from chronic inhalation and direct contact pathways of petroleum vapour emanating off petroleum contaminated soils (Vapour Risk). HSLs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to depths below surface to >4m.

Tier 1 HSLs are divided into the following sub-criteria:

- HSL A – residential with garden/accessible soils.
- HSL B – residential with minimal opportunities for soil access.

- HSL C – public open space/recreational areas.
- HSL D – commercial/industrial premises.

Table 14. HSL-A for Benzene Toluene Ethylbenzene and Xylene (BTEX), Naphthalene and Total Recoverable Hydrocarbon Fractions

Analyte	NEPM 2013 Residential Soil HSL-A for Vapour Intrusion 0-<1m Sand, mg/kg	NEPM 2013 Residential Soil HSL-A for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 Residential Soil HSL-A for direct contact, mg/kg
Benzene	0.5	0.5	100
Toluene	160	220	14,000
Ethylbenzene	55	NL	4,500
Xylenes	40	60	12,000
Naphthalene	3	NL	1,400
C6-C10			4,400
C6-C10 - BTEX (F1)	45	70	
>C10-C16			3,300
>C10-C16 - N (F2)	110	240	
>C16-C34 (F3)			4,500
>C34-C40 (F4)			6,300

10.2.3 NEPM Ecological Investigation Level (EIL) – Urban Residential and Public Open Space

Ecological investigation levels (EILs) have been developed to assess the risk for the presence of metals and organic substance in a terrestrial ecosystem. EILs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to the top 2m of soil. EILs can be applied for arsenic (As), copper (Cu), chromium III (Cr(III)), dichlorodiphenyltrichloroethane (DDT), naphthalene, nickel (Ni), lead (Pb) and zinc (Zn). The NEPM Soil Quality Guidelines (SQG) for EILs are calculated using the Added Contamination Limit (ACL) to determine the amount of contamination that had to be added to the soil to cause toxicity, including ambient background concentration (ABC).

Table 15. Generic EIL for Arsenic, DDT and Naphthalene

Analyte	NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg
Arsenic, As	100
DDT	180
Naphthalene	170

10.2.4 NEPM Ecological Screening Level (ESL) – Urban Residential and Public Open Space

ESLs have been developed for selected petroleum hydrocarbons (BTEX, benzo(a)pyrene, TRH F1 and F2) in soil, based on fresh contamination. These parameters are applicable to coarse and fine-grained soil and apply from the surface of the soil to 2m below ground level, which corresponds with the root and habitat zone for many species.

Table 16. ESL for Benzene Toluene Ethylbenzene and Xylene (BTEX), Benzo(a)pyrene and Total Recoverable Hydrocarbon Fractions

Analyte	NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces for Coarse-Grained Soil, mg/kg
Benzene	50
Toluene	85
Ethylbenzene	70
Xylenes	105
BaPyr (B(a)P)	0.7
C6-C10	180
>C10-C16	120
>C16-C34 (F3)	300
>C34-C40 (F4)	2,800

10.2.5 NEPM Management Limits – Residential, Parkland and Public Open Space

Management Limits for petroleum have been developed for prevention of explosive vapour accumulation, prevention of the formation of observable Light Non-Aqueous Phase Liquids (LNAPL) and protection against effects on buried infrastructure. Residential, parkland and public open space limits have been adopted based on the proposed land use.

Table 17. Management Limits for Total Recoverable Hydrocarbon Fractions

Analyte	NEPM 2013 Management Limits for Residential, Parkland and Public Open Space for Coarse-Grained Soil, mg/kg
C6-C10	700
>C10-C16	1,000
>C16-C34 (F3)	2,500
>C34-C40 (F4)	10,000

10.2.6 NEPM Guidelines for Asbestos

The assessed soil must not contain Asbestos Containing Materials (ACM) in the excess of 0.01%w/w and surface soil within the site must be free of visible ACM, Asbestos Fines (AF) and Fibrous Asbestos (FA).

11. Sampling and Analysis Plan

11.1 Sampling Rationale

Table 18. Sampling Rationale

Criteria	Chosen Approach	Justification
Sampling Pattern	Systematic approach	This pattern was selected due to the area of the site, data quality, access to underlying soil and groundwater, the AEC and CoPC as well as the potential heterogeneity of any contamination.
Sampling Density	Lot 2: 18 soil samples, from nine (9) boreholes; Two (2) groundwater monitoring well samples; Lot 3: 28 soil samples, from 13 boreholes (including two (2) duplicate samples)	This sampling density correlates with the sampling pattern and was selected based on the extent of the potential contaminated area to be detected, feasibility, the site history, distribution of current and historical uses on site, intended future use of the site, location and condition of structures.
Duplicate (total)	2 duplicate samples: D1 = BH3.1 (primary soil sample) D2 = BH13.2 (primary soil sample)	Quality Control (QC) sampling was undertaken in general accordance with specifications outlined in AS4482.1, *Guide to Sampling and Investigation of Potentially Contaminated Soil.*
Sampling Depths	Fill material/topsoil sample depths: 0.2m – 0.5m Natural soil material sample depths: 0.5m – 4m	These depths were selected in compliment with sampling density and to target depths of potential contaminants. Additionally, soil thickness and proximity to the aquifer were considered when determining these depths.

11.2 Field Sampling Methodology

11.2.1 Soil Samples

All boreholes were completed with a drill auger. Two (2) soil samples were collected from each borehole at depths ranging from 0.2m to 4m. The location and depth of the soil samples for Lot 2 and 3 are reported in Appendix A, Figure 3, Table 1 and Figure 4, Table 2, respectively. In total 46 soil samples were collected across both lots. Additionally, two (2) duplicate samples were collected for quality control and assurance as part of the Sampling and Analysis Plan.

By using a drill auger for the boreholes, the qualified environmental consultant was able to conduct a visual inspection of the soil cross section. Soil was scraped from the freshly cut cross section for sample collection. Drill auger was decontaminated with deionised water between boreholes. Samples were immediately placed in laboratory prepared jars (labelled prior to arriving on site), with the lid securely attached to jar and only removed for the purpose of storing each sample. This sample storage approach allowed the preservation of any potential fill layers as well as natural underlying clay to be stored in stratigraphic layers.

All the soil samples were placed on ice in an esky for transport under Chain of Custody (COC) to a NATA accredited laboratory for the analysis of the CoPC.

Table 19. Lot 2 sample details

Sample	Depth (m)	Soil Type	Soil Matrix
BH 1.1	0.3	Fill material/topsoil	Sand predominated
BH 1.2	0.7	Natural soil	Sand predominated
BH 2.1	0.3	Fill material/topsoil	Sand predominated
BH 2.2	0.7	Natural soil	Sand predominated
BH 3.1	0.3	Fill material/topsoil	Sand predominated
BH 3.2	0.7	Natural soil	Sand predominated
BH 4.1	1.5	Natural soil	Sand predominated
BH 4.2	4	Natural soil	Sand predominated
BH 5.1	0.4	Fill material/topsoil	Sand predominated
BH 5.2	0.8	Natural soil	Sand predominated
BH 6.1	0.3	Fill material/topsoil	Sand predominated
BH 6.2	0.8	Natural soil	Sand predominated
BH 7.1	0.2	Fill material/topsoil	Sand predominated
BH 7.2	0.6	Natural soil	Sand predominated
BH 8.1	0.3	Fill material/topsoil	Sand predominated
BH 8.2	0.6	Natural soil	Sand predominated
BH 9.1	0.3	Fill material/topsoil	Sand predominated

BH 9.2	0.6	Natural soil	Sand predominated

Table 20. Lot 3 sample locations

Sample	Depth (m)	Soil Type	Soil Matrix
BH 1.1	0.2	Fill material/topsoil	Sand predominated
BH 1.2	0.5	Fill material/topsoil	Sand predominated
BH 2.1	0.3	Fill material/topsoil	Sand predominated
BH 2.2	0.5	Fill material/topsoil	Sand predominated
BH 3.1	0.4	Fill material/topsoil	Sand predominated
BH 3.2	0.7	Natural soil	Sand predominated
BH 4.1	0.3	Fill material/topsoil	Sand predominated
BH 4.2	0.6	Natural soil	Sand predominated
BH 5.1	0.4	Fill material/topsoil	Sand predominated
BH 5.2	0.6	Natural soil	Sand predominated
BH 6.1	0.2	Fill material/topsoil	Sand predominated
BH 6.2	0.6	Natural soil	Sand predominated
BH 7.1	0.5	Fill material/topsoil	Sand predominated
BH 7.2	1.5	Natural soil	Sand predominated
BH 8.1	0.5	Fill material/topsoil	Sand predominated
BH 8.2	1.5	Natural soil	Sand predominated
BH 9.1	0.5	Fill material/topsoil	Sand predominated
BH 9.2	1.2	Natural soil	Sand predominated
BH 10.1	0.5	Fill material/topsoil	Sand predominated
BH 10.2	1.5	Natural soil	Sand predominated
BH 11.1	0.5	Fill material/topsoil	Sand predominated
BH 11.2	1.5	Natural soil	Sand predominated
BH 12.1	0.5	Fill material/topsoil	Sand predominated
BH 12.2	1.4	Natural soil	Sand predominated
BH 13.1	0.5	Fill material/topsoil	Sand predominated
BH 13.2	1.5	Natural soil	Sand predominated
D1	0.3	Fill material/topsoil	Sand predominated
D2	1.5	Natural soil	Sand predominated

11.2.2 Groundwater Sampling

Groundwater samples were collected from two (2) monitoring wells, with one (1) sample from each well (MW1 and MW2). A HydraSleeve was lowered into each well, positioned appropriately and allowed to reach equilibrium before retrieval. Depth to water and depth of well were recorded for each well. Groundwater samples were placed in laboratory prepared bottles: amber glass vial for metal analysis and two (2) glass vials for VOCs and TRH per groundwater monitoring well.

The groundwater samples were placed on ice in an esky for transport under Chain of Custody (COC) to a NATA accredited laboratory for the analysis of the COPC.

11.3 Field Quality Assurance & Quality Control Procedures

The following procedures were undertaken to ensure the data quality for each sample:

- Selection of appropriate sampling methods;
- Decontamination procedures;
- Appropriate containers selected for planned analyses;
- Appropriate preservation and storage measures to minimise contamination or analyte loss;
- Statement of duplicate frequency;
- Sampling devices and equipment;
- Field instrument calibrations.

11.4 Chemical Analysis Methodology

11.4.1 Soil Analysis

Soil samples were extracted and analysed for Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Naphthalene, Total Recoverable Hydrocarbons (TRH), Metals and Asbestos. Soil samples were solvent extracted with methanol and analysed using Gas Chromatography-Mass Spectrometry (GC-MS) Purge and Trap for BTEX, Naphthalene and F1 (C_6-C_9) of TRH. Three (3) different extraction surrogates (Bromofluorobenzene, d4-1,2-dichloroethane and d8-toluene) were spiked with a known concentration into each sample to evaluate extraction efficiency. Due to the volatility and potential loss of F1 (C_6-C_9) of TRH, this fraction was analysed with GC-MS P&T because this instrument provides a suitable detection limit for these low molecular weight hydrocarbons. The remainder of TRH (F2, F3 and F4) was extracted with Acetone:Dichloromethane (ratio 50:50) and analysed using Gas Chromatography-Flame Ionisation Detection (GC-FID), spiked with the three (3) extraction surrogates used in the previous analysis. Metals (aside from Mercury (Hg)) were digested with nitric acid to decompose organic matter (OM) and hydrochloric acid to complete digestion of metals, then analysed using Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES), with results reported as dry sample. Hg was analysed by digestion with nitric acid, hydrogen peroxide and hydrochloric acid. Hg ions were reduced via stannous chloride reagent in acidic solution to elemental Hg. The vapour was purged using nitrogen as the carrier gas into a cold cell in an Atomic Absorption Spectrometer (AAS).

Soil moisture % was carried out by placing a known amount of sample in a weighed evaporating basin and drying the soil at either 40°C or 105°C.

11.4.2 Groundwater Analysis

Groundwater samples were analysed for Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Naphthalene, Total Recoverable Hydrocarbons (TRH) and Metals. BTEX, Naphthalene and F1 (C_6-C_9) of TRH were analysed directly using Gas Chromatography-Mass Spectrometry (GC-MS) Purge and Trap and were spiked with three (3) different surrogates (Bromofluorobenzene, d4-1,2-dichloroethane and d8-toluene). TRH F2, F3 and F4 groundwater samples were extracted with dischloromethane and analysed using Gas Chromatography-Flame Ionisation Detection (GC-FID).

Metals (aside from Hg) were analysed directly using Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). Hg was analysed by reducing ions via stannous chloride reagent in acidic solution to elemental Hg. The vapour was purged using nitrogen as the carrier gas into a cold cell in an Atomic Absorption Spectrometer (AAS).

11.5 Laboratory Quality Assurance & Quality Control Procedures

The following procedures were undertaken to ensure the data quality for each sample:

- A copy of signed chain-of-custody forms acknowledging receipt date, time and temperature and identity of samples included in shipments;
- Record of holding times;
- Analytical methods used, including any deviations or method detection limit;
- Laboratory accreditation for analytical methods used;
- Laboratory performance for the analytical method using duplicates calculated as Relative Percentage Differences (RPD);
- Surrogates used during extraction process;
- Practical quantification limits (PQL);
- Reference laboratory control sample (LCS) used throughout the full method process from extraction to injection;
- Matrix spikes (MS) indicate percentage of recovery of an expected result, via a known concentration if an analyte spiked in a field sub-sample;
- Laboratory blank results (tabulate);
- Results are within control chart limits;
- Instrument detection limit.

12. Data Quality Objectives (DQOs)

The DQOs have been developed in accordance with the NEPM Appendix B of Schedule B2 and provide the type, quantity and quality of data to support decisions regarding the environmental conditions of this site.

Table 21. Data Quality Objectives

Step 1: State the problem	NEO Consulting have identified the following risks to human and environmental receptors: - current and/or historical potentially contaminating activities that may have impacted the soils and groundwater at the site.
Step 2: Identify the decision/goal of the study	NEO Consulting considered the site history, the use of this site, and the NEPM Guidelines, when identifying the decisions required for the site to be considered suitable for its continued land use. The decisions required to meet these decisions are as follows: - Was the sampling, analysis and quality plan designed appropriate to achieve the aim of the DSI? - If present, is on-site contamination capable of migrating off-site? - Are there any unacceptable risks to the future on site or off-site receptors in the soil or groundwater? - Is the site suitable for its continued land use?
Step 3: Identify the information inputs	NEO Consulting has identified issues of potential environmental concern; • Appropriate identification of CoPC; • Soil and groundwater sampling and analysis programs across the site; • Appropriate quality assurance/quality control to enable an evaluation of the reliability of the analytical data; and • Screening sampler analytical results against appropriate assessment criteria for the intended land use.
Step 4: Define the boundaries of the study	The study boundaries are: - Lateral boundary: The legally defined area of the site; - Vertical boundary: The soil interface to the maximum depth reached during soil and groundwater sampling; and - Temporal boundary: Constrained to a single visit to the site.
Step 5: Develop the analytical approach	Here, NEO Consulting integrate the information from steps 1 – 4 to support and justify our proposed analytical approach. Our aim is to confirm if the site is suitable for the proposed development. If the findings of the SAQP identify;

	- 250% exceedance of the adopted assessment criteria for soil; - Any exceedance of the adopted assessment criteria for groundwater; - Groundwater flow direction confirms contamination likely to be transported offsite; - Professional opinion that further assessment is required; and/or - Adopted RPD for QC data not met. Further assessment may be required to confirm suitability of the site in the form of; Data Gap investigation, Remediation Action Plan and Site Validation.
Step 6: Specify performance or acceptance criteria	To determine if the soils and groundwater are within acceptable ranges, we employ the following NEPM criteria: - The 95% upper confidence limit (UCL) is calculated for the mean concentration of each contaminant for each individual sample across a sampling plane (eg. surface samples, depth samples), which provides the probability that 95% of the data obtained will meet the acceptance criteria; and - a limit on decision error will be 5% that the conclusion may be incorrect.
Step 7: Optimise the design for obtaining data	Grid sampling pattern within the AEC will provide suitable coverage of the site to produce reliable data in alignment with the Data Quality Indicators (DQIs) to cover precision, accuracy, representativeness, completeness and comparability (PARCC). This sampling pattern will ensure that critical locations are assessed and analysed appropriately for CoPC.
The DQOs align with CSM	Yes

13. Analytical Results

13.1 Soil Analytical Results

The soil analytical results are summarised below. Detailed soil analytical results are presented in the laboratory reports in **Appendix B.** NL = Not Limited; NA = Not Analysed

Results Indicator	
▲	Exceedance of guideline limit for one or more samples.

▼	No exceedance of guideline limit for all samples.

13.1.1 Soil Analytical Results for Lot 2

Table 22. Analytical results for Total Recoverable Hydrocarbons (TRH) and Benzene Toluene Ethylbenzene Xylene (BTEX)

Total Recoverable Hydrocarbons (TRH) and Benzene Toluene, Ethylbenzene and Xylene (BTEX)	NEPM 2013 HSL-D for Vapour Intrusion 0-<1m Sand, mg/kg	NEPM 2013 HSL-D for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 HSL-D for Vapour Intrusion 2-<4m Sand, mg/kg	NEPM 2013 HSL-D for Vapour Intrusion 4m+ Sand, mg/kg	NEPM 2013 HSL-D for Direct Contact, mg/kg	NEPM 2013 ESL for Commercial/ Industrial, Coarse-Grained Soil, mg/kg	NEPM 2013 Management Limits for Commercial/ Industrial, Coarse-Grained Soil, mg/kg
Benzene	▼	▼	▼	▼	▼	▼	
Toluene	NL	NL	NL	NL	▼	▼	
Ethylbenzene	NL	NL	NL	NL	▼	▼	
Xylenes	▼	NL	NL	NL	▼	▼	
C6-C10					▼	▼	▼
C6-C10 - BTEX (F1)	▼	▼	▼	NL			
>C10-C16					▼	▼	▼
>C10-C16 - N (F2)	NL	NL	NL	NL			
>C16-C34 (F3)					▼	▼	▼
>C34-C40 (F4)					▼	▼	▼

Table 23. Analytical results for Polycyclic Aromatic Hydrocarbons (PAH)

Polycyclic Aromatic Hydrocarbons (PAH)	NEPM 2013 HSL-D for Vapour Intrusion 0-<1m Sand, mg/kg	NEPM 2013 HSL-D for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 HSL-D for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 HSL-D for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 HSL-D for Direct Contact, mg/kg	NEPM 2013 HIL-D, mg/kg	NEPM 2013 Soil ESL for Commercial/ Industrial for Coarse-Grained Soil, mg/kg	NEPM 2013 Generic EIL for Commercial/ Industrial mg/kg
Naphthalene	NL	NL	NL	NL	▼			▼
Benzo[a]pyrene							NA	
Carcinogenic PAHs (as BaP TEQ)						NA		
Total PAH (18)						NA		

Table 24. Analytical results for Pesticides

Pesticides	NEPM 2013 HIL-D, mg/kg	NEPM 2013 Generic EIL for Commercial/ Industrial, mg/kg
HCB	▼	
Heptachlor	▼	
Chlordane	▼	
Aldrin & Dieldrin	▼	
Endrin	▼	
DDT		▼
DDT+DDE+DDT	▼	
Endosulfan	▼	
Methoxychlor	▼	

Mirex	▼	

Table 25. Analytical results for Heavy Metals

Metals	NEPM 2013 HIL-D, mg/kg	NEPM 2013 Generic EIL for Commercial/ Industrial, mg/kg
Arsenic, As	▼	▼
Cadmium, Cd	▼	
Chromium, Cr	▼	
Copper, Cu	▼	
Lead, Pb	▼	
Nickel, Ni	▼	
Zinc, Zn	▼	
Mercury, Hg	▼	

Table 26. Analytical results for Asbestos

Chemical	All Lot 2 Samples
Asbestos Detected	Not detected

13.1.2 Soil Analytical Results for Lot 3

Table 27. Analytical results for Total Recoverable Hydrocarbons (TRH) and Benzene Toluene Ethylbenzene Xylene (BTEX)

Total Recoverable Hydrocarbons (TRH) and Benzene Toluene, Ethylbenzene and Xylene (BTEX)	NEPM 2013 HSL-A for Vapour Intrusion 0-<1m Sand, mg/kg	NEPM 2013 HSL-A for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 HSL-A for Direct Contact, mg/kg	NEPM 2013 ESL for Urban, Residential and Public Open Spaces, Coarse-Grained Soil, mg/kg	NEPM 2013 Management Limits for Residential, Parkland and Public Open Space, Coarse-Grained Soil, mg/kg
Benzene	▼	▼	▼	▼	
Toluene	▼	▼	▼	▼	
Ethylbenzene	▼	NL	▼	▼	
Xylenes	▼	▼	▼	▼	
C6-C10			▼	▼	▼
C6-C10 - BTEX (F1)	▼	▼			
>C10-C16			▼	▲	▼
>C10-C16 - N (F2)	▲	▲			
>C16-C34 (F3)			▼	▲	▼
>C34-C40 (F4)			▼	▼	▼

Table 28. Analytical results for Polycyclic Aromatic Hydrocarbons (PAH)

Polycyclic Aromatic Hydrocarbons (PAH)	NEPM 2013 HSL-A for Vapour Intrusion 0-<1m Sand, mg/kg	NEPM 2013 HSL-A for Vapour Intrusion 1-<2m Sand, mg/kg	NEPM 2013 HSL-A for Direct Contact, mg/kg	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Soil ESL for Urban, Residential and Public Open Spaces for Coarse-Grained Soil, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
Naphthalene	▼	NL	▼			▼
Benzo[a]pyrene					NA	
Carcinogenic PAHs (as BaP TEQ)				NA		
Total PAH (18)				NA		

Table 29. Analytical results for Pesticides

Pesticides	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
HCB	▼	
Heptachlor	▼	
Chlordane	▼	
Aldrin & Dieldrin	▼	
Endrin	▼	
DDT		▼
DDT+DDE+DDT	▼	
Endosulfan	▼	

Methoxychlor		
Mirex		

Table 30. Analytical results for Heavy Metals

Metals	NEPM 2013 HIL-A, mg/kg	NEPM 2013 Generic EIL for Urban Residential and Public Open Space, mg/kg
Arsenic, As		
Cadmium, Cd		
Chromium, Cr		
Copper, Cu		
Lead, Pb		
Nickel, Ni		
Zinc, Zn		
Mercury, Hg		

Table 31. Analytical results for Asbestos

Chemical	All Lot 3 Samples
Asbestos Detected	Not detected

13.2 Groundwater Results

The groundwater analytical results are summarised below. Detailed groundwater analytical results are presented in the laboratory reports in **Appendix B.**

Table 32. Summary of groundwater HSL-D analytical results for Lot 2.

NEPM Assessment Criteria	NEPM 2013 Commercial/Industrial Groundwater **HSL-D** for Vapour Intrusion 2 - <4m **Sand**, mg/L	NEPM 2013 Commercial/Industrial Groundwater **HSL-D** for Vapour Intrusion 4 - <8m **Sand**, mg/L	NEPM 2013 Commercial/Industrial Groundwater **HSL-D** for Vapour Intrusion 8m+ **Sand**, mg/L
Benzene	▼	▼	▼
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	NL	NL	NL
Naphthalene	NL	NL	NL
Benzo(a)pyrene	NA	NA	NA
TRH C6-C10 - BTEX (F1)	▼	▼	▼
TRH >C10-C16 - Naphthalene (F2)	NL	NL	NL

Table 33. Summary of soil analytical results for Lot 2.

Analytes	NEPM 2013 **GIL** Drinking Water, mg/L	NEPM 2013 **GIL** Marine Waters, µg/L	NEPM 2013 **GIL** Fresh Waters, µg/L
Monocyclic Aromatic Hydrocarbons			
Benzene	▼	▼	▼
Toluene	▼	-	-
Ethylbenzene	▼	-	-
Xylenes	▼	-	▼
Polycyclic Aromatic Hydrocarbons			
Naphthalene	-	▼	▼
Benzo(a)pyrene	▼	-	-

Metals			
Arsenic, As	▼	-	▼
Cadmium, Cd	▼	▼	▼
Chromium, Cr	▼	▼	▼
Copper, Cu	▼	▲	▲
Lead, Pb	▼	▼	▼
Nickel, Ni	▼	▼	▼
Zinc, Zn	-	▲	▲
Mercury	▼	▼	▼

14. Data Quality Indicators

Table 23. Field Data Quality Indicators

Completeness	The DSI ensured that all critical locations for soil and groundwater were sampled, and samples were collected within the grid formation at the appropriate depths during a single visit to the site. This plan also aligns with Standard Operating Practices (SOP), to produce valid and reproducible data. NEO Consulting's qualified environmental consultants are experience and ensure compliance and completion of all sample recording, labelling and COC procedures.
Comparability	The DSI aligns with SOP to produce qualitative data. NEO Consulting's qualified environmental consultants sampled uniformly to ensure that each individual sample collection contained sufficient soil (g) and groundwater (mL) to produce a dataset that is reflective of the environmental conditions of the site at time of collection. All samples were handled and stored in a manner that maximised the preservation of all potential CoPC within the soil and groundwater samples. Climatic and physical conditions at the time of sample collection were considered and recorded.

Representativeness	The DSI aligns with SOP to produce a qualitative dataset that is representative of both soil and groundwater on site. NEO Consulting's qualified environmental consultants ensured sample collection, handling, storage and transfer was appropriate for soil and groundwater. Additionally, samples reflect environmental conditions at time of collection and samples are homogenised to maximise detection during laboratory analysis.
Precision	The DSI aligns with SOP to produce qualitative data that measures the variability of results. The primary technique for evaluating field precision is by collection of duplicate samples, to measure the difference in response between two (2) different samples from the sample location. NEO Consulting's qualified environmental consultants ensured that duplicate frequency was appropriate to sampling plan and area of site.
Accuracy	The DSI aligns with SOP to produce qualitative data that measures bias within the results. NEO Consulting's qualified environmental consultants ensured all COC procedures were carried out appropriately to minimise incidents of cross contamination or incorrect handling and storage of samples.

Table 24. Laboratory Data Quality Indicators

Completeness	The allocated NATA accredited laboratory produce reliable and thorough datasets. All samples were analysed for CoPC using an appropriate and standardised extraction method and analytical instrument. Samples were received, extracted and injected within specified holding times. The laboratory qualified environmental organic chemists ensured completion of COC procedures, wet chemistry, data integration and calculation.
Comparability	Analytical procedures within the NATA accredited laboratory were specialised and standardised for both soil and groundwater samples. The qualified environmental organic chemists determined the appropriate extraction methods and analytical instruments used based on response factor and ability to target CoPC. Spikes and surrogates were chosen based on appropriateness to avoid coelution with contaminants indigenous to the samples and across varying retention times to map response factor. The chosen spikes and surrogates were used for all samples and analysis was completed within the same batch to account for analytical instrument calibration (in addition system blanks support instrument calibration baseline results).

Representativeness	The NATA accredited laboratory procedures ensured the data is representative of the site by using appropriate extraction and analytical instrument methods. The qualified environmental organic chemists followed COC procedures; ensured that extraction methods were specialised for each potential contaminant and standardised across all samples; and used analytical instruments suitable for the sample type, targeted CoPC, extraction method, instrument sensitivity, response factor and detection limit.
Precision	Quantitative measures undertaken by the NATA accredited laboratory include field and laboratory duplicates. The qualified environmental organic chemists produced a field duplicate analysis that measured the precision of field sampling and maps the potential heterogeneity of contamination across a field sampling location. The laboratory duplicate procedure included two (2) laboratory sub-samples for extraction and analysis from the one (1) field sample in the collection container. The two (2) laboratory sub-samples map the potential heterogeneity of contamination that can occur within the one (1) field samples collection.
Accuracy	Quantitative measures undertaken by the NATA accredited laboratory's qualified environmental organic chemists include the analysis of field, rinsate and method blanks; spike and surrogate analysis to measure response factor and retention time; laboratory control samples; appropriateness of analytical method; and timing and completion of analysis.

15. Conclusion

15.1 Soil

15.1.1 Lot 2

Analytical results did not exceed the NEPM Assessment Criteria for Commercial/Industrial site for all samples.

15.1.2 Lot 3

Analytical results exceeded the NEPM Assessment Criteria Residential A in TRH (>C_{10}-C_{16} minus Naphthalene) for HSL-A Vapour Intrusion, 0-<1m depth (Sand) (110mg/kg) with BH9.1 recording 400mg/kg, and HSL-A Vapour Intrusion, 1-<2m depth (Sand) (240mg/kg) with BH9.2 recording 280mg/kg. Additionally, analytical results exceeded the NEPM Assessment Criteria Residential A in TRH (>C_{10}-C_{16}) for ESL (Urban, Residential and Public Open Spaces for coarse-grained soil) (120mg/kg) with BH9.1 recording 400mg/kg, and BH9.2 recording 280mg/kg; and

TRH (>C_{16}-C_{34}) for ESL (300mg/kg) with BH9.1 recording 450mg/kg, and BH9.2 recording 330mg/kg. This contamination requires remedial action for the site to be made suitable for the proposed development.
All other analytical results were below the NEPM Assessment Criteria for Residential A sites for all samples.

15.2 Groundwater

Analytical results exceeded the NEPM Assessment Criteria for one (1) sample, from MW1. Metals exceed the GIL Guidelines for Marine and Fresh Waters in sample MW1 with Copper (3µg/L) and Zinc (55µg/L), with GIL Guideline limits for Marine Water for Copper 1.3µg/L and Zinc 15µg/L, while GIL Guideline limits for Fresh Water for Copper 1.4µg/L and Zinc 8µg/L. The exceedance of Zinc and Copper within the groundwater are likely to be representative of background concentrations attributed to local geology and are associated with typical shale and sandstone mineralogy. Total metals were recorded, not dissolved metals which are often recorded higher, also these metals are not directly associated with the service station operations and can be attributed to naturally occurring levels of Zinc and Copper within ground water. All other analytical results were below the NEPM Assessment Criteria for Commercial/Industrial sites for all samples.

NEO Consulting finds, based on this Targeted Detailed Site Investigation that the site can be made suitable for the proposed developments on both Lot 2 and Lot 3 providing the recommendations within **Section 16** are implemented.

16. Recommendations

Based on the information collected and available during this investigation, the following recommendations have been made:

- Remedial Action Plan (RAP) to be undertaken on Lot 3 to guide the remediation of the TRH F2 contamination surrounding BH9. Additionally, a Data Gap Investigation (DGI) should be undertaken prior to the implementation of the RAP to assess if PAH contamination co-occurs with the TRH contamination;
- Any soils requiring excavation, on-site reuse and/or removal must be classified in accordance with "Waste Classification Guidelines Part 1: Classifying Waste" NSW EPA (2014);
- Any areas of the site suspected of containing ACM including soil and/or fill material are to be handled in accordance with relevant Australian Standards, SafeWork NSW codes of practice and any other applicable requirements; and
- A site specific 'Unexpected Finds Protocol' is to be made available for reference for all occupants and/or site workers in the event unanticipated contamination is discovered, including asbestos.

References

- Goulburn Mulwaree Local Environmental Plan 2009;
- Department of Urban Affairs and Planning, NSW Environmental Protection Authority, *Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land,* 1998;
- National Environment Protection Measures, *Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater 2013*;
- National Environment Protection Measures, *Schedule B2 – Guideline on Site Characterisation,* 2013;
- National Environmental Protection Measures, Schedule B5c – *Guideline on Ecological Investigation Levels for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel and Zinc, 2013;*
- National Environment Protection Measures, Schedule B7 – *Guideline on Derivation of Health – Based Investigation Levels, 2013;*
- National Environment Protection Measures, *Appendix 1 – The Derivation of HILS for Metals and Inorganics, 2013;*
- NSW EPA, *Contaminated Land Management, Guidelines for the NSW Site Auditor Scheme,* 2017 (3rd Edition);
- NSW Environmental Protection Authority, *Waste Classification Guidelines Part 1: Classifying Waste,* 2014;
- NSW Environmental Protection Authority, *Sampling Design Guidelines*, 1995;
- The Contaminated Land Management Act 1997;
- NSW Environmental Protection Authority, *Guidelines on the Duty to Report Contamination under Contaminated Land Management Act*, 1997;
- NSW EPA, *Technical Note: Investigation of Service Station Sites,* 2014;
- NSW Department of Environment and Conservation, *Guidelines for the Assessment and Management of Groundwater Contamination,* 2007;
- NSW Environmental Protection Authority, *Guidelines for Consultants Reporting on Contaminated Sites,* 2020;
- Protection of the Environment and Operation Act 1997;
- Protection of the Environment Operations (Waste) Regulations, 2005;
- SafeWork SNW Code of Practice, How to Safely Remove Asbestos, 2016;
- SafeWork NSW Code of Practice, How to Manage and Control Asbestos in the Workplace, 2016;
- SafeWork NSW, *Managing Asbestos in or On Soil,* 2014
- State Environment Protection Policy 55 (SEPP 55). *Remediation of Land Under the Environmental Planning and Assessment Act,* 1998;
- Work Health and Safety Act, 2011; and
- Work Health and Safety Regulation, 2011.

Limitations

The findings of this report are based on the Scope of Work outlined in Section 2. NEO Consulting performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental consulting profession. No warranties, express or implied are made.

The results of this assessment are based upon the information documented and presented in this report. All conclusions and recommendations regarding the site are the professional opinions of NEO Consulting personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, NEO Consulting assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of NEO Consulting, or developments resulting from situations outside the scope of this project.

The results of this assessment are based on the site conditions identified at the time of the site inspection and validation sampling. NEO Consulting will not be liable to revise the report to account for any changes in site characteristics, regulatory requirements, assessment criteria or the availability of additional information, subsequent to the issue date of this report.

NEO Consulting is not engaged in environmental consulting and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes.

NEO CONSULTING

Prepared by:

Luke Breva
Environmental Scientist

Reviewed by:

Nick Caltabiano
Project Manager

APPENDIX A

Figures and Site Photographic Log

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Figure 1: The distance between the site and Wollongong CBD is approximately 88.36km.

Site location

Source: Six Maps 2021

Figure 1	Locality Map
Project	14-16 George St, Marulan NSW 2579

Figure 2: The latest image of the site shows that the site consists of three (3) separate lots.

The red area is **Lot 1**. The Lot 1 is a square shape and contains excavated areas and a structural dwelling. Lot 1 is approximately 27,770.12m^2 in size and has not been assessed as part of this investigation.

The purple shaded area is classified as **Lot 2**. Lot 2 is a oblique shape that contains an active fuel station. This site has an area of approximately 39896.33m^2. The green shaded area is the location of the proposed fast food development.

The orange shaded area is classified as **Lot 3.** Lot 3 is a smaller site that contains a structural dwelling. The area of Lot 3 is approximately 5360.81m^2.

Within this DSI, NEO Consultants only focused on Lot 2 and Lot 3.

⊗ Intrusive sampling locations

Source: NearMaps 2021

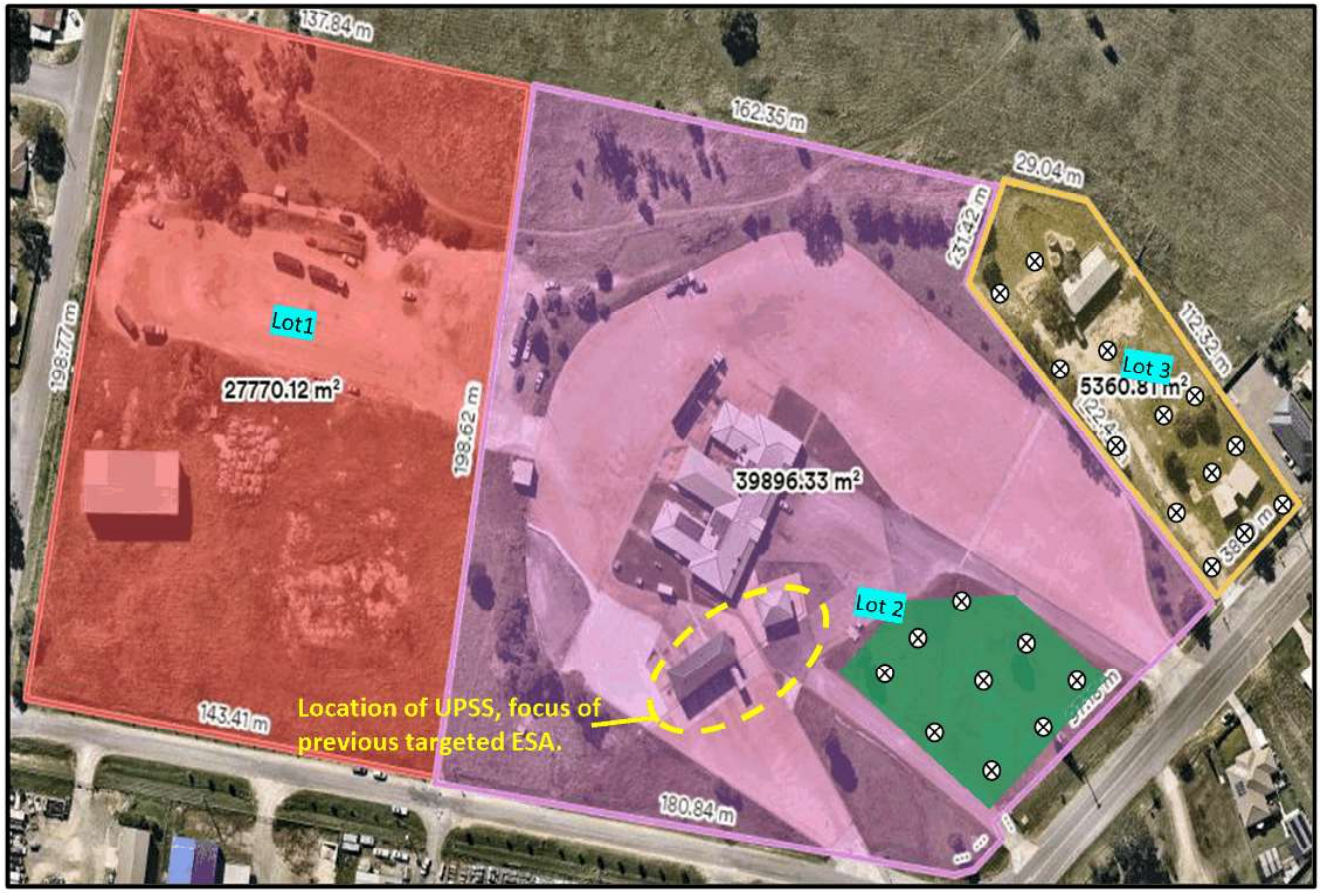

Figure 2	Site Details of Map
Project	14-16 George St, Marulan NSW 2579

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Figure 3: locations of sampling and UPSS. Focus of previous Targeted ESA report.

Sample Name	Approximate Depth (m)
BH1 1.5	1.5
BH1 4.5	4.5
BH2 1.5	1.5
BH2 4.5	4.5
BH3 1.5	1.5
BH3 5	5.0
BH4 1.5	1.5
BH4 4.5	4.5

UST

Fuel pump bowser

Water monitoring wells, already onsite. Dry.

Borehole location

Source: NearMaps 2021

Figure 3	Site Details of Map
Project	14 George St, Marulan NSW 2579

Figure 4: Approximate borehole locations of Lot 2.

Sample Name	Approximate Depth (m)	Sample Name	Approximate Depth (m)
BH1.1	0.3	BH5.2	0.8
BH1.2	0.7	BH6.1	0.3
BH2.1	0.3	BH6.2	0.8
BH2.2	0.7	BH7.1	0.2
BH3.1	0.3	BH7.2	0.6
BH3.2	0.7	BH8.1	0.3
BH4.1	1.5	BH8.2	0.6
BH4.2	4	BH9.1	0.3
BH5.1	0.4	BH9.2	0.6

	Depth of well m bgl	Depth to water m bgl
MW2	10.50	8.70
MW1	9.00	7.80

⊗ Monitoring well installed by NEO

⊗ Borehole location

Source: NearMaps 2021

Figure 4	Site Details of Map
Project	14-16 George St, Marulan NSW 2579

N

Figure 5: Approximate borehole locations of Lot 3.

⊗ Borehole location

Sample Name	Approximate Depth (m)	Sample Name	Approximate Depth (m)
BH1.1	0.2	BH8.1	0.5
BH1.2	0.5	BH8.2	1.5
BH2.1	0.3	BH9.1	0.5
BH2.2	0.5	BH9.2	1.2
BH3.1	0.4	BH10.1	0.5
BH3.2	0.7	BH10.2	1.5
BH4.1	0.3	BH11.1	0.5
BH4.2	0.6	BH11.2	1.5
BH5.1	0.4	BH12.1	0.5
BH5.2	0.6	BH12.2	1.4
BH6.1	0.2	BH13.1	0.5
BH6.2	0.6	BH13.2	1.5
BH7.1	0.5	D1 (Duplicate of 3.1)	0.3
BH7.2	1.5	D2 (Duplicate of 13.2)	1.5

BH8 / MW3	Depth of well m bgl	Depth to water m bgl
MW3	7.5	Dry

Figure 5	Site Details of Map
Project	14-16 George St, Marulan NSW 2579

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Figure 6: Depicts an aerial view of the site and surrounding area within the year 2010. The site is an irregular shaped lot and contains an active service station and a retail shop. Moreover, it comprises two abounded wooden shed, and un-used fuel bowsers and fuel tanks. The site also consists of landscaping including trees and grass areas. The surrounding area is composed of acreage, residential and commercial properties.

Figure 6	Historical Photograph: 2010
Project	14-16 George St, Marulan NSW 2579

Source: Google Earth 2021

N

Figure 7: Depicts an aerial view of the site and surrounding area within the year 2015. The site has remained similar to the image taken in 2010. The surrounding area has increased in residential and commercial developments.

Figure 7	Historical Photograph: 2015
Project	14-16 George St, Marulan NSW 2579

Source: Google Earth 2021

N

Figure 8: Depicts an aerial view of the site and surrounding area within the year 2021. The site has remained similar to the images taken in previous years. The surrounding area has increased in residential and commercial developments.

Figure 8	Historical Photograph: 2021
Project	14-16 George St, Marulan NSW 2579

Source: NearMaps 2021

Onsite Photographs: 24.05.21

Description of Images	Image
Photograph 1: Overview of the site (Lot 2) from George Street. The site contains an active fuel station and retail shop. The site consists of a mix groundcover including grass, concrete, bitumen, and pavement. The site is overall flat.	
Photograph 2: The fuel station within the site (Lot 2). The site contains two metal canopy which shelters nine (9) fuel bowsers.	
Photograph 3: The retail shop within the site on Lot 2.	

Photograph 4: The entrance gate of Lot 3 located on George Street. Lot 3 contains a wooden shed, fuel bowser and over ground fuel tanks. Lot 3 is separated from Lot 2 using chain wire fencing and consists of scattered grass groundcover and a few trees.	
Photograph 5: historical fuel tanks within Lot 3.	
Photograph 6: The steel shed and fuel bowser within Lot 3.	

Photograph 7: The water monitoring well installed within Lot 3.	
Photograph 8: A borehole within Lot 2. The soil is loamy, brown, and moist.	
Photograph 9: A borehole within Lot 3. The soil is light brown clay and dry.	

APPENDIX B

Laboratory Results Summary Table

Table 25. Lot 2 soil analytical results for Total Recoverable Hydrocarbons (TRH), Benzene Toluene Ethylbenzene Xylene (BTEX) and Naphthalene. F1 = subtract the sum of BTEX concentrations from the C_6-C_{10} aliphatic hydrocarbon fraction. F2 = subtract Naphthalene from the> C_{10}-C_{16} aliphatic hydrocarbon fraction.

NEPM Assessment Criteria		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	C6-C10	C6-C10 - BTEX (F1)	>C10-C16	>C10-C16 - N (F2)	>C16-C34 (F3)	>C34-C40 (F4)
NEPM 2013 Commercial/Industrial Soil **HSL-D** for Vapour Intrusion, 0-<1m depth, **Sand**, mg/kg		**3**	**NL**	**NL**	**230**	**NL**		**260**		**NL**		
NEPM 2013 Commercial/Industrial Soil **HSL-D** for Vapour Intrusion, 1-<2m depth, **Sand**, mg/kg		**3**	**NL**	**NL**	**NL**	**NL**		**370**		**NL**		
NEPM 2013 Commercial/Industrial Soil **HSL-D** for Vapour Intrusion, 2-<4m depth, **Sand**, mg/kg		**3**	**NL**	**NL**	**NL**	**NL**		**630**		**NL**		
NEPM 2013 Commercial/Industrial Soil **HSL-D** for Vapour Intrusion, 4m+ depth, **Sand**, mg/kg		**3**	**NL**	**NL**	**NL**	**NL**		**NL**		**NL**		
NEPM 2013 Commercial/Industrial Soil **HSL-D** for direct contact, mg/kg		**430**	**99,000**	**27,000**	**81,000**	**11,000**	**26,000**		**20,000**		**27,000**	**38,000**
NEPM 2013 Soil ESL for Commercial/Industrial, coarse-grained soil, mg/kg		**75**	**135**	**165**	**180**		**215**		**170**		**1,700**	**3,300**
NEPM 2013 Management Limits for Commercial/Industrial, coarse-grained soil. mg/kg							**700**		**1,000**		**3,500**	**10,000**
NEPM 2013 Soil Generic **EIL** for Commercial/Industrial, mg/kg						**370**						
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH 1.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 1.2	0.7	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 2.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 2.2	0.7	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120

BH 3.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 3.2	0.7	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 4.1	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 4.2	4	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 5.1	0.4	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 5.2	0.8	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 6.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 6.2	0.8	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 7.1	0.2	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 7.2	0.6	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 8.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 8.2	0.6	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 9.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 9.2	0.6	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120

Table 26. Lot 2 soil analytical results for metals

NEPM Assessment Criteria		Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg
NEPM 2013 Residential Soil **HIL-D**, mg/kg		**3000**	**900**	**3600**	**240 000**	**1500**	**6000**	**400 000**	**730**
NEPM 2013 Soil Generic **EIL** for Commercial/Industrial, mg/kg		**160**							
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH 1.1	0.3	**2**	<0.3	**1.8**	**1.5**	**8**	<0.5	**10**	<0.05
BH 1.2	0.7	**1**	<0.3	**1.5**	<0.5	**7**	<0.5	**3.7**	<0.05
BH 2.1	0.3	**1**	<0.3	**2.0**	**1.6**	**8**	<0.5	**7.1**	<0.05
BH 2.2	0.7	**2**	<0.3	**2.8**	<0.5	**8**	<0.5	**4.8**	<0.05
BH 3.1	0.3	**1**	<0.3	**2.8**	**6.6**	**10**	**1.1**	**44**	<0.05

BH 3.2	0.7	**1**	<0.3	**2.8**	**1.3**	**9**	**0.7**	**7.6**	<0.05
BH 4.1	1.5	**5**	<0.3	**6.3**	**4.6**	**7**	**2.5**	**32**	<0.05
BH 4.2	4	**4**	<0.3	**14**	**4.4**	**9**	**3.3**	**41**	<0.05
BH 5.1	0.4	**6**	<0.3	**11**	**2.2**	**13**	**2.8**	**20**	<0.05
BH 5.2	0.8	**6**	<0.3	**9.8**	**2.7**	**13**	**2.5**	**20**	<0.05
BH 6.1	0.3	**1**	<0.3	**1.6**	**2.0**	**8**	<0.5	**9.7**	<0.05
BH 6.2	0.8	**7**	<0.3	**8.8**	**1.0**	**12**	**1.6**	**10**	<0.05
BH 7.1	0.2	**5**	<0.3	**8.3**	**1.7**	**28**	**1.0**	**24**	<0.05
BH 7.2	0.6	**5**	<0.3	**7.6**	**1.0**	**10**	**1.4**	**13**	<0.05
BH 8.1	0.3	**6**	<0.3	**8.2**	**0.6**	**10**	**1.2**	**13**	<0.05
BH 8.2	0.6	**5**	<0.3	**9.6**	**0.8**	**13**	**1.2**	**11**	<0.05
BH 9.1	0.3	**3**	<0.3	**3.6**	**1.1**	**17**	**0.8**	**10**	<0.05
BH 9.2	0.6	**7**	<0.3	**7.4**	**0.7**	**10**	**1.3**	**11**	<0.05

Table 27. Lot 2 soil analytical results for pesticides

NEPM Assessment Criteria		Hexachlorobenzene (HCB)	Heptachlor	Chlordane	Aldrin & Dieldrin	Endrin	DDT	DDT+DDE +DDT	Endosulfan	Methoxychlor	Mirex	Total CLP OCP	Total OPP
NEPM 2013 Residential Soil **HIL-D**, mg/kg		**80**	**50**	**530**	**45**	**100**		**3600**	**2000**	**2500**	**100**		
NEPM 2013 Soil Generic **EIL** for Commercial/Industrial, mg/kg							**640**						
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH 1.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 1.2	0.7	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 2.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 2.2	0.7	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 3.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 3.2	0.7	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7

BH 4.1	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 4.2	4	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 5.1	0.4	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 5.2	0.8	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 6.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 6.2	0.8	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 7.1	0.2	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 7.2	0.6	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 8.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 8.2	0.6	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 9.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 9.2	0.6	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7

Table 28. Lot 3 analytical results for Total Recoverable Hydrocarbons (TRH), Benzene Toluene Ethylbenzene Xylene (BTEX) and Naphthalene. F1 = subtract the sum of BTEX concentrations from the C_6-C_{10} aliphatic hydrocarbon fraction. F2 = subtract Naphthalene from the> C_{10}-C_{16} aliphatic hydrocarbon fraction.

NEPM Assessment Criteria		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	C6-C10	C6-C10 - BTEX (F1)	>C10-C16	>C10-C16 - N (F2)	>C16-C34 (F3)	>C34-C40 (F4)
NEPM 2013 Residential A Soil **HSL-A** for Vapour Intrusion, 0-<1m depth, **Sand**, mg/kg		**0.5**	**160**	**55**	**40**	**3**		**45**		**110**		
NEPM 2013 Residential A Soil **HSL-A** for Vapour Intrusion, 1-<2m depth, **Sand**, mg/kg		**0.5**	**220**	**NL**	**60**	**NL**		**70**		**240**		
NEPM 2013 Residential A Soil **HSL-A** for direct contact, mg/kg		**100**	**14,000**	**4,500**	**12,000**	**14,000**	**4,400**		**3,300**		**4,500**	**6,300**
NEPM 2013 Soil **ESL** for Urban, Residential and Public Open Spaces for **coarse-grained soil**, mg/kg		**50**	**85**	**70**	**105**		**180**		**120**		**300**	**2,800**
NEPM 2013 **Management Limits** for Residential, Parkland and Public Open Space for **coarse-grained soil**, mg/kg							**700**		**1,000**		**2,500**	**10,000**
NEPM 2013 Soil Generic **EIL** for Urban Residential and Public Open Space, mg/kg						**170**						
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH 1.1	0.2	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 1.2	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 2.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 2.2	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 3.1	0.4	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 3.2	0.7	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 4.1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 4.2	0.6	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 5.1	0.4	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	**91**	<120
BH 5.2	0.6	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	**100**	<120
BH 6.1	0.2	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120

BH 6.2	0.6	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 7.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 7.2	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 8.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 8.2	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 9.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	**400**	**400**	**450**	<120
BH 9.2	1.2	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	**280**	**280**	**330**	<120
BH 10.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 10.2	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 11.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 11.2	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 12.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 12.2	1.4	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 13.1	0.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
BH 13.2	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
D1	0.3	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120
D2	1.5	<0.1	<0.1	<0.1	<0.3	<0.1	<25	<25	<25	<25	<90	<120

Table 29. Lot 3 analytical results for metals

NEPM Assessment Criteria		Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg
NEPM 2013 Residential Soil HIL-A, mg/kg		**100**	**20**	**100**	**6000**	**300**	**400**	**7400**	**40**
NEPM 2013 Soil Generic EIL for Urban Residential and Public Open Space, mg/kg		**100**							
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH 1.1	0.2	**2**	<0.3	**2.1**	**1.6**	**6**	**0.8**	**10**	<0.05
BH 1.2	0.5	**5**	**1.5**	**7.3**	**17**	**30**	**5.2**	**98**	<0.05
BH 2.1	0.3	**4**	<0.3	**7.4**	**2.4**	**15**	**1.5**	**19**	<0.05
BH 2.2	0.5	**3**	<0.3	**6.1**	**0.6**	**9**	**0.8**	**9.4**	<0.05
BH 3.1	0.4	**5**	<0.3	**10**	**0.9**	**10**	**2**	**16**	<0.05
BH 3.2	0.7	**6**	<0.3	**10**	<0.5	**13**	**1.5**	**8.6**	<0.05
BH 4.1	0.3	**6**	<0.3	**7.6**	**0.6**	**14**	**1.1**	**13**	<0.05
BH 4.2	0.6	**5**	<0.3	**11**	**0.6**	**10**	**2.2**	**13**	<0.05

BH 5.1	0.4	**4**	<0.3	**5.8**	**1.1**	**12**	**1.7**	**17**	<0.05
BH 5.2	0.6	**7**	<0.3	**8.1**	**1.7**	**16**	**2.8**	**24**	<0.05
BH 6.1	0.2	**4**	<0.3	**8.6**	**1.1**	**10**	**1.8**	**17**	<0.05
BH 6.2	0.6	**5**	<0.3	**9.2**	**3.7**	**13**	**2.7**	**35**	<0.05
BH 7.1	0.5	**2**	<0.3	**5.8**	**3.8**	**5**	**2.3**	**32**	<0.05
BH 7.2	1.5	**3**	<0.3	**4.9**	**3.1**	**4**	**3.2**	**30**	<0.05
BH 8.1	0.5	**3**	<0.3	**7.2**	**1.3**	**8**	**1.4**	**7.5**	<0.05
BH 8.2	1.5	**5**	<0.3	**11**	**3.2**	**10**	**3.4**	**39**	<0.05
BH 9.1	0.5	**5**	<0.3	**9.4**	**1.8**	**9**	**1.8**	**9.7**	<0.05
BH 9.2	1.2	**5**	<0.3	**7.3**	**0.8**	**9**	**1.8**	**9.6**	<0.05
BH 10.1	0.5	**3**	<0.3	**7**	<0.5	**15**	**1.2**	**5.9**	<0.05
BH 10.2	1.5	**2**	<0.3	**5.7**	**0.6**	**9**	**1.2**	**6.3**	<0.05
BH 11.1	0.5	**5**	<0.3	**8.9**	**0.6**	**9**	**1.5**	**13**	<0.05
BH 11.2	1.5	**4**	<0.3	**9.3**	**1.3**	**10**	**2.1**	**17**	<0.05
BH 12.1	0.5	**3**	<0.3	**4.3**	**1.4**	**11**	**1.4**	**14**	<0.05
BH 12.2	1.4	**5**	<0.3	**2.3**	**3.2**	**10**	**1.9**	**25**	<0.05
BH 13.1	0.5	**3**	<0.3	**7.9**	**3.7**	**10**	**1.9**	**16**	<0.05
BH 13.2	1.5	**3**	<0.3	**5.6**	**3.2**	**7**	**2.5**	**30**	<0.05
D1	0.3	**7**	**2.5**	**9.9**	**20**	**32**	**4.3**	**130**	<0.05
D2	1.5	**3**	<0.3	**4.9**	**3.7**	**6**	**2.3**	**29**	<0.05

Table 30. Lot 3 analytical results for pesticides

NEPM Assessment Criteria		Hexachlorobenzene (HCB)	Heptachlor	Chlordane	Aldrin & Dieldrin	Endrin	DDT	DDT+DDE+DDT	Endosulfan	Methoxychlor	Mirex	Total CLP OC Pesticides	Total OP Pesticides
NEPM 2013 Residential Soil **HIL-A**, mg/kg		**10**	**6**	**50**	**6**	**10**		**240**	**270**	**300**	**10**		
NEPM 2013 Soil Generic **EIL** for Urban Residential and Public Open Space, mg/kg							**180**						
Sample	Depth (m)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH 1.1	0.2	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 1.2	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 2.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 2.2	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 3.1	0.4	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 3.2	0.7	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 4.1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 4.2	0.6	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 5.1	0.4	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 5.2	0.6	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 6.1	0.2	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 6.2	0.6	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 7.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 7.2	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 8.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 8.2	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 9.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 9.2	1.2	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7

BH 10.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 10.2	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 11.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 11.2	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 12.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 12.2	1.4	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 13.1	0.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
BH 13.2	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
D1	0.3	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7
D2	1.5	<0.1	<0.2	<0.2	<0.3	<0.2	<0.2	<0.6	<0.5	<0.1	<0.1	<1	<1.7

Table 33. Lot 2 groundwater analytical results for Total Recoverable Hydrocarbons (TRH), Benzene Toluene Ethylbenzene Xylene (BTEX) and Naphthalene. F1 = subtract the sum of BTEX concentrations from the C_6-C_{10} aliphatic hydrocarbon fraction. F2 = subtract Naphthalene from the> C_{10}-C_{16} aliphatic hydrocarbon fraction. (B(a)P) not analysed (NA).

NEPM Assessment Criteria	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Benzo(a)pyrene	TRH C6-C10 - BTEX (F1)	TRH >C10-C16 - Naphthalene (F2)
NEPM 2013 GIL Drinking Water, mg/L	0.001	0.8	0.3	0.6	-	0.00001		
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
NEPM 2013 GIL Marine Waters, µg/L	500C	-	-	-	50C	-		
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
NEPM 2013 GIL Fresh Waters, µg/L	950	-	-	350 as o-x; 200 as p-x	16	-		
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
NEPM 2013 Commercial/Industrial Groundwater **HSL-D** for Vapour Intrusion 2 - <4m **Sand**, mg/L	**5**	NL	NL	NL	NL		**6**	NL
NEPM 2013 Commercial/Industrial Groundwater **HSL-D** for Vapour Intrusion 4 - <8m **Sand**, mg/L	**5**	NL	NL	NL	NL		**6**	NL
NEPM 2013 Commercial/Industrial Groundwater **HSL-D** for Vapour Intrusion 8m+ **Sand**, mg/L	**5**	NL	NL	NL	NL		**7**	NL
MW1 (µg/L)	<0.5	<0.5	<0.5	<1.5	<0.5	NA	<50	<60
MW2 (µg/L)	<0.5	<0.5	<0.5	<1.5	<0.5	NA	**62**	<60

MW1 (mg/L)	<0.0005	<0.0005	<0.0005	<0.0015	<0.0005	NA	<0.05	<0.06
MW2 (mg/L)	<0.0005	<0.0005	<0.0005	<0.0015	<0.0005	NA	**0.062**	<0.06

Table 34. Lot 2 groundwater analytical results for metals

NEPM Assessment Criteria	Arsenic, As	Cadmium, Cd	Chromium, Cr	Copper, Cu	Lead, Pb	Nickel, Ni	Zinc, Zn	Mercury, Hg
NEPM 2013 GIL Drinking Water, mg/L	0.01 mg/L	0.002 mg/L	0.05 mg/L	2 mg/L	0.01 mg/L	0.02 mg/L	- mg/L	0.001 mg/L
NEPM 2013 GIL Marine Waters, µg/L	- µg/L	0.7 µg/L	4.4 µg/L	1.3 µg/L	4.4 µg/L	7 µg/L	15 µg/L	0.1 µg/L
NEPM 2013 GIL Fresh Waters, µg/L	24 A(III); 13 As(V) µg/L	0.2 µg/L	1 µg/L	1.4 µg/L	3.4 µg/L	11 µg/L	8 µg/L	0.06 µg/L
MW1 (µg/L)	<1	<0.1	<1	**3**	<1	**1**	**22**	
MW2 (µg/L)	<1	<0.1	<1	<1	<1	<1	<5	
MW1 (mg/L)	<0.001	0.0001	<0.001	**0.003**	<0.001	**0.001**	**0.022**	<0.0001
MW2 (mg/L)	<0.001	0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001

APPENDIX C

Property Report and "Dial Before You Dig" Results

DIAL BEFORE YOU DIG www.1100.com.au

Job No 21630660

Phone: 1100
www.1100.com.au

Caller Details

Contact:	Mr Nick Caltabiano	**Caller Id:**	2384105	**Phone:**	0435656787
Company:	NEO Consulting Pty Ltd	**Mobile:**	Not Supplied	**Fax:**	Not Supplied
Address:	186 Riverstone Pde RIVERSTONE NSW 2765	**Email:**	neo.searches.dbyd@gmail.com		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

User Reference: Metro Marulan
Working on Behalf of: Private

Enquiry Date:	Start Date:	End Date:
17/05/2021	24/05/2021	24/05/2021

Address:
Metro Marulan 14 George Street
Marulan NSW 2579

Job Purpose:	Onsite Activity:
Excavation	Vertical Boring
Location of Workplace:	**Location in Road:**
Private Property	Not Supplied

- Check the location of the dig site is correct. If not submit a new enquiry.
- If the scope of works change, or plan validity dates expire, resubmit your enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- **For more information on safe excavation practices, visit www.1100.com.au**

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
# Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
109768660	Essential Energy	132391	NOTIFIED
109768662	Jemena Gas Country	1300880906	NOTIFIED
109768663	NBN Co, NswAct	1800626329	NOTIFIED
109768661	Telstra NSW, South	1800653935	NOTIFIED

END OF UTILITIES LIST

Lodge Your Free Enquiry Online – 24 Hours a Day, Seven Days a Week [NSW]

Property Report

14 GEORGE STREET MARULAN 2579

Property Details

Address:	14 GEORGE STREET MARULAN 2579
Lot/Section /Plan No:	2/-/DP1053945
Council:	GOULBURN MULWAREE COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Goulburn Mulwaree Local Environmental Plan 2009 (pub. 8-11-2013)
Land Zoning	IN1 - General Industrial: (pub. 20-2-2009)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	NA
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Drinking Water Catchment	Sub Catchment Boundaries
	Subject Land

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

NSW GOVERNMENT

Property Report

14 GEORGE STREET MARULAN 2579

- State Environmental Planning Policy (Affordable Rental Housing) 2009: Land Application (pub. 31-7-2009)
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)
- State Environmental Planning Policy (Concurrences and Consents) 2018: Land Application (pub. 21-12-2018)
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017: Land Application (pub. 1-9-2017)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004: Land Application (pub. 31-3-2004)
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- State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007: Land Application (pub. 16-2-2007)
- State Environmental Planning Policy (Primary Production and Rural Development) 2019: Land Application (pub. 28-2-2019)
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011: Subject Land (pub. 21-1-2011)
- State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017: Subject Land (pub. 25-8-2017)
- State Environmental Planning Policy No 21—Caravan Parks: Land Application (pub. 24-4-1992)
- State Environmental Planning Policy No 33—Hazardous and Offensive Development: Land Application (pub. 13-3-1992)
- State Environmental Planning Policy No 36—Manufactured Home Estates: Land Application (pub. 16-7-1993)
- State Environmental Planning Policy No 50—Canal Estate Development: Land Application (pub. 10-11-1997)
- State Environmental Planning Policy No 55—Remediation of Land: Land Application (pub. 28-8-1998)
- State Environmental Planning Policy No 64—Advertising and Signage: Land Application (pub. 16-3-2001)
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

NSW GOVERNMENT

Property Report

14 GEORGE STREET MARULAN 2579

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Land near Electrical Infrastructure	This property may be located near electrical infrastructure and could be subject to requirements listed under ISEPP Clause 45. Please contact Essential Energy for more information.
Local Aboriginal Land Council	PEJAR

Property Report

16 GEORGE STREET MARULAN 2579

Property Details

Address:	16 GEORGE STREET MARULAN 2579
Lot/Section /Plan No:	3/-/DP1053945
Council:	GOULBURN MULWAREE COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Goulburn Mulwaree Local Environmental Plan 2009 (pub. 8-11-2013)
Land Zoning	IN1 - General Industrial: (pub. 20-2-2009)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	NA
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Drinking Water Catchment	Sub Catchment Boundaries
	Subject Land

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)

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NSW GOVERNMENT

Property Report

16 GEORGE STREET MARULAN 2579

- State Environmental Planning Policy (Affordable Rental Housing) 2009: Land Application (pub. 31-7-2009)
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)
- State Environmental Planning Policy (Concurrences and Consents) 2018: Land Application (pub. 21-12-2018)
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017: Land Application (pub. 1-9-2017)
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- State Environmental Planning Policy No 64—Advertising and Signage: Land Application (pub. 16-3-2001)
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

NSW GOVERNMENT

Property Report

16 GEORGE STREET MARULAN 2579

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Land near Electrical Infrastructure	This property may be located near electrical infrastructure and could be subject to requirements listed under ISEPP Clause 45. Please contact Essential Energy for more information.
Local Aboriginal Land Council	PEJAR

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)

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Property Report

16-28 PORTLAND AVENUE MARULAN 2579

Property Details

Address:	16-28 PORTLAND AVENUE MARULAN 2579
Lot/Section /Plan No:	1/-/DP1053945
Council:	GOULBURN MULWAREE COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Goulburn Mulwaree Local Environmental Plan 2009 (pub. 8-11-2013)
Land Zoning	IN1 - General Industrial: (pub. 20-2-2009)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	NA
Heritage	NA
Land Reservation Acquisition	NA
Foreshore Building Line	NA
Drinking Water Catchment	Sub Catchment Boundaries
	Subject Land

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

This report provides general information only and does not replace a Section 10.7 Certificate (formerly Section 149)

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NSW GOVERNMENT

Property Report

16-28 PORTLAND AVENUE MARULAN 2579

- State Environmental Planning Policy (Affordable Rental Housing) 2009: Land Application (pub. 31-7-2009)
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)
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- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017: Land Application (pub. 1-9-2017)
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- State Environmental Planning Policy (Infrastructure) 2007: Land Application (pub. 21-12-2007)
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- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

NSW GOVERNMENT

Property Report

16-28 PORTLAND AVENUE MARULAN 2579

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

Land near Electrical Infrastructure	This property may be located near electrical infrastructure and could be subject to requirements listed under ISEPP Clause 45. Please contact Essential Energy for more information.
Local Aboriginal Land Council	PEJAR

Goulburn Mulwaree Council
Locked Bag 22
Goulburn NSW 2580

Civic Centre
184 - 194 Bourke Street
Goulburn NSW 2580
t (02) 4823 4444
e council@goulburn.nsw.gov.au
www.goulburn.nsw.gov.au

Contact: Planning & Environment

Dib Group Pty Ltd
PO Box 388
LIDCOMBE NSW 1825

SECTION 10.7 (2) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Receipt No.: 333376
Applicant's Reference: 20236
Certificate No: PLAN/1169/2021

DESCRIPTION OF PROPERTY

Address: **16-28 Portland Avenue MARULAN NSW 2579**
Legal Description: **Lot 1 DP 1053945**

1 Names of relevant planning instruments and DCP's

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

State Environmental Planning Policies (SEPP)

SEPP No. 21 – Caravan Parks	*SEPP (Building Sustainability Index: BASIX) 2004*
SEPP No. 33 – Hazardous and Offensive Development	*SEPP (Exempt and Complying Development Codes) 2008*
SEPP No. 36 – Manufactured Home Estates	*SEPP (Housing for Seniors or People with a Disability) 2004*
SEPP No. 50 – Canal Estate Development	*SEPP (Infrastructure) 2007*
SEPP No. 55 – Remediation of Land	*SEPP (Mining, Petroleum Production and Extractive Industries) 2007*
SEPP No. 64 – Advertising and Signage	*SEPP (Koala Habitat Protection) 2020*
SEPP No. 65 - Design Quality of Residential Apartment Development	*SEPP (State & Regional Development) 2011*
SEPP No. 70 – Affordable Housing (Revised Schemes)	*SEPP (State Significant Precincts) 2005*
SEPP (Concurrences and Consents) 2018	*SEPP (Affordable Rental Housing) 2009*
SEPP (Primary Production and Rural Development) 2019	*SEPP (Educational Establishments and Child Care Facilities) 2017*
SEPP (Koala Habitat Protection) 2021	*SEPP (Sydney Drinking Water Catchment) 2011*
SEPP (Vegetation in Non-Rural Areas) 2017	

SECTION 10.7 (2) PLANNING CERTIFICATE

Local Environmental Plan (LEP)

Goulburn Mulwaree Local Environmental Plan 2009

(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 Amendments to the *Goulburn Mulwaree Local Environmental Plan 2009*
Draft Goulburn Mulwaree Local Environmental Plan 2009 (B6 Enterprise Corridor and Currawang) • *This amendment only affects: Lot 12 DP 581011, Lot 1 DP 995523, Lot 1 DP 38459, Lots 1 and 2 DP 1196725, Lots 2-6 DP 38459, Lot 22 DP 1113506, Lots 1 and 2 DP 845895, Lots 1 and 2 DP 153553, Lot Y DP 160746, Lot 33 DP 1062014, Lot B DP 152471, Lot A DP 163373, Lot 1 DP 841582, Lot 43 DP 28002, Lot 1 DP 1062993, Lots 1 and 2 DP 28002, Lot B DP 332337, Lot 51 DP 419287, Lot 20 DP 522273, Lot 1 DP 17363, Lots 131,141, 150, 154, 190 and 204 DP750047, Lot 1 DP 1259043, and Lot 1 DP 590583* Draft Goulburn Mulwaree Local Environmental Plan 2009 (37 Ross Street and 23 Brewer Street, Goulburn) • *This amendment only affects Lots 100 and 101 DP 1214244* Draft Goulburn Mulwaree Local Environmental Plan 2009 (Racecourse Drive, Goulburn) • *This amendment only affects Lots 1 and 2 DP 1225883, Lots 2, 3, 4 and 5 DP 1047328, Lots 1 and 2 DP 1081406, Lots 11 and 12 DP 1184187, Lots 84, 85, 86, 87 and 88 DP 1090102, Lots 1 and 2 DP 1114744, Lots 81 and 82 DP 1061444, Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 DP 1269481* Proposed Natural Disasters Clause
Draft State Environmental Planning Policies (SEPP's)
Draft Environment SEPP *ISEPP – Amendment – Health Infrastructure* *Explanation of Intended Effect - Housing Diversity SEPP* includes the consolidation and amendment of three housing related SEPPs: • *SEPP (Affordable Rental Housing) 2009,* • *SEPP (Housing for Seniors and People with a Disability) 2004,* and • *SEPP No 70 – Affordable Housing (Revised Schemes).* *Explanation of Intended Effect - Agritourism and Small Scale Agricultural* Development outlines proposed amendments to the: • *Standard Instrument (Local Environmental Plans) Order 2006 (Standard Instrument LEP Order),* • *State Environmental Planning Policy (Primary Production and Rural Development) 2019 (PPRD SEPP),* and • *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (Codes SEPP).* *Explanation of Intended Effect - Design and Place SEPP* includes a proposal to: • Repeal and replace *SEPP No 65 – Design Quality of Residential Apartment Development* and *SEPP (Building Sustainability Index: BASIX) 2004 (BASIX SEPP),* and • Consolidate design and place requirements in other SEPPs in the future.

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

Goulburn Mulwaree Development Control Plan 2009

SECTION 10.7 (2) PLANNING CERTIFICATE

(4) In this clause, proposed environmental planning instruments includes a planning proposal for a LEP or a draft environmental planning instrument.

2 Zoning and land use under relevant LEP's

(a) The identity of the zone is IN1 General Industrial
under the *Goulburn Mulwaree Local Environmental Plan 2009*.

(b) The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent.

(c) The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent.

(d) The purposes for which the plan or instrument provides that development is prohibited within the zone.

The answers for parts (b) to (d) are set out in the land use table below:

Zone IN1 General Industrial

1 Objectives of zone
- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.

2 Permitted without consent
Roads.

3 Permitted with consent
Depots; Extensive agriculture; Freight transport facilities; Funeral homes; Garden centres; General industries; Hardware and building supplies; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Rural supplies; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4.

4 Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat launching ramps; Boat sheds; Business premises; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Eco-tourist facilities; Educational establishments; Exhibition homes; Exhibition villages; Function centres; Health services facilities; Heavy industrial storage establishments; Heavy industries; Helipads; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Jetties; Marinas; Mooring pens; Moorings; Pond-based aquaculture Recreation facilities (major); Residential accommodation; Restricted premises; Retail premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities.

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.
No

(f) Whether the land includes or comprises critical habitat.

No the land does not include or comprise critical habitat.

(g) Whether the land is located in a heritage conservation area.

The land is not within a heritage conservation area.

(h) Whether an item of environmental heritage is situated on the land.

An item of environmental heritage is not situated on the land.

SECTION 10.7 (2) PLANNING CERTIFICATE

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

Not applicable to the Goulburn Mulwaree 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
No. Complying development under the Housing Code cannot be undertaken on the land due to the zoning of the land.

Low Rise Housing Diversity Code
No. Complying development under the Low Rise Housing Diversity Code cannot be undertaken on the land due to the zoning of the land.

Greenfield Housing Code
No. Complying development under the Greenfield Housing Code cannot be undertaken on the land due to the land not being within a Greenfield Housing Code Area Map under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

Inland Code
No. Complying development under the Inland Code cannot be undertaken on the land due to the zoning of the land.

Rural Housing Code
No. Complying development under the Rural Housing Code cannot be undertaken on the land due to the zoning of the land.

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

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

Commercial and Industrial Alterations Code
Yes. Complying development under the Commercial and Industrial Alterations Code can be carried out on the land.

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

Container Recycling Facilities Code
Yes. Complying development under the Container Recycling Facilities Code can be carried out on the land.

Subdivisions Code
Yes. Complying development under the Subdivisions Code can be carried out on the land.

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

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

Note. If the land is a lot to which the Housing Code, Rural Housing Code, Housing Alterations Code, General Development Code, Commercial and Industrial Alterations 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.

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

Not applicable to the Goulburn Mulwaree Local Government Area.

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*.

No.

6 Road widening and road realignment

Whether or not the land is affected by Road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*; or

(b) any environmental planning instrument; or

(c) any resolution of the Council.

No.

7 Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by Policy:

(a) adopted by the council, or

(b) adopted by any other public authority,

that restricts development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding)?

No.

7A Flood related development controls information

(1) Whether or not development on the land or part of the land for the purpose of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purpose of group homes or seniors housing) is subject to flood related development controls.

No.

Note: This land is outside the flood planning area on the flood planning map referred in Clause 7.1 *Goulburn Mulwaree Local Environmental Plan 2009*. The land may also be outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2003*. If so, Council has not undertaken a flood study outside the flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

Note: This land is outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2016*. Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

No.

SECTION 10.7 (2) PLANNING CERTIFICATE

Note: This land is outside the flood planning area on the flood planning map referred in Clause 7.1 *Goulburn Mulwaree Local Environmental Plan 2009*. The land may also be outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2003*. If so, Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

Note: This land is outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2016*. Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

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 Act?

No.

9 Contribution plans

The name of each contributions plan applying to the land.

Goulburn Mulwaree Section 94 Contributions Plan 2009 and/ or *Section 94A Development Contributions Plan 2009**

* The *Goulburn Mulwaree Local Infrastructure Contributions Plan 2021* (s.7.11 and s.7.12 plan) commences on 1 June 2021 and repeals the above two Plans upon its commencement.

The land may be affected by any of the following plans under Section 64 of the *Local Government Act 1993*:

Development Servicing Plan for Water Supply, Sewerage and Stormwater 2017.

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. Council is not aware that the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016.

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 the 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. Council has not been notified of a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relating to the land.

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 the Local Land Services or it is registered in the public register under that section).

SECTION 10.7 (2) PLANNING CERTIFICATE

No. Council has not been notified that the land contains an area set aside under Section 60ZC of the *Local Land Services Act 2013*.

11 Bush fire prone land

Whether or not some or all of the land is bush fire prone land.

The land or part of the land is not bush fire prone land.

12 Property vegetation plans

If the land is land to which a property vegetation plan approved under Part 4 of 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 is not aware of a property vegetation plan under the *Native Vegetation Act 2003* relating to the land.

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

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

No, an order under the *Trees (Disputes Between Neighbours) Act 2006* has not been made.

14 Directions under Part 3A

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

No direction is in force.

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 any current site compatibility certificates (seniors housing) in respect of proposed development on the 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 *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* have been imposed as conditions of consent to a development application for the land granted after 11 October 2007.

16 Site compatibility certificates for infrastructure, schools or TAFE establishments

Whether or not Council is aware of a valid site compatibility certificate in respect of proposed development on the land.

Council is not aware of any 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.

SECTION 10.7 (2) PLANNING CERTIFICATE

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

(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.

No terms referred to in clause 17(1) or 37(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* have been imposed as conditions of consent to a development application in respect of the land.

18 Paper subdivision 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.

No the land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

21 Affected Building Notices and Building Product Orders

(1) Whether or not there is any affected building notice of which Council is aware that is in force in respect to the land.

Council is not aware of any affected building notice that is in force in respect of the land.

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

Council is not aware of any affected building notice that is in force in respect of the land.

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

Council is not aware of any intention to make a building product rectification order in respect of the land and is outstanding.

SECTION 10.7 (2) PLANNING CERTIFICATE

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.

The land is not significantly contaminated as at the date this certificate is issued.

(b) Whether or not the land to which the certificate relates is subject to a management order within the meaning of that Act.

The land is not subject to a management order as at the date this certificate is issued.

(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.

The land is not the subject of an approved voluntary management proposal as at the date this certificate is issued.

(d) Whether or not the land to which this certificate relates is subject to an ongoing maintenance order within the meaning of that Act.

The land is not subject to an ongoing maintenance order as at the date this certificate is issued.

(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.

The land is not the subject of a site audit statement as at the date this certificate is issued.

Legislation and Environmental Planning Instruments including *Goulburn Mulwaree Local Environmental Plan 2009* and the *Standard Instrument (Local Environmental Plans) Order 2006* can be found at www.legislation.nsw.gov.au

SECTION 10.7 (5) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

At the date of this certificate, Council is aware of the following matters affecting the above mentioned land (other than those matters set out in Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*.

A Does the land have frontage to a Classified Road and consequently affected by Clauses 3.3.6, 4.1.7, 6.4.2 and 6.4.3 of *Goulburn Mulwaree Development Control Plan 2009*?

No.

B Is the land identified on the Height of Buildings Map and consequently affected by Clause 4.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

C Is the land identified on the Floor Space Ratio Map and consequently affected by Clauses 4.4 and 4.5 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

D Is the land located within 50 metres of a zone boundary and consequently affected by Clause 5.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

Yes.

E Is a permit required from Council to clear vegetation under Part 3 of *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*?

Yes.

Note: The requirements for approval of vegetation clearing are varied depending on the location and uses of the land and the intention of the clearing. The question above relates only to whether a permit is required from Council under *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*.

F Is the land identified on the Urban Release Area Map and consequently affected by Part 6 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

G Is the land identified on the Terrestrial Biodiversity Map and consequently affected by Clause 7.2 *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

Information regarding loose-fill asbestos insulation

Some residential homes located in the Goulburn Mulwaree local government area have been identified as potentially containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

SECTION 10.7 (2) & (5) PLANNING CERTIFICATE PLAN/1169/2021

Contact NSW Fair Trading for further information.

Date of Certificate
31 March 2021

for **Warwick Bennett**
General Manager
Goulburn Mulwaree Council

ADDITIONAL INFORMATION THAT DOES NOT FORM PART OF THE CERTIFICATE

Notice to Prospective Purchasers/Residents of
Urban Land in the Goulburn Mulwaree Local Government Area

Due to extensive growth and development within and alongside the urban areas of the Goulburn Mulwaree Local Government Area, non-residential land uses increasingly adjoin residential developments. These mixed land uses and zones have resulted in the potential for land use conflicts.

Goulburn Mulwaree Council supports the right of persons carrying out legitimate non-residential land use activities on urban land.

Council advises that whilst some land use activities will have formal consent from Council and/or other Government Agencies for operations, other activities may not require consent and are undertaken within the objectives of the land use zone.

Council will not support any action that will unreasonably interfere with the existing use or ongoing operation of land uses, particularly where such activities or uses are carried out in accordance with existing approvals, industry standards and relevant legislation. Many businesses and commercial enterprises carry out operations as required, early in the morning or late in the evening. These operations may involve vehicle movements, machinery noise and trade and supply activities which may impact upon the amenity of an area.

Prospective purchasers of land are encouraged to undertake their own enquiries into any operations or activities on adjoining, neighbouring or nearby properties that may cause noise or amenity impact. Intending purchasers are advised that legitimate land uses in urban areas may include, but are not limited to:

- Agricultural produce stores
- Building trade supply retailers
- Childcare centres and schools
- Concrete batching plants
- Equine training and stabling facilities
- Food businesses
- Home businesses
- Landscape supplies
- Medical practices and services
- Motor vehicle and/or heavy machinery workshops
- Motorsport facilities
- Nurseries
- Nursing homes and aged care facilities
- Petrol stations
- Public recreation facilities including aquatic centres, playgrounds and sporting fields
- Pubs and clubs
- Recycling facilities
- Retail suppliers/ shops
- Steel fabrication and engineering
- Transport depots
- Veterinary practices
- Vehicle retailers
- Waste management facilities
- Water and waste water treatment facilities
- Wholesalers

In addition to the above, prospective purchasers are encouraged to attend locations of interest during different times of the day to determine the suitability of land for their intended use.

ADDITIONAL INFORMATION THAT DOES NOT FORM PART OF THE CERTIFICATE

Notice to Prospective Purchasers/Residents of
Rural Land in the Goulburn Mulwaree Local Government Area

Goulburn Mulwaree Council supports the rights of persons to carry out legitimate rural and agricultural uses and practices on rural land.

Goulburn Mulwaree Council will not support any action to unreasonably interfere with the legitimate rural and agricultural use of the land, where such activities or uses are carried out in accordance with industry standards, relevant regulations or approvals. Council wishes to point out that some rural activities will have required formal consent of Council and/or Government Agencies.

Legitimate activities are not limited to those listed and prospective purchasers are advised that they should be aware of them at the time of purchasing land. Many rural and agricultural practices, by necessity, are carried out very early in the morning or late into the evening. Intending purchasers are advised that legitimate rural and agricultural uses of the land may include:

- Abattoir operations
- Intensive livestock farming
- Dairies
- Livestock waste disposal systems
- Stockyard activities.
- Animal husbandry practices (castration, dehorning, mulesing etc.)
- The presence of noisy animals, including crowing roosters
- Livestock movement on Council roads
- Clearing and land cultivation
- Bush fire hazard reduction burning
- Burning of stubble for cropping operations
- Construction of fire breaks
- Earthmoving including construction of dams, drains and contour banks
- Construction of access roads and tracks
- Pumping and irrigation
- Harvesting operations
- Grain receival operations
- Transportation of rural produce
- Fodder conservation
- Chaff cutting operations
- Silage productions
- The growing of any agricultural crop or pasture species which may produce detectable aromas or pollens e.g. canola & lucerne
- Slashing and mowing of vegetation
- Logging
- Spreading of fertilisers, including lime and gypsum
- Crop spraying by both aerial and ground operations
- Control and eradication of noxious weeds
- Authorised measures to control agricultural pests including baiting, ripping, fumigation and shooting
- Planting of trees and shrubs for woodblocks, windbreaks etc
- Fencing construction and erection
- Tourist facilities
- Manufacture and repair of agricultural machinery
- Processing of rural commodities
- Council Landfill Facilities
- Council Sewerage Treatment Works.

In addition to the above, Council also wishes to highlight the land management responsibilities. In particular weeds management that accompany the ownership of rural land. In this regard, it is advisable to become familiar with Council's 'Rural Living Handbook' to ensure these responsibilities are met. The handbook is available on Council's website at www.goulburn.nsw.gov.au/Development/Plans-Strategies or in hard copy at Customer Service.

Goulburn Mulwaree Council
Locked Bag 22
Goulburn NSW 2580

Civic Centre
184 - 194 Bourke Street
Goulburn NSW 2580
t (02) 4823 4444
e council@goulburn.nsw.gov.au
www.goulburn.nsw.gov.au

Contact: Planning & Environment

Dib Group Pty Ltd
PO Box 388
LIDCOMBE NSW 1825

SECTION 10.7 (2) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Receipt No.: 333376
Applicant's Reference: 20236
Certificate No: PLAN/1171/2021

DESCRIPTION OF PROPERTY

Address: **14 George Street MARULAN NSW 2579**
Legal Description: **Lot 2 DP 1053945**

1 Names of relevant planning instruments and DCP's

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

State Environmental Planning Policies (SEPP)

SEPP No. 21 – Caravan Parks	*SEPP (Building Sustainability Index: BASIX) 2004*
SEPP No. 33 – Hazardous and Offensive Development	*SEPP (Exempt and Complying Development Codes) 2008*
SEPP No. 36 – Manufactured Home Estates	*SEPP (Housing for Seniors or People with a Disability) 2004*
SEPP No. 50 – Canal Estate Development	*SEPP (Infrastructure) 2007*
SEPP No. 55 – Remediation of Land	*SEPP (Mining, Petroleum Production and Extractive Industries) 2007*
SEPP No. 64 – Advertising and Signage	*SEPP (Koala Habitat Protection) 2020*
SEPP No. 65 - Design Quality of Residential Apartment Development	*SEPP (State & Regional Development) 2011*
SEPP No. 70 – Affordable Housing (Revised Schemes)	*SEPP (State Significant Precincts) 2005*
SEPP (Concurrences and Consents) 2018	*SEPP (Affordable Rental Housing) 2009*
SEPP (Primary Production and Rural Development) 2019	*SEPP (Educational Establishments and Child Care Facilities) 2017*
SEPP (Koala Habitat Protection) 2021	*SEPP (Sydney Drinking Water Catchment) 2011*
SEPP (Vegetation in Non-Rural Areas) 2017	

SECTION 10.7 (2) PLANNING CERTIFICATE

Local Environmental Plan (LEP)

Goulburn Mulwaree Local Environmental Plan 2009

(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 Amendments to the *Goulburn Mulwaree Local Environmental Plan 2009*
Draft Goulburn Mulwaree Local Environmental Plan 2009 (B6 Enterprise Corridor and Currawang) • *This amendment only affects: Lot 12 DP 581011, Lot 1 DP 995523, Lot 1 DP 38459, Lots 1 and 2 DP 1196725, Lots 2-6 DP 38459, Lot 22 DP 1113506, Lots 1 and 2 DP 845895, Lots 1 and 2 DP 153553, Lot Y DP 160746, Lot 33 DP 1062014, Lot B DP 152471, Lot A DP 163373, Lot 1 DP 841582, Lot 43 DP 28002, Lot 1 DP 1062993, Lots 1 and 2 DP 28002, Lot B DP 332337, Lot 51 DP 419287, Lot 20 DP 522273, Lot 1 DP 17363, Lots 131,141, 150, 154, 190 and 204 DP750047, Lot 1 DP 1259043, and Lot 1 DP 590583* Draft Goulburn Mulwaree Local Environmental Plan 2009 (37 Ross Street and 23 Brewer Street, Goulburn) • *This amendment only affects Lots 100 and 101 DP 1214244* Draft Goulburn Mulwaree Local Environmental Plan 2009 (Racecourse Drive, Goulburn) • *This amendment only affects Lots 1 and 2 DP 1225883, Lots 2, 3, 4 and 5 DP 1047328, Lots 1 and 2 DP 1081406, Lots 11 and 12 DP 1184187, Lots 84, 85, 86, 87 and 88 DP 1090102, Lots 1 and 2 DP 1114744, Lots 81 and 82 DP 1061444, Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 DP 1269481* Proposed Natural Disasters Clause
Draft State Environmental Planning Policies (SEPP's)
Draft Environment SEPP *ISEPP – Amendment – Health Infrastructure* *Explanation of Intended Effect - Housing Diversity SEPP* includes the consolidation and amendment of three housing related SEPPs: • *SEPP (Affordable Rental Housing) 2009,* • *SEPP (Housing for Seniors and People with a Disability) 2004,* and • *SEPP No 70 – Affordable Housing (Revised Schemes).* *Explanation of Intended Effect - Agritourism and Small Scale Agricultural* Development outlines proposed amendments to the: • *Standard Instrument (Local Environmental Plans) Order 2006 (Standard Instrument LEP Order),* • *State Environmental Planning Policy (Primary Production and Rural Development) 2019 (PPRD SEPP),* and • *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (Codes SEPP).* *Explanation of Intended Effect - Design and Place SEPP* includes a proposal to: • Repeal and replace *SEPP No 65 – Design Quality of Residential Apartment Development* and *SEPP (Building Sustainability Index: BASIX) 2004 (BASIX SEPP),* and • Consolidate design and place requirements in other SEPPs in the future.

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

Goulburn Mulwaree Development Control Plan 2009

SECTION 10.7 (2) PLANNING CERTIFICATE

(4) In this clause, proposed environmental planning instruments includes a planning proposal for a LEP or a draft environmental planning instrument.

2 Zoning and land use under relevant LEP's

(a) The identity of the zone is IN1 General Industrial
under the *Goulburn Mulwaree Local Environmental Plan 2009*.

(b) The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent.

(c) The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent.

(d) The purposes for which the plan or instrument provides that development is prohibited within the zone.

The answers for parts (b) to (d) are set out in the land use table below:

Zone IN1 General Industrial

1 Objectives of zone
- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.

2 Permitted without consent
Roads.

3 Permitted with consent
Depots; Extensive agriculture; Freight transport facilities; Funeral homes; Garden centres; General industries; Hardware and building supplies; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Rural supplies; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4.

4 Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat launching ramps; Boat sheds; Business premises; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Eco-tourist facilities; Educational establishments; Exhibition homes; Exhibition villages; Function centres; Health services facilities; Heavy industrial storage establishments; Heavy industries; Helipads; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Jetties; Marinas; Mooring pens; Moorings; Pond-based aquaculture Recreation facilities (major); Residential accommodation; Restricted premises; Retail premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities.

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.
No

(f) Whether the land includes or comprises critical habitat.

No the land does not include or comprise critical habitat.

(g) Whether the land is located in a heritage conservation area.

The land is not within a heritage conservation area.

(h) Whether an item of environmental heritage is situated on the land.

An item of environmental heritage is not situated on the land.

SECTION 10.7 (2) PLANNING CERTIFICATE

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

Not applicable to the Goulburn Mulwaree 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
No. Complying development under the Housing Code cannot be undertaken on the land due to the zoning of the land.

Low Rise Housing Diversity Code
No. Complying development under the Low Rise Housing Diversity Code cannot be undertaken on the land due to the zoning of the land.

Greenfield Housing Code
No. Complying development under the Greenfield Housing Code cannot be undertaken on the land due to the land not being within a Greenfield Housing Code Area Map under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

Inland Code
No. Complying development under the Inland Code cannot be undertaken on the land due to the zoning of the land.

Rural Housing Code
No. Complying development under the Rural Housing Code cannot be undertaken on the land due to the zoning of the land.

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

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

Commercial and Industrial Alterations Code
Yes. Complying development under the Commercial and Industrial Alterations Code can be carried out on the land.

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

Container Recycling Facilities Code
Yes. Complying development under the Container Recycling Facilities Code can be carried out on the land.

Subdivisions Code
Yes. Complying development under the Subdivisions Code can be carried out on the land.

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

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

Note. If the land is a lot to which the Housing Code, Rural Housing Code, Housing Alterations Code, General Development Code, Commercial and Industrial Alterations 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.

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

Not applicable to the Goulburn Mulwaree Local Government Area.

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*.

No.

6 Road widening and road realignment

Whether or not the land is affected by Road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*; or

(b) any environmental planning instrument; or

(c) any resolution of the Council.

No.

7 Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by Policy:

(a) adopted by the council, or

(b) adopted by any other public authority,

that restricts development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding)?

No.

7A Flood related development controls information

(1) Whether or not development on the land or part of the land for the purpose of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purpose of group homes or seniors housing) is subject to flood related development controls.

No.

Note: This land is outside the flood planning area on the flood planning map referred in Clause 7.1 *Goulburn Mulwaree Local Environmental Plan 2009*. The land may also be outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2003*. If so, Council has not undertaken a flood study outside the flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

Note: This land is outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2016*. Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

No.

SECTION 10.7 (2) PLANNING CERTIFICATE

Note: This land is outside the flood planning area on the flood planning map referred in Clause 7.1 *Goulburn Mulwaree Local Environmental Plan 2009*. The land may also be outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2003*. If so, Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

Note: This land is outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2016*. Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

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 Act?

No.

9 Contribution plans

The name of each contributions plan applying to the land.

Goulburn Mulwaree Section 94 Contributions Plan 2009 and/ or *Section 94A Development Contributions Plan 2009**

* The *Goulburn Mulwaree Local Infrastructure Contributions Plan 2021* (s.7.11 and s.7.12 plan) commences on 1 June 2021 and repeals the above two Plans upon its commencement.

The land may be affected by any of the following plans under Section 64 of the *Local Government Act 1993*:

Development Servicing Plan for Water Supply, Sewerage and Stormwater 2017.

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. Council is not aware that the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016.

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 the 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. Council has not been notified of a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relating to the land.

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 the Local Land Services or it is registered in the public register under that section).

SECTION 10.7 (2) PLANNING CERTIFICATE

No. Council has not been notified that the land contains an area set aside under Section 60ZC of the *Local Land Services Act 2013*.

11 Bush fire prone land

Whether or not some or all of the land is bush fire prone land.

The land or part of the land is not bush fire prone land.

12 Property vegetation plans

If the land is land to which a property vegetation plan approved under Part 4 of 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 is not aware of a property vegetation plan under the *Native Vegetation Act 2003* relating to the land.

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

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

No, an order under the *Trees (Disputes Between Neighbours) Act 2006* has not been made.

14 Directions under Part 3A

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

No direction is in force.

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 any current site compatibility certificates (seniors housing) in respect of proposed development on the 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 *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* have been imposed as conditions of consent to a development application for the land granted after 11 October 2007.

16 Site compatibility certificates for infrastructure, schools or TAFE establishments

Whether or not Council is aware of a valid site compatibility certificate in respect of proposed development on the land.

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

(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.

No terms referred to in clause 17(1) or 37(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* have been imposed as conditions of consent to a development application in respect of the land.

18 Paper subdivision 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.

No the land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

21 Affected Building Notices and Building Product Orders

(1) Whether or not there is any affected building notice of which Council is aware that is in force in respect to the land.

Council is not aware of any affected building notice that is in force in respect of the land.

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

Council is not aware of any affected building notice that is in force in respect of the land.

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

Council is not aware of any intention to make a building product rectification order in respect of the land and is outstanding.

SECTION 10.7 (2) PLANNING CERTIFICATE

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.

The land is not significantly contaminated as at the date this certificate is issued.

(b) Whether or not the land to which the certificate relates is subject to a management order within the meaning of that Act.

The land is not subject to a management order as at the date this certificate is issued.

(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.

The land is not the subject of an approved voluntary management proposal as at the date this certificate is issued.

(d) Whether or not the land to which this certificate relates is subject to an ongoing maintenance order within the meaning of that Act.

The land is not subject to an ongoing maintenance order as at the date this certificate is issued.

(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.

The land is not the subject of a site audit statement as at the date this certificate is issued.

Legislation and Environmental Planning Instruments including *Goulburn Mulwaree Local Environmental Plan 2009* and the *Standard Instrument (Local Environmental Plans) Order 2006* can be found at www.legislation.nsw.gov.au

SECTION 10.7 (5) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

At the date of this certificate, Council is aware of the following matters affecting the above mentioned land (other than those matters set out in Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*.

A Does the land have frontage to a Classified Road and consequently affected by Clauses 3.3.6, 4.1.7, 6.4.2 and 6.4.3 of *Goulburn Mulwaree Development Control Plan 2009*?

No.

B Is the land identified on the Height of Buildings Map and consequently affected by Clause 4.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

C Is the land identified on the Floor Space Ratio Map and consequently affected by Clauses 4.4 and 4.5 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

D Is the land located within 50 metres of a zone boundary and consequently affected by Clause 5.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

Yes.

E Is a permit required from Council to clear vegetation under Part 3 of *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*?

Yes.

Note: The requirements for approval of vegetation clearing are varied depending on the location and uses of the land and the intention of the clearing. The question above relates only to whether a permit is required from Council under *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*.

F Is the land identified on the Urban Release Area Map and consequently affected by Part 6 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

G Is the land identified on the Terrestrial Biodiversity Map and consequently affected by Clause 7.2 *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

Information regarding loose-fill asbestos insulation

Some residential homes located in the Goulburn Mulwaree local government area have been identified as potentially containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

SECTION 10.7 (2) & (5) PLANNING CERTIFICATE PLAN/1171/2021

Contact NSW Fair Trading for further information.

Date of Certificate
31 March 2021

for **Warwick Bennett**
General Manager
Goulburn Mulwaree Council

ADDITIONAL INFORMATION THAT DOES NOT FORM PART OF THE CERTIFICATE

Notice to Prospective Purchasers/Residents of
Urban Land in the Goulburn Mulwaree Local Government Area

Due to extensive growth and development within and alongside the urban areas of the Goulburn Mulwaree Local Government Area, non-residential land uses increasingly adjoin residential developments. These mixed land uses and zones have resulted in the potential for land use conflicts.

Goulburn Mulwaree Council supports the right of persons carrying out legitimate non-residential land use activities on urban land.

Council advises that whilst some land use activities will have formal consent from Council and/or other Government Agencies for operations, other activities may not require consent and are undertaken within the objectives of the land use zone.

Council will not support any action that will unreasonably interfere with the existing use or ongoing operation of land uses, particularly where such activities or uses are carried out in accordance with existing approvals, industry standards and relevant legislation. Many businesses and commercial enterprises carry out operations as required, early in the morning or late in the evening. These operations may involve vehicle movements, machinery noise and trade and supply activities which may impact upon the amenity of an area.

Prospective purchasers of land are encouraged to undertake their own enquiries into any operations or activities on adjoining, neighbouring or nearby properties that may cause noise or amenity impact. Intending purchasers are advised that legitimate land uses in urban areas may include, but are not limited to:

- Agricultural produce stores
- Building trade supply retailers
- Childcare centres and schools
- Concrete batching plants
- Equine training and stabling facilities
- Food businesses
- Home businesses
- Landscape supplies
- Medical practices and services
- Motor vehicle and/or heavy machinery workshops
- Motorsport facilities
- Nurseries
- Nursing homes and aged care facilities
- Petrol stations
- Public recreation facilities including aquatic centres, playgrounds and sporting fields
- Pubs and clubs
- Recycling facilities
- Retail suppliers/ shops
- Steel fabrication and engineering
- Transport depots
- Veterinary practices
- Vehicle retailers
- Waste management facilities
- Water and waste water treatment facilities
- Wholesalers

In addition to the above, prospective purchasers are encouraged to attend locations of interest during different times of the day to determine the suitability of land for their intended use.

ADDITIONAL INFORMATION THAT DOES NOT FORM PART OF THE CERTIFICATE

Notice to Prospective Purchasers/Residents of
Rural Land in the Goulburn Mulwaree Local Government Area

Goulburn Mulwaree Council supports the rights of persons to carry out legitimate rural and agricultural uses and practices on rural land.

Goulburn Mulwaree Council will not support any action to unreasonably interfere with the legitimate rural and agricultural use of the land, where such activities or uses are carried out in accordance with industry standards, relevant regulations or approvals. Council wishes to point out that some rural activities will have required formal consent of Council and/or Government Agencies.

Legitimate activities are not limited to those listed and prospective purchasers are advised that they should be aware of them at the time of purchasing land. Many rural and agricultural practices, by necessity, are carried out very early in the morning or late into the evening. Intending purchasers are advised that legitimate rural and agricultural uses of the land may include:

- Abattoir operations
- Intensive livestock farming
- Dairies
- Livestock waste disposal systems
- Stockyard activities.
- Animal husbandry practices (castration, dehorning, mulesing etc.)
- The presence of noisy animals, including crowing roosters
- Livestock movement on Council roads
- Clearing and land cultivation
- Bush fire hazard reduction burning
- Burning of stubble for cropping operations
- Construction of fire breaks
- Earthmoving including construction of dams, drains and contour banks
- Construction of access roads and tracks
- Pumping and irrigation
- Harvesting operations
- Grain receival operations
- Transportation of rural produce
- Fodder conservation
- Chaff cutting operations
- Silage productions
- The growing of any agricultural crop or pasture species which may produce detectable aromas or pollens e.g. canola & lucerne
- Slashing and mowing of vegetation
- Logging
- Spreading of fertilisers, including lime and gypsum
- Crop spraying by both aerial and ground operations
- Control and eradication of noxious weeds
- Authorised measures to control agricultural pests including baiting, ripping, fumigation and shooting
- Planting of trees and shrubs for woodblocks, windbreaks etc
- Fencing construction and erection
- Tourist facilities
- Manufacture and repair of agricultural machinery
- Processing of rural commodities
- Council Landfill Facilities
- Council Sewerage Treatment Works.

In addition to the above, Council also wishes to highlight the land management responsibilities. In particular weeds management that accompany the ownership of rural land. In this regard, it is advisable to become familiar with Council's 'Rural Living Handbook' to ensure these responsibilities are met. The handbook is available on Council's website at www.goulburn.nsw.gov.au/Development/Plans-Strategies or in hard copy at Customer Service.

Goulburn Mulwaree Council
Locked Bag 22
Goulburn NSW 2580

Civic Centre
184 - 194 Bourke Street
Goulburn NSW 2580
t (02) 4823 4444
e council@goulburn.nsw.gov.au
www.goulburn.nsw.gov.au

Contact: Planning & Environment

Dib Group Pty Ltd
PO Box 388
LIDCOMBE NSW 1825

SECTION 10.7 (2) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Receipt No.: 333376
Applicant's Reference: 20236
Certificate No: PLAN/1170/2021

DESCRIPTION OF PROPERTY

Address: **16 George Street MARULAN NSW 2579**
Legal Description: **Lot 3 DP 1053945 Parish Marulan**

1 Names of relevant planning instruments and DCP's

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

State Environmental Planning Policies (SEPP)

SEPP No. 21 – Caravan Parks	*SEPP (Building Sustainability Index: BASIX) 2004*
SEPP No. 33 – Hazardous and Offensive Development	*SEPP (Exempt and Complying Development Codes) 2008*
SEPP No. 36 – Manufactured Home Estates	*SEPP (Housing for Seniors or People with a Disability) 2004*
SEPP No. 50 – Canal Estate Development	*SEPP (Infrastructure) 2007*
SEPP No. 55 – Remediation of Land	*SEPP (Mining, Petroleum Production and Extractive Industries) 2007*
SEPP No. 64 – Advertising and Signage	*SEPP (Koala Habitat Protection) 2020*
SEPP No. 65 - Design Quality of Residential Apartment Development	*SEPP (State & Regional Development) 2011*
SEPP No. 70 – Affordable Housing (Revised Schemes)	*SEPP (State Significant Precincts) 2005*
SEPP (Concurrences and Consents) 2018	*SEPP (Affordable Rental Housing) 2009*
SEPP (Primary Production and Rural Development) 2019	*SEPP (Educational Establishments and Child Care Facilities) 2017*
SEPP (Koala Habitat Protection) 2021	*SEPP (Sydney Drinking Water Catchment) 2011*
SEPP (Vegetation in Non-Rural Areas) 2017	

SECTION 10.7 (2) PLANNING CERTIFICATE

Local Environmental Plan (LEP)

Goulburn Mulwaree Local Environmental Plan 2009

(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 Amendments to the *Goulburn Mulwaree Local Environmental Plan 2009*
Draft Goulburn Mulwaree Local Environmental Plan 2009 (B6 Enterprise Corridor and Currawang) • *This amendment only affects: Lot 12 DP 581011, Lot 1 DP 995523, Lot 1 DP 38459, Lots 1 and 2 DP 1196725, Lots 2-6 DP 38459, Lot 22 DP 1113506, Lots 1 and 2 DP 845895, Lots 1 and 2 DP 153553, Lot Y DP 160746, Lot 33 DP 1062014, Lot B DP 152471, Lot A DP 163373, Lot 1 DP 841582, Lot 43 DP 28002, Lot 1 DP 1062993, Lots 1 and 2 DP 28002, Lot B DP 332337, Lot 51 DP 419287, Lot 20 DP 522273, Lot 1 DP 17363, Lots 131,141, 150, 154, 190 and 204 DP750047, Lot 1 DP 1259043, and Lot 1 DP 590583* Draft Goulburn Mulwaree Local Environmental Plan 2009 (37 Ross Street and 23 Brewer Street, Goulburn) • *This amendment only affects Lots 100 and 101 DP 1214244* Draft Goulburn Mulwaree Local Environmental Plan 2009 (Racecourse Drive, Goulburn) • *This amendment only affects Lots 1 and 2 DP 1225883, Lots 2, 3, 4 and 5 DP 1047328, Lots 1 and 2 DP 1081406, Lots 11 and 12 DP 1184187, Lots 84, 85, 86, 87 and 88 DP 1090102, Lots 1 and 2 DP 1114744, Lots 81 and 82 DP 1061444, Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 DP 1269481* Proposed Natural Disasters Clause
Draft State Environmental Planning Policies (SEPP's)
Draft Environment SEPP *ISEPP – Amendment – Health Infrastructure* *Explanation of Intended Effect - Housing Diversity SEPP* includes the consolidation and amendment of three housing related SEPPs: • *SEPP (Affordable Rental Housing) 2009,* • *SEPP (Housing for Seniors and People with a Disability) 2004,* and • *SEPP No 70 – Affordable Housing (Revised Schemes).* *Explanation of Intended Effect - Agritourism and Small Scale Agricultural* Development outlines proposed amendments to the: • *Standard Instrument (Local Environmental Plans) Order 2006 (Standard Instrument LEP Order),* • *State Environmental Planning Policy (Primary Production and Rural Development) 2019 (PPRD SEPP),* and • *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (Codes SEPP).* *Explanation of Intended Effect - Design and Place SEPP* includes a proposal to: • Repeal and replace *SEPP No 65 – Design Quality of Residential Apartment Development* and *SEPP (Building Sustainability Index: BASIX) 2004 (BASIX SEPP),* and • Consolidate design and place requirements in other SEPPs in the future.

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

Goulburn Mulwaree Development Control Plan 2009

SECTION 10.7 (2) PLANNING CERTIFICATE

(4) In this clause, proposed environmental planning instruments includes a planning proposal for a LEP or a draft environmental planning instrument.

2 Zoning and land use under relevant LEP's

(a) The identity of the zone is IN1 General Industrial
under the *Goulburn Mulwaree Local Environmental Plan 2009*.

(b) The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent.

(c) The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent.

(d) The purposes for which the plan or instrument provides that development is prohibited within the zone.

The answers for parts (b) to (d) are set out in the land use table below:

Zone IN1 General Industrial

1 Objectives of zone
- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.

2 Permitted without consent
Roads.

3 Permitted with consent
Depots; Extensive agriculture; Freight transport facilities; Funeral homes; Garden centres; General industries; Hardware and building supplies; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Rural supplies; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4.

4 Prohibited
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat launching ramps; Boat sheds; Business premises; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Eco-tourist facilities; Educational establishments; Exhibition homes; Exhibition villages; Function centres; Health services facilities; Heavy industrial storage establishments; Heavy industries; Helipads; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Jetties; Marinas; Mooring pens; Moorings; Pond-based aquaculture Recreation facilities (major); Residential accommodation; Restricted premises; Retail premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities.

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.
No

(f) Whether the land includes or comprises critical habitat.

No the land does not include or comprise critical habitat.

(g) Whether the land is located in a heritage conservation area.

The land is not within a heritage conservation area.

(h) Whether an item of environmental heritage is situated on the land.

An item of environmental heritage is not situated on the land.

SECTION 10.7 (2) PLANNING CERTIFICATE

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

Not applicable to the Goulburn Mulwaree 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
No. Complying development under the Housing Code cannot be undertaken on the land due to the zoning of the land.

Low Rise Housing Diversity Code
No. Complying development under the Low Rise Housing Diversity Code cannot be undertaken on the land due to the zoning of the land.

Greenfield Housing Code
No. Complying development under the Greenfield Housing Code cannot be undertaken on the land due to the land not being within a Greenfield Housing Code Area Map under the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

Inland Code
No. Complying development under the Inland Code cannot be undertaken on the land due to the zoning of the land.

Rural Housing Code
No. Complying development under the Rural Housing Code cannot be undertaken on the land due to the zoning of the land.

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

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

Commercial and Industrial Alterations Code
Yes. Complying development under the Commercial and Industrial Alterations Code can be carried out on the land.

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

Container Recycling Facilities Code
Yes. Complying development under the Container Recycling Facilities Code can be carried out on the land.

Subdivisions Code
Yes. Complying development under the Subdivisions Code can be carried out on the land.

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

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

Note. If the land is a lot to which the Housing Code, Rural Housing Code, Housing Alterations Code, General Development Code, Commercial and Industrial Alterations 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.

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

Not applicable to the Goulburn Mulwaree Local Government Area.

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*.

No.

6 Road widening and road realignment

Whether or not the land is affected by Road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*; or

(b) any environmental planning instrument; or

(c) any resolution of the Council.

No.

7 Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by Policy:

(a) adopted by the council, or

(b) adopted by any other public authority,

that restricts development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding)?

No.

7A Flood related development controls information

(1) Whether or not development on the land or part of the land for the purpose of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purpose of group homes or seniors housing) is subject to flood related development controls.

No.

Note: This land is outside the flood planning area on the flood planning map referred in Clause 7.1 *Goulburn Mulwaree Local Environmental Plan 2009*. The land may also be outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2003*. If so, Council has not undertaken a flood study outside the flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

Note: This land is outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2016*. Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

No.

SECTION 10.7 (2) PLANNING CERTIFICATE

Note: This land is outside the flood planning area on the flood planning map referred in Clause 7.1 *Goulburn Mulwaree Local Environmental Plan 2009*. The land may also be outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2003*. If so, Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

Note: This land is outside the flood study area referred to in the *Wollondilly and Mulwaree Rivers Flood Study 2016*. Council has not undertaken a flood study on the land. You should make your own enquiries as to the potential for periodic inundation and flooding events.

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 Act?

No.

9 Contribution plans

The name of each contributions plan applying to the land.

Goulburn Mulwaree Section 94 Contributions Plan 2009 and/ or *Section 94A Development Contributions Plan 2009**

* The *Goulburn Mulwaree Local Infrastructure Contributions Plan 2021* (s.7.11 and s.7.12 plan) commences on 1 June 2021 and repeals the above two Plans upon its commencement.

The land may be affected by any of the following plans under Section 64 of the *Local Government Act 1993*:

Development Servicing Plan for Water Supply, Sewerage and Stormwater 2017.

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. Council is not aware that the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016.

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 the 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. Council has not been notified of a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relating to the land.

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 the Local Land Services or it is registered in the public register under that section).

SECTION 10.7 (2) PLANNING CERTIFICATE

No. Council has not been notified that the land contains an area set aside under Section 60ZC of the *Local Land Services Act 2013*.

11 Bush fire prone land

Whether or not some or all of the land is bush fire prone land.

The land or part of the land is not bush fire prone land.

12 Property vegetation plans

If the land is land to which a property vegetation plan approved under Part 4 of 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 is not aware of a property vegetation plan under the *Native Vegetation Act 2003* relating to the land.

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

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

No, an order under the *Trees (Disputes Between Neighbours) Act 2006* has not been made.

14 Directions under Part 3A

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

No direction is in force.

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 any current site compatibility certificates (seniors housing) in respect of proposed development on the 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 *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* have been imposed as conditions of consent to a development application for the land granted after 11 October 2007.

16 Site compatibility certificates for infrastructure, schools or TAFE establishments

Whether or not Council is aware of a valid site compatibility certificate in respect of proposed development on the land.

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

(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.

No terms referred to in clause 17(1) or 37(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* have been imposed as conditions of consent to a development application in respect of the land.

18 Paper subdivision 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.

No the land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

21 Affected Building Notices and Building Product Orders

(1) Whether or not there is any affected building notice of which Council is aware that is in force in respect to the land.

Council is not aware of any affected building notice that is in force in respect of the land.

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

Council is not aware of any affected building notice that is in force in respect of the land.

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

Council is not aware of any intention to make a building product rectification order in respect of the land and is outstanding.

SECTION 10.7 (2) PLANNING CERTIFICATE

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.

The land is not significantly contaminated as at the date this certificate is issued.

(b) Whether or not the land to which the certificate relates is subject to a management order within the meaning of that Act.

The land is not subject to a management order as at the date this certificate is issued.

(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.

The land is not the subject of an approved voluntary management proposal as at the date this certificate is issued.

(d) Whether or not the land to which this certificate relates is subject to an ongoing maintenance order within the meaning of that Act.

The land is not subject to an ongoing maintenance order as at the date this certificate is issued.

(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.

The land is not the subject of a site audit statement as at the date this certificate is issued.

Legislation and Environmental Planning Instruments including *Goulburn Mulwaree Local Environmental Plan 2009* and the *Standard Instrument (Local Environmental Plans) Order 2006* can be found at www.legislation.nsw.gov.au

SECTION 10.7 (5) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

At the date of this certificate, Council is aware of the following matters affecting the above mentioned land (other than those matters set out in Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*.

A Does the land have frontage to a Classified Road and consequently affected by Clauses 3.3.6, 4.1.7, 6.4.2 and 6.4.3 of *Goulburn Mulwaree Development Control Plan 2009*?

No.

B Is the land identified on the Height of Buildings Map and consequently affected by Clause 4.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

C Is the land identified on the Floor Space Ratio Map and consequently affected by Clauses 4.4 and 4.5 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

D Is the land located within 50 metres of a zone boundary and consequently affected by Clause 5.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

Yes.

E Is a permit required from Council to clear vegetation under Part 3 of *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*?

Yes.

Note: The requirements for approval of vegetation clearing are varied depending on the location and uses of the land and the intention of the clearing. The question above relates only to whether a permit is required from Council under *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*.

F Is the land identified on the Urban Release Area Map and consequently affected by Part 6 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

G Is the land identified on the Terrestrial Biodiversity Map and consequently affected by Clause 7.2 *Goulburn Mulwaree Local Environmental Plan 2009*?

No.

Information regarding loose-fill asbestos insulation

Some residential homes located in the Goulburn Mulwaree local government area have been identified as potentially containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

SECTION 10.7 (2) & (5) PLANNING CERTIFICATE PLAN/1170/2021

Contact NSW Fair Trading for further information.

Date of Certificate
31 March 2021

for **Warwick Bennett**
General Manager
Goulburn Mulwaree Council

ADDITIONAL INFORMATION THAT DOES NOT FORM PART OF THE CERTIFICATE

Notice to Prospective Purchasers/Residents of
Urban Land in the Goulburn Mulwaree Local Government Area

Due to extensive growth and development within and alongside the urban areas of the Goulburn Mulwaree Local Government Area, non-residential land uses increasingly adjoin residential developments. These mixed land uses and zones have resulted in the potential for land use conflicts.

Goulburn Mulwaree Council supports the right of persons carrying out legitimate non-residential land use activities on urban land.

Council advises that whilst some land use activities will have formal consent from Council and/or other Government Agencies for operations, other activities may not require consent and are undertaken within the objectives of the land use zone.

Council will not support any action that will unreasonably interfere with the existing use or ongoing operation of land uses, particularly where such activities or uses are carried out in accordance with existing approvals, industry standards and relevant legislation. Many businesses and commercial enterprises carry out operations as required, early in the morning or late in the evening. These operations may involve vehicle movements, machinery noise and trade and supply activities which may impact upon the amenity of an area.

Prospective purchasers of land are encouraged to undertake their own enquiries into any operations or activities on adjoining, neighbouring or nearby properties that may cause noise or amenity impact. Intending purchasers are advised that legitimate land uses in urban areas may include, but are not limited to:

- Agricultural produce stores
- Building trade supply retailers
- Childcare centres and schools
- Concrete batching plants
- Equine training and stabling facilities
- Food businesses
- Home businesses
- Landscape supplies
- Medical practices and services
- Motor vehicle and/or heavy machinery workshops
- Motorsport facilities
- Nurseries
- Nursing homes and aged care facilities
- Petrol stations
- Public recreation facilities including aquatic centres, playgrounds and sporting fields
- Pubs and clubs
- Recycling facilities
- Retail suppliers/ shops
- Steel fabrication and engineering
- Transport depots
- Veterinary practices
- Vehicle retailers
- Waste management facilities
- Water and waste water treatment facilities
- Wholesalers

In addition to the above, prospective purchasers are encouraged to attend locations of interest during different times of the day to determine the suitability of land for their intended use.

ADDITIONAL INFORMATION THAT DOES NOT FORM PART OF THE CERTIFICATE

Notice to Prospective Purchasers/Residents of
Rural Land in the Goulburn Mulwaree Local Government Area

Goulburn Mulwaree Council supports the rights of persons to carry out legitimate rural and agricultural uses and practices on rural land.

Goulburn Mulwaree Council will not support any action to unreasonably interfere with the legitimate rural and agricultural use of the land, where such activities or uses are carried out in accordance with industry standards, relevant regulations or approvals. Council wishes to point out that some rural activities will have required formal consent of Council and/or Government Agencies.

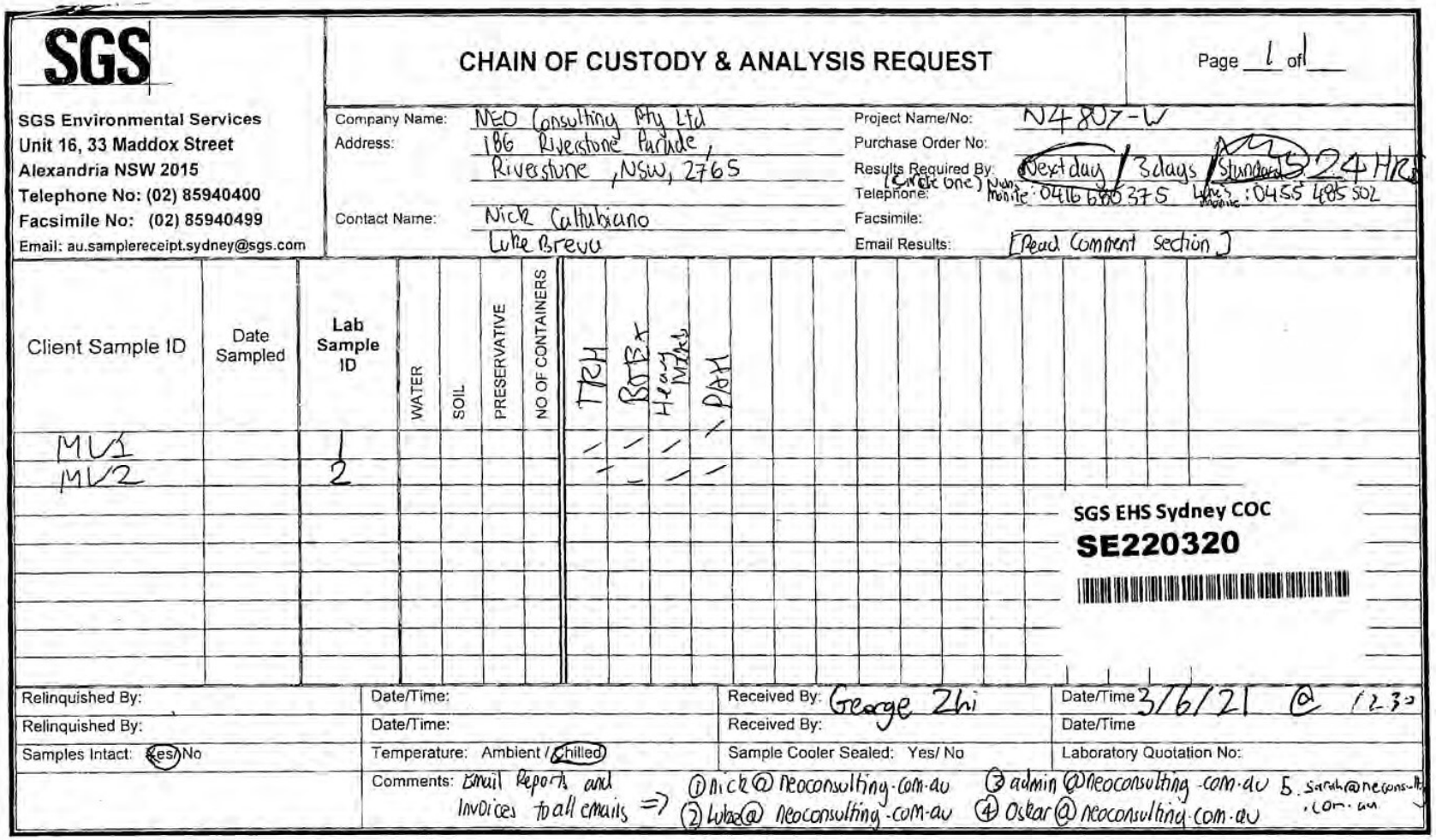
Legitimate activities are not limited to those listed and prospective purchasers are advised that they should be aware of them at the time of purchasing land. Many rural and agricultural practices, by necessity, are carried out very early in the morning or late into the evening. Intending purchasers are advised that legitimate rural and agricultural uses of the land may include:

- Abattoir operations
- Intensive livestock farming
- Dairies
- Livestock waste disposal systems
- Stockyard activities.
- Animal husbandry practices (castration, dehorning, mulesing etc.)
- The presence of noisy animals, including crowing roosters
- Livestock movement on Council roads
- Clearing and land cultivation
- Bush fire hazard reduction burning
- Burning of stubble for cropping operations
- Construction of fire breaks
- Earthmoving including construction of dams, drains and contour banks
- Construction of access roads and tracks
- Pumping and irrigation
- Harvesting operations
- Grain receival operations
- Transportation of rural produce
- Fodder conservation
- Chaff cutting operations
- Silage productions
- The growing of any agricultural crop or pasture species which may produce detectable aromas or pollens e.g. canola & lucerne
- Slashing and mowing of vegetation
- Logging
- Spreading of fertilisers, including lime and gypsum
- Crop spraying by both aerial and ground operations
- Control and eradication of noxious weeds
- Authorised measures to control agricultural pests including baiting, ripping, fumigation and shooting
- Planting of trees and shrubs for woodblocks, windbreaks etc
- Fencing construction and erection
- Tourist facilities
- Manufacture and repair of agricultural machinery
- Processing of rural commodities
- Council Landfill Facilities
- Council Sewerage Treatment Works.

In addition to the above, Council also wishes to highlight the land management responsibilities. In particular weeds management that accompany the ownership of rural land. In this regard, it is advisable to become familiar with Council's 'Rural Living Handbook' to ensure these responsibilities are met. The handbook is available on Council's website at www.goulburn.nsw.gov.au/Development/Plans-Strategies or in hard copy at Customer Service.

APPENDIX D

Certificates of Analysis



SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 1 of 1

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name: NEO Consulting Pty Ltd
Address: 186 Riverstone Parade, Riverstone, NSW, 2765
Contact Name: Nick Caltabiano, Luke Brew

Project Name/No: N4807-W
Purchase Order No:
Results Required By: (Circle One) Next day / 3 days / Standard 5 24 HRS
Telephone: Nick's mobile: 0416 666 375 Luke's mobile: 0455 485 502
Facsimile:
Email Results: [Read Comment section]

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	TRH	BOTEX	Heavy Metals	PAH
MW1		1					/	/	/	/
MW2		2					/	/	/	/

SGS EHS Sydney COC
SE220320

Relinquished By:	Date/Time:	Received By: George Zhi	Date/Time 3/6/21 @ 12:30
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: (Yes) No	Temperature: Ambient / (Chilled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments: Email Reports and Invoices to all emails => (1) nick@neoconsulting.com.au (2) luke@neoconsulting.com.au (3) admin@neoconsulting.com.au (4) Oskar@neoconsulting.com.au 5. sarah@neoconsulting.com.au		

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Ref: BLANK_COC/ver.2/16.08.2007/Page 1 of 1

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Admin
Client	NEO CONSULTING PTY LTD
Address	PO BOX 279 RIVERSTONE NSW 2765
Telephone	0416 680 375
Facsimile	(Not specified)
Email	admin@neoconsulting.com.au
Project	**N4806**
Order Number	(Not specified)
Samples	28

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE219984 R0**
Date Received	25/5/2021
Date Reported	2/6/2021

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.

A portion of the soil sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. For identification of asbestos in soil samples, Industries & environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

SGS

ANALYTICAL RESULTS SE219984 R0

VOC's in Soil [AN433] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

SGS

ANALYTICAL RESULTS SE219984 R0

VOC's in Soil [AN433] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1

SGS

ANALYTICAL RESULTS SE219984 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

SGS

ANALYTICAL RESULTS SE219984 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	**67**	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	**99**	**110**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	**91**	**100**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	**110**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

SGS ANALYTICAL RESULTS SE219984 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
TRH C10-C14	mg/kg	20	<20	**230**	**160**	<20	<20
TRH C15-C28	mg/kg	45	<45	**620**	**440**	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	**400**	**280**	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	**400**	**280**	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	**450**	**330**	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	**850**	**600**	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	**850**	**600**	<210	<210

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

SGS

ANALYTICAL RESULTS SE219984 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219984 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219984 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219984 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219984 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219984 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219984 R0

OP Pesticides in Soil [AN420] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

SGS ANALYTICAL RESULTS SE219984 R0

OP Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

SGS

ANALYTICAL RESULTS SE219984 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 31/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
Arsenic, As	mg/kg	1	2	5	4	3	5
Cadmium, Cd	mg/kg	0.3	<0.3	1.5	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	2.1	7.3	7.4	6.1	10
Copper, Cu	mg/kg	0.5	1.6	17	2.4	0.6	0.9
Lead, Pb	mg/kg	1	6	30	15	9	10
Nickel, Ni	mg/kg	0.5	0.8	5.2	1.5	0.8	2.0
Zinc, Zn	mg/kg	2	10	98	19	9.4	16

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
Arsenic, As	mg/kg	1	6	6	5	4	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	7.6	11	5.8	8.1
Copper, Cu	mg/kg	0.5	<0.5	0.6	0.6	1.1	1.7
Lead, Pb	mg/kg	1	13	14	10	12	16
Nickel, Ni	mg/kg	0.5	1.5	1.1	2.2	1.7	2.8
Zinc, Zn	mg/kg	2	8.6	13	13	17	24

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
Arsenic, As	mg/kg	1	4	5	2	3	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.6	9.2	5.8	4.9	7.2
Copper, Cu	mg/kg	0.5	1.1	3.7	3.8	3.1	1.3
Lead, Pb	mg/kg	1	10	13	5	4	8
Nickel, Ni	mg/kg	0.5	1.8	2.7	2.3	3.2	1.4
Zinc, Zn	mg/kg	2	17	35	32	30	7.5

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
Arsenic, As	mg/kg	1	5	5	5	3	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	9.4	7.3	7.0	5.7
Copper, Cu	mg/kg	0.5	3.2	1.8	0.8	<0.5	0.6
Lead, Pb	mg/kg	1	10	9	9	15	9
Nickel, Ni	mg/kg	0.5	3.4	1.8	1.8	1.2	1.2
Zinc, Zn	mg/kg	2	39	9.7	9.6	5.9	6.3

SGS

ANALYTICAL RESULTS SE219984 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 31/5/2021 (continued)

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
Arsenic, As	mg/kg	1	**5**	**4**	**3**	**5**	**3**
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	**8.9**	**9.3**	**4.3**	**2.3**	**7.9**
Copper, Cu	mg/kg	0.5	**0.6**	**1.3**	**1.4**	**3.2**	**3.7**
Lead, Pb	mg/kg	1	**9**	**10**	**11**	**10**	**10**
Nickel, Ni	mg/kg	0.5	**1.5**	**2.1**	**1.4**	**1.9**	**1.9**
Zinc, Zn	mg/kg	2	**13**	**17**	**14**	**25**	**16**

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
Arsenic, As	mg/kg	1	**3**	**7**	**3**
Cadmium, Cd	mg/kg	0.3	<0.3	**2.5**	<0.3
Chromium, Cr	mg/kg	0.5	**5.6**	**9.9**	**4.9**
Copper, Cu	mg/kg	0.5	**3.2**	**20**	**3.7**
Lead, Pb	mg/kg	1	**7**	**32**	**6**
Nickel, Ni	mg/kg	0.5	**2.5**	**4.3**	**2.3**
Zinc, Zn	mg/kg	2	**30**	**130**	**29**

SGS

ANALYTICAL RESULTS SE219984 R0

Mercury in Soil [AN312] Tested: 31/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

SGS

ANALYTICAL RESULTS SE219984 R0

Moisture Content [AN002] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 1.2 SOIL - 24/5/2021 SE219984.002	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 2.2 SOIL - 24/5/2021 SE219984.004	BH 3.1 SOIL - 24/5/2021 SE219984.005
% Moisture	%w/w	1	13.7	12.7	20.4	17.9	23.5

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219984.006	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 4.2 SOIL - 24/5/2021 SE219984.008	BH 5.1 SOIL - 24/5/2021 SE219984.009	BH 5.2 SOIL - 24/5/2021 SE219984.010
% Moisture	%w/w	1	18.3	17.1	23.0	17.6	20.5

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 6.2 SOIL - 24/5/2021 SE219984.012	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 7.2 SOIL - 24/5/2021 SE219984.014	BH 8.1 SOIL - 24/5/2021 SE219984.015
% Moisture	%w/w	1	18.9	16.9	7.3	5.7	14.1

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219984.016	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 9.2 SOIL - 24/5/2021 SE219984.018	BH 10.1 SOIL - 24/5/2021 SE219984.019	BH 10.2 SOIL - 24/5/2021 SE219984.020
% Moisture	%w/w	1	12.7	21.5	18.2	18.0	17.3

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 11.2 SOIL - 24/5/2021 SE219984.022	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 12.2 SOIL - 24/5/2021 SE219984.024	BH 13.1 SOIL - 24/5/2021 SE219984.025
% Moisture	%w/w	1	15.2	22.4	17.7	15.9	13.1

PARAMETER	UOM	LOR	BH 13.2 SOIL - 24/5/2021 SE219984.026	D1 SOIL - 24/5/2021 SE219984.027	D2 SOIL - 24/5/2021 SE219984.028
% Moisture	%w/w	1	9.8	14.4	9.9

SGS

ANALYTICAL RESULTS SE219984 R0

Fibre Identification in soil [AN602] **Tested: 31/5/2021**

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219984.001	BH 2.1 SOIL - 24/5/2021 SE219984.003	BH 3.1 SOIL - 24/5/2021 SE219984.005	BH 4.1 SOIL - 24/5/2021 SE219984.007	BH 5.1 SOIL - 24/5/2021 SE219984.009
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219984.011	BH 7.1 SOIL - 24/5/2021 SE219984.013	BH 8.1 SOIL - 24/5/2021 SE219984.015	BH 9.1 SOIL - 24/5/2021 SE219984.017	BH 10.1 SOIL - 24/5/2021 SE219984.019
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH 11.1 SOIL - 24/5/2021 SE219984.021	BH 12.1 SOIL - 24/5/2021 SE219984.023	BH 13.1 SOIL - 24/5/2021 SE219984.025
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01

SGS

METHOD SUMMARY

SE219984 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

SGS

METHOD SUMMARY SE219984 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

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

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

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

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

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

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

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

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

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

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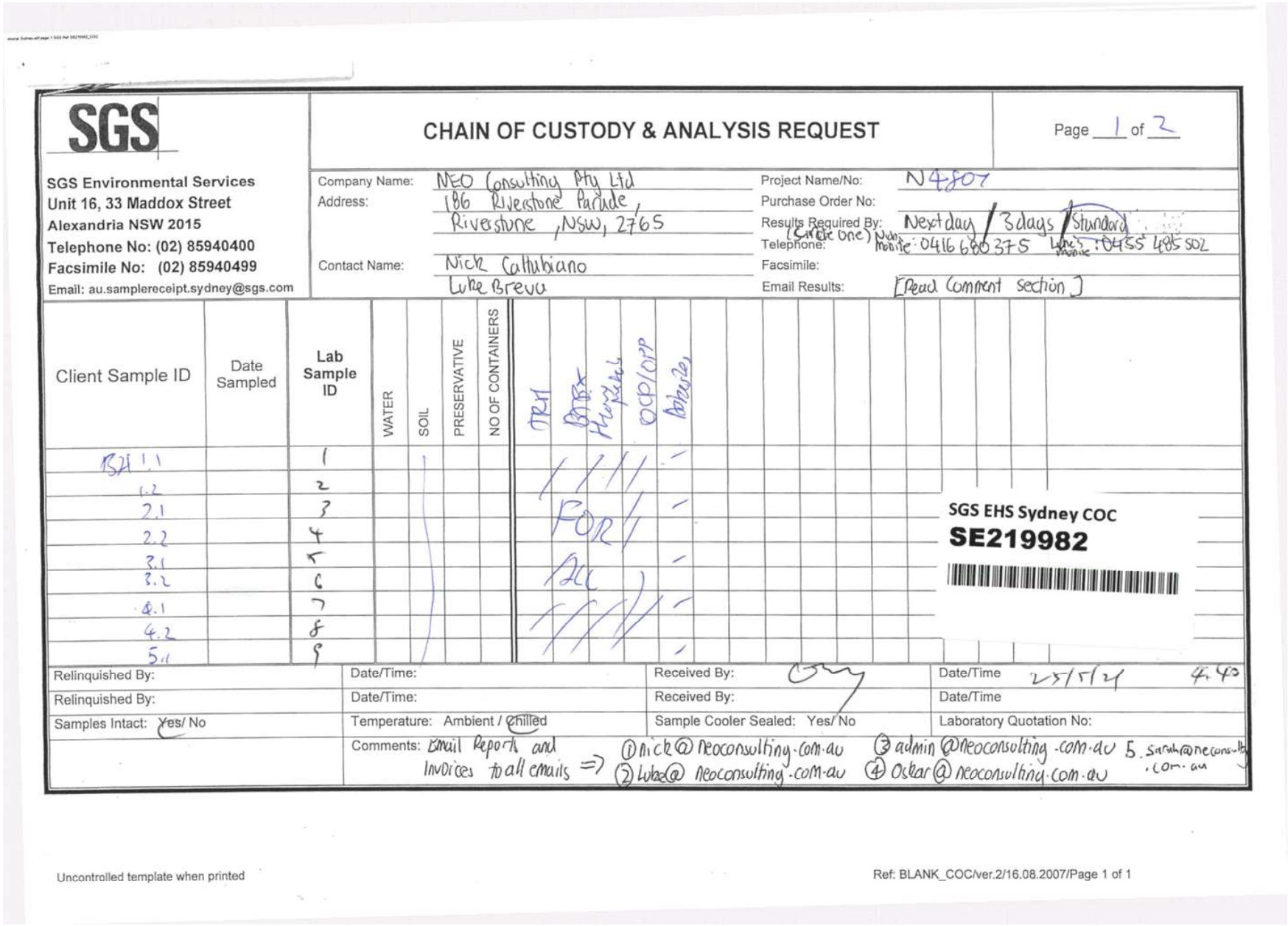

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CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 1 of 2

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name: NEO Consulting Pty Ltd
Address: 186 Riverstone Parade, Riverstone, NSW, 2765
Contact Name: Nick Caltabiano, Luke Brevu

Project Name/No: N4507
Purchase Order No:
Results Required By: Next day / 3 days / Standard (Circle one)
Telephone: Nicks mobile: 0416 680 375 Luke's mobile: 0455 485 502
Facsimile:
Email Results: [Read Comment section]

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	TRH	BTEX Hexane	OCP/OPP	Asbestos
BH 1.1		1								
1.2		2								
2.1		3								
2.2		4								
3.1		5								
3.2		6								
4.1		7								
4.2		8								
5.1		9								

SGS EHS Sydney COC
SE219982

Relinquished By:	Date/Time:	Received By:	Date/Time 23/5/24 4.40
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments: Email Report and Invoices to all emails => (1) nick@neoconsulting.com.au (2) luke@neoconsulting.com.au (3) admin@neoconsulting.com.au (4) Oskar@neoconsulting.com.au 5. sarah@neoconsulting.com.au		

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CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 2 of 2

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name: NEO Consulting Pty Ltd
Address: 186 Riverstone Parade, Riverstone, NSW, 2765
Contact Name: Nick Caltabiano, Luke Brevu

Project Name/No: N 4707
Purchase Order No:
Results Required By: Next day / 3 days / Standard (Circle one)
Telephone: Nick's mobile: 0416 680 375 Luke's mobile: 0455 485 502
Facsimile:
Email Results: [Read Comment section]

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	TRH	BTEX	Heavy Metals	OCP/OPP	Asbestos
BH2 5.2		10					✓	✓	✓	✓	-
" 6.1		11					✓	✓	✓	✓	-
" 6.2		12					✓	✓	✓	✓	-
" 7.1		13					✓	✓	✓	✓	-
" 7.2		14					✓	✓	✓	✓	-
" 8.1		15					✓	✓	✓	✓	-
" 8.2		16					✓	✓	✓	✓	-
" 9.1		17					✓	✓	✓	✓	-
" 9.2		18					✓	✓	✓	✓	-

Relinquished By:	Date/Time:	Received By:	Date/Time 4/11/21 4.40
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments: Email Report and Invoices to all emails => ① nick@neoconsulting.com.au ② luke@neoconsulting.com.au ③ admin@neoconsulting.com.au ④ Oskar@neoconsulting.com.au ⑤ sarah@neoconsulting.com.au		

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Admin
Client	NEO CONSULTING PTY LTD
Address	PO BOX 279 RIVERSTONE NSW 2765
Telephone	0416 680 375
Facsimile	(Not specified)
Email	admin@neoconsulting.com.au
Project	**N4807**
Order Number	(Not specified)
Samples	18

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE219982 R0**
Date Received	25/5/2021
Date Reported	2/6/2021

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.

A portion of the soil sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. For identification of asbestos in soil samples, Industries & environment recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

SGS

ANALYTICAL RESULTS SE219982 R0

VOC's in Soil [AN433] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1

SGS

ANALYTICAL RESULTS SE219982 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

SGS

ANALYTICAL RESULTS SE219982 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

SGS

ANALYTICAL RESULTS SE219982 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

SGS

ANALYTICAL RESULTS SE219982 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219982 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219982 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

SGS ANALYTICAL RESULTS SE219982 R0

OC Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1

SGS

ANALYTICAL RESULTS SE219982 R0

OP Pesticides in Soil [AN420] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

SGS

ANALYTICAL RESULTS SE219982 R0

OP Pesticides in Soil [AN420] Tested: 28/5/2021 (continued)

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

SGS

ANALYTICAL RESULTS SE219982 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 31/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
Arsenic, As	mg/kg	1	2	1	1	2	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	1.8	1.5	2.0	2.8	2.8
Copper, Cu	mg/kg	0.5	1.5	<0.5	1.6	<0.5	6.6
Lead, Pb	mg/kg	1	8	7	8	8	10
Nickel, Ni	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	1.1
Zinc, Zn	mg/kg	2	10	3.7	7.1	4.8	44

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
Arsenic, As	mg/kg	1	1	5	4	6	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	2.8	6.3	14	11	9.8
Copper, Cu	mg/kg	0.5	1.3	4.6	4.4	2.2	2.7
Lead, Pb	mg/kg	1	9	7	9	13	13
Nickel, Ni	mg/kg	0.5	0.7	2.5	3.3	2.8	2.5
Zinc, Zn	mg/kg	2	7.6	32	41	20	20

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
Arsenic, As	mg/kg	1	1	7	5	5	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	1.6	8.8	8.3	7.6	8.2
Copper, Cu	mg/kg	0.5	2.0	1.0	1.7	1.0	0.6
Lead, Pb	mg/kg	1	8	12	28	10	10
Nickel, Ni	mg/kg	0.5	<0.5	1.6	1.0	1.4	1.2
Zinc, Zn	mg/kg	2	9.7	10	24	13	13

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
Arsenic, As	mg/kg	1	5	3	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.6	3.6	7.4
Copper, Cu	mg/kg	0.5	0.8	1.1	0.7
Lead, Pb	mg/kg	1	13	17	10
Nickel, Ni	mg/kg	0.5	1.2	0.8	1.3
Zinc, Zn	mg/kg	2	11	10	11

SGS

ANALYTICAL RESULTS SE219982 R0

Mercury in Soil [AN312] Tested: 31/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

SGS

ANALYTICAL RESULTS SE219982 R0

Moisture Content [AN002] Tested: 28/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 1.2 SOIL - 24/5/2021 SE219982.002	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 2.2 SOIL - 24/5/2021 SE219982.004	BH 3.1 SOIL - 24/5/2021 SE219982.005
% Moisture	%w/w	1	**15.9**	**13.0**	**18.0**	**13.1**	**20.9**

PARAMETER	UOM	LOR	BH 3.2 SOIL - 24/5/2021 SE219982.006	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 4.2 SOIL - 24/5/2021 SE219982.008	BH 5.1 SOIL - 24/5/2021 SE219982.009	BH 5.2 SOIL - 24/5/2021 SE219982.010
% Moisture	%w/w	1	**18.5**	**9.1**	**5.6**	**18.4**	**19.5**

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 6.2 SOIL - 24/5/2021 SE219982.012	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 7.2 SOIL - 24/5/2021 SE219982.014	BH 8.1 SOIL - 24/5/2021 SE219982.015
% Moisture	%w/w	1	**13.5**	**20.2**	**21.7**	**15.7**	**16.8**

PARAMETER	UOM	LOR	BH 8.2 SOIL - 24/5/2021 SE219982.016	BH 9.1 SOIL - 24/5/2021 SE219982.017	BH 9.2 SOIL - 24/5/2021 SE219982.018
% Moisture	%w/w	1	**16.4**	**17.3**	**17.1**

SGS

ANALYTICAL RESULTS SE219982 R0

Fibre Identification in soil [AN602] Tested: 31/5/2021

PARAMETER	UOM	LOR	BH 1.1 SOIL - 24/5/2021 SE219982.001	BH 2.1 SOIL - 24/5/2021 SE219982.003	BH 3.1 SOIL - 24/5/2021 SE219982.005	BH 4.1 SOIL - 24/5/2021 SE219982.007	BH 5.1 SOIL - 24/5/2021 SE219982.009
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH 6.1 SOIL - 24/5/2021 SE219982.011	BH 7.1 SOIL - 24/5/2021 SE219982.013	BH 8.1 SOIL - 24/5/2021 SE219982.015	BH 9.1 SOIL - 24/5/2021 SE219982.017
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01

SGS

METHOD SUMMARY

SE219982 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

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METHOD SUMMARY SE219982 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

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

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

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

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

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

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

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

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

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Admin	Manager	Huong Crawford
Client	NEO CONSULTING PTY LTD	Laboratory	SGS Alexandria Environmental
Address	PO BOX 279 RIVERSTONE NSW 2765	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	0416 680 375	Telephone	+61 2 8594 0400
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	admin@neoconsulting.com.au	Email	au.environmental.sydney@sgs.com
Project	**N4807-W**	SGS Reference	**SE220320 R0**
Order Number	(Not specified)	Date Received	3/6/2021
Samples	2	Date Reported	4/6/2021

COMMENTS

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

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Kamrul AHSAN
Senior Chemist

Teresa NGUYEN
Organic Chemist

SGS

ANALYTICAL RESULTS SE220320 R0

VOCs in Water [AN433] Tested: 3/6/2021

PARAMETER	UOM	LOR	MW1 WATER - 2/6/2021 SE220320.001	MW2 WATER - 2/6/2021 SE220320.002
Benzene	µg/L	0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1
o-xylene	µg/L	0.5	<0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5
Total BTEX	µg/L	3	<3	<3
Naphthalene	µg/L	0.5	<0.5	<0.5

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ANALYTICAL RESULTS SE220320 R0

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 3/6/2021

PARAMETER	UOM	LOR	MW1 WATER - 2/6/2021 SE220320.001	MW2 WATER - 2/6/2021 SE220320.002
TRH C6-C9	µg/L	40	<40	**57**
Benzene (F0)	µg/L	0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	**62**
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	**62**

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ANALYTICAL RESULTS SE220320 R0

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 4/6/2021

PARAMETER	UOM	LOR	MW1 WATER - 2/6/2021 SE220320.001	MW2 WATER - 2/6/2021 SE220320.002
TRH C10-C14	µg/L	50	<50	<50
TRH C15-C28	µg/L	200	**270**	<200
TRH C29-C36	µg/L	200	<200	<200
TRH C37-C40	µg/L	200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500
TRH C10-C40	µg/L	320	<320	<320

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ANALYTICAL RESULTS SE220320 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 4/6/2021

PARAMETER	UOM	LOR	MW1 WATER - 2/6/2021 SE220320.001	MW2 WATER - 2/6/2021 SE220320.002
Naphthalene	µg/L	0.1	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1	<0.1
Fluorene	µg/L	0.1	<0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1	<0.1
Anthracene	µg/L	0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1	<0.1
Pyrene	µg/L	0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1
Chrysene	µg/L	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	<1	<1

SGS

ANALYTICAL RESULTS SE220320 R0

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 3/6/2021

PARAMETER	UOM	LOR	MW1 WATER - 2/6/2021 SE220320.001	MW2 WATER - 2/6/2021 SE220320.002
Arsenic, As	µg/L	1	**1**	<1
Cadmium, Cd	µg/L	0.1	<0.1	<0.1
Chromium, Cr	µg/L	1	<1	<1
Copper, Cu	µg/L	1	**3**	<1
Lead, Pb	µg/L	1	<1	<1
Nickel, Ni	µg/L	1	**1**	<1
Zinc, Zn	µg/L	5	**22**	<5

SGS

ANALYTICAL RESULTS SE220320 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 4/6/2021

PARAMETER	UOM	LOR	MW1 WATER - 2/6/2021 SE220320.001	MW2 WATER - 2/6/2021 SE220320.002
Mercury	mg/L	0.0001	<0.0001	<0.0001

SGS

METHOD SUMMARY

SE220320 R0

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoveerable Hydrocarbons - Silica (TRH-Silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES SE220320 R0

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

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Solid samples expressed on a dry weight basis.

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

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

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

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

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

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

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Attachment 2: Remedial Action Plan

Remedial Action Plan

16 George Street,

Marulan NSW 2579

Lot 3 / - / DP1053945

N5458

22nd September 2021

NEO Consulting Pty Ltd
admin@neoconsulting.com.au
www.neoconsulting.com.au

Report distribution

Detailed Site Investigation

Address: 16 George Street, Marulan NSW 2579

NEO Consulting Report No: N5458

Date: 22nd September 2021

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Version	Prepared by	Reviewed by	Date issue
Draft	Luke Breva Environmental Scientist	Nick Caltabiano Project Manager	14th September 2021
FINAL	Luke Breva Environmental Scientist	Nick Caltabiano Project Manager	22nd September 2021

Report Revision	Details	Report No.	Date	Amended By
1	FINAL Report	N5458	22nd September 2021	-
		Issued By:	Nick Caltabiano	

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APPENDICIES

APPENDIX A – FIGURE

EXECUTIVE SUMMARY

NEO Consulting Pty Ltd (NEO) were appointed by DIB Group Pty Ltd (the client) to produce a Remediation Action Plan (RAP) for the site located at 16 George Street, Marulan NSW 2579 (the site).

The objectives of this RAP are to guide the site's remedial and validation process by providing a targeted remediation strategy to address the following:

- Remediation of Total Recoverable Hydrocarbon (TRH) fractions $>C_{10}$-C_{16}, $>C_{10}$-C_{16} -Naphthalene (F2) and $>C_{16}$-C_{34} (F3) contaminated soil material within borehole BH9 of Lot 3.

To achieve project objectives the following scope of works were undertaken.

- Review previous environmental investigations for the site;
- Establish remediation goals and criteria;
- Evaluate remediation technologies and select appropriate remediation strategies;
- Provide guidance on licences, an Environmental Management Plan (EMP), Work Health & Safety Plan (WHSP) and other relevant site plans required for the remedial works;
- Address recommendations made in the previous environmental investigation and outline additional investigations that may need to be undertaken for the site;
- Outline necessary site operations including excavation, stockpiling, management and disposal of soil materials and water, environmental controls and a contingency plan to manage additional contamination that may be identified during remediation and validation works; and
- Establish a sampling, analysis and quality control plan for additional works, remediation and validation work.

A previous environmental investigation, Targeted Detailed Site Investigation (NEO, 13th June 2021) identified the following:

- NEO consultants collected a total of 46 soil samples from 22 boreholes (two (2) primary samples per borehole, and two (2) duplicate sample for QA/QC procedures):
    - Within Lot 2 (No. 14 George Street, Marulan NSW 2579) a total of 18 soil samples were collected from nine (9) boreholes. Lot 2 is the location of a proposed service station and fast-food area. Lot 2 did not contain any contamination and will not be the focus of the present RAP;
    - Within Lot 3 (No. 16 George Street, Marulan NSW 2579) a total of 28 soil samples were collected from 13 boreholes. Two (2) duplicate samples were taken from this lot. Lot 3 is the location of a proposed hotel/motel and will be the focus of the present RAP.
- Samples were analysed by a NATA accredited laboratory for: Total Recoverable Hydrocarbons (TRH), Monocyclic Aromatic Hydrocarbons including Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Naphthalene, metals, pesticides and asbestos;

- Analytical results for soil on Lot 3 exceed the NEPM HSL-A vapour intrusion guidelines and ESL assessment criteria:

Table 1: Sample BH9.1 and BH9.2 exceedances of TRH fractions

NEPM Assessment Criteria	>C_{10} – C_{16}	>C_{10} – C_{16} -Naphthalene (F2)	>C_{16}-C_{34} (F3)
NEPM 2013 Residential A Soil **HSL-A** for Vapour Intrusion, 0-<1m depth, **Sand**, mg/kg		**110**	
NEPM 2013 Residential A Soil **HSL-A** for Vapour Intrusion, 1-<2m depth, **Sand**, mg/kg		**240**	
NEPM 2013 Soil **ESL** for Urban, Residential and Public Open Spaces for **coarse-grained soil**, mg/kg	**120**		**300**
Sample	mg/kg	mg/kg	mg/kg
BH9.1	**400**	**400**	**450**
BH9.2	**280**	**280**	**330**

NEO Consulting recommended the implementation of a RAP to determine the remediation process for the exceedances of TRH fractions identified in the soils beneath the site. This RAP is a guide to determine the appropriate remedial action and ensure that the site is suitable for the intended land use.

A review of remedial options were undertaken based on the potential extent of the TRH contamination hotspot, proposed development for the site, suitability of method for thorough removal of contamination, feasibility for the client and general guideline policies. Subsequently NEO Consulting recommends that contaminated soils are excavated and physically removed off-site for disposal to an appropriate licensed landfill facility. The excavated soil must be classified in accordance with the NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014). Additionally, if excavated soils exceed an acceptable level of contamination, these soils may be pre-treated to reduce or immobilise contaminants prior to physical removal of excavated soils off-site.

This particular remediation method was selected because this approach has demonstrated successful remedial outcomes for previous contamination episodes on similar sites; is reliable and ensure short and long term protection from health and ecological exposure to contaminants for the site; can be implemented in a timely manner to reduce potential exposure or migration of contamination; minimises potential land restrictions that may result if the contaminated soils remained on-site; and this approach is approved by regulatory bodies for contaminated soils of this nature.

NEO Consulting recommends that the remediation work for the TRH contamination hotspot for BH9.1 and BH9.2 includes:

- An excavated pit at the location of BH9 in Lot 3 to remove the contaminated soil. The excavated contaminated soil should be stockpiled and physically removed off-site for disposal to an appropriate licensed landfill facility. The excavated soil must be classified and removed off – site in accordance with the NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014).

1. INTRODUCTION

1.1 BACKGROUND

NEO Consulting were engaged to conduct a Remediation Action Plan (RAP) for the site located at No. 16 George Street, Marulan NSW 2579 (the site). The site is located within the Local Government Area of Goulburn Mulwaree Council. The site has an approximate area of 0.54ha, is legally identified as Lot 3 / - / DP1053945 and is zoned as IN1 - General Industrial. The site is a lot that is incorporated as part of a larger development including two (2) additional adjoining lots (No. 16-28 Portland Avenue and No. 14 George Street, Marulan NSW 2579). However, for the purpose of this RAP, the report will focus on the site for remediation: No. 16 George Street, Marulan NSW 2579.

1.2 PROPOSED DEVELOPMENT

The proposed development for the site includes the construction of a motel, with associated pool, gazebo, bar and carpark.

1.3 REGULATORY FRAMEWORK

The following regulatory framework and guidelines were considered during the preparation of this report:

- Department of Urban Affairs and Planning, NSW Environmental Protection Authority, *Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land,* 1998;
- National Environment Protection Measures, *Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater 2013*;
- National Environment Protection Measures, *Schedule B2 – Guideline on Site Characterisation,* 2013;
- National Environmental Protection Measures, Schedule B5c – *Guideline on Ecological Investigation Levels for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel and Zinc, 2013;*
- National Environment Protection Measures, Schedule B7 – *Guideline on Derivation of Health – Based Investigation Levels, 2013;*
- National Environment Protection Measures, *Appendix 1 – The Derivation of HILS for Metals and Inorganics, 2013;*
- NSW EPA, *Contaminated Land Management, Guidelines for the NSW Site Auditor Scheme,* 2017 (3rd Edition);
- NSW Environmental Protection Authority, *Waste Classification Guidelines Part 1: Classifying Waste,* 2014;
- NSW Environmental Protection Authority, *Sampling Design Guidelines*, 1995;
- The Contaminated Land Management Act 1997;
- NSW Environmental Protection Authority, *Guidelines on the Duty to Report Contamination under Contaminated Land Management Act*, 1997;
- NSW EPA, *Technical Note: Investigation of Service Station Sites,* 2014;
- NSW Department of Environment and Conservation, *Guidelines for the Assessment and Management of Groundwater Contamination,* 2007;
- NSW EPA, *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines* (2020).

- Protection of the Environment and Operation Act 1997;
- Protection of the Environment Operations (Waste) Regulations, 2005;
- SafeWork Australia *Code of Practice, How to Safely Remove Asbestos*, 2020;
- WorkCover NSW, *Managing Asbestos in or on Soil*, 2014;
- National Occupational Health and Safety Commission (NOHSC) *Code of Practice for the Management and Control of Asbestos in Workplaces*, 2018;
- State Environment Protection Policy 55 (SEPP 55). *Remediation of Land Under the Environmental Planning and Assessment Act*, 1998;
- Work Health and Safety Act, 2011; and
- Work Health and Safety Regulation, 2011.

1.4 PROJECT OBJECTIVES

The objectives of this RAP are to guide the site's remedial and validation process by providing a targeted remediation strategy to address the following:

- Data Gap Closures for the site;
- Remediation of Total Recoverable Hydrocarbon (TRH) contamination within soil BH9.1 and BH9.2 of Lot 3; and
- Validation of entire site in accordance with the NSW EPA, *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines* (2020).

1.5 SCOPE OF WORKS

To achieve the above listed project objectives, the following scope of works were undertaken to produce this RAP.

- Review the previous environmental investigation for the site;
- Establish remediation goals and criteria;
- Evaluate remediation technologies and select appropriate remediation strategies;
- Provide guidance on licences, an Environmental Management Plan (EMP), Work Health & Safety Plan (WHSP) and other relevant site plans require for the remedial works;
- Outline necessary site operations including excavation, stockpiling, management and disposal of soil materials and water, environmental controls and a contingency plan to manage additional identified contamination that may be identified during remediation and validation works;
- Advise processes for the unexpected finds of suspicious materials and an Unexpected Finds Protocol; Address recommendations made in previous environmental investigations and outline additional investigations which may need to be undertaken for the site; and
- Establish a sampling, analysis and quality control plan for remediation works and validation works.

2. SITE INFORMATION

2.1 SITE IDENTIFICATION

Table 2. Site Details

Address	No. 16 George Street, Marulan NSW 2579
Deposited plan	Lot 3 / - / DP1053945
Zoning	IN1 - General Industrial
Area	0.54ha

2.2 SITE DESCRIPTION

Based on the DSI, qualified environmental consultants from NEO inspected the site on the 23rd May 2021. During the inspection, site details noted include:

- The site was an irregular-shaped lot and contained of open grass areas and two wooden sheds with metal roofing;
- The site contained three (3) unused storage tanks, two (2) old out of service bowsers and a metal shed near the north-east portion;
- The site had grass and gravel groundcover;
- No visual or aromatic indications of contamination were identified during the inspection;
- The site (Lot 3 / - / DP1053945) was on an upward gradient to the service station on (Lot 2 / - / DP1053945).

2.3 SURROUNDING LAND USE

Table 3. Surrounding land use

Direction from site	Land-use
North	Rural vacant land
East	Rural residential property
South	Portland Avenue and George Street intersecting
West	Rural residential property

2.4 ENVIRONMENTAL SETTING

Data obtained from the Geological Survey of NSW and the Geoscience Australia Stratigraphic Units Database indicate the site to be underlain by sediments comprising residual deposits of unconsolidated clay and fine-grained sands to partially consolidated clay layers. Previous investigations encountered natural clays to 4.5 m bgl.

A groundwater bore search was conducted on the 23rd May 2021 and it is found that seven (7) (GW022357, GW023891, GW113742, GW113743, GW113744, GW113745, GW113756) borehole were present within a 500m

radius of the site. The closest surface water receptors to the site are Marulan Creek located approximately 370m southeast of the site, and Jaorimin Creek located approximately 680m to the northwest of the site.

The site is located within an area with "no known occurrence" of Acid Sulphate Soils (DPIE eSPADE).

3. PREVIOUS INVESTIGATION

A previous environmental investigation of the site reported the following:

3.1 DETAILED SITE INVESTIGATION (NEO Consulting, 13th June 2021)

- NEO consultants collected a total of 46 soil samples from 22 boreholes (two (2) primary samples per borehole, and two (2) duplicate sample for QA/QC procedures):
    - Within Lot 2 (No. 14 George Street, Marulan NSW 2579) a total of 18 soil samples were collected from nine (9) boreholes. Lot 2 is the location of a proposed service station andf fast-food area. Lot 2 did not contain any contamination and will not be the focus of the present RAP;
    - Within Lot 3 (No. 16 George Street, Marulan NSW 2579) a total of 28 soil samples were collected from 13 boreholes. Two (2) duplicate samples were taken from this lot. Lot 3 is the location of a proposed hotel/motel and will be the focus of the present RAP.
- Samples were analysed by a NATA accredited laboratory for: Total Recoverable Hydrocarbons (TRH), Monocyclic Aromatic Hydrocarbons including Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Naphthalene, metals, pesticides and asbestos;
- Analytical results for soil on Lot 3 exceed the NEPM HSL-A vapour intrusion guidelines and ESL assessment criteria (**Table 4**).

3.2 CONTAMINATION HOTSPOT IDENTIFICATION

On review of the analytical results from the DSI, one (1) hotspot has been identified on-site, with two (2) samples from this borehole exceeding the NEPM Assessment Criteria. This hotspot area has elevated levels of TRH fractions: $>C_{10}-C_{16}$, $>C_{10}-C_{16}$ -Naphthalene (F2) and $>C_{16}-C_{34}$ (F3).

Table 4. Contamination results from the DSI, see map in **Appendix A**.

NEPM Assessment Criteria	$>C_{10}-C_{16}$	$>C_{10}-C_{16}$ -Naphthalene (F2)	$>C_{16}-C_{34}$ (F3)
NEPM 2013 Residential A Soil **HSL-A** for Vapour Intrusion, 0-<1m depth, **Sand**, mg/kg		**110**	
NEPM 2013 Residential A Soil **HSL-A** for Vapour Intrusion, 1-<2m depth, **Sand**, mg/kg		**240**	
NEPM 2013 Soil **ESL** for Urban, Residential and Public Open Spaces for **coarse-grained soil**, mg/kg	**120**		**300**

Sample	mg/kg	mg/kg	mg/kg
BH9.1	**400**	**400**	**450**
BH9.2	**280**	**280**	**330**

4. REMEDIATION CRITERIA

The following assessment criteria were adopted for the Data Gap closure and RAP.

4.1 NEPM HEALTH SCREENING LEVEL A & B (HSL-A & HSL-B) – LOW TO HIGH DENSITY RESIDENTIAL

HSLs have been developed for selected petroleum compounds and fractions and are used for the assessment of potential risks to human health from chronic inhalation and direct contact pathways of petroleum vapour emanating off petroleum contaminated soils (Vapour Risk). HSLs are guided by land-use scenarios, specific soil physicochemical properties and generally apply to depths below surface to >4m.

Tier 1 HSLs are divided into the following sub-criteria:

- HSL A – residential with garden/accessible soils
- HSL B – residential with minimal opportunities for soil access
- HSL C – public open space/recreational areas
- HSL D – commercial/industrial premises

4.2 NEPM ECOLOGICAL SCREENING LEVEL (ESL) – URBAN RESIDENTIAL AND PUBLIC OPEN SPACE

ESLs have been developed for selected petroleum hydrocarbons (BTEX, benzo(a)pyrene, TRH F1 and F2) in soil, based on fresh contamination. These parameters are applicable to coarse and fine-grained soil and apply from the surface of the soil to 2m below ground level, which corresponds with the root and habitat zone for many species.

5. CONCEPTUAL SITE MODEL

In accordance with NEPM, *Schedule B2, Guideline on Site Characterisation* (2013) and to aid in the assessment of data collection for the site, a Conceptual Site Model (CSM) assesses plausible pollutant linkages between potential contamination sources, migration pathways and receptors. The CSM provides a framework for the review of the reliability and useability of the data collected and to identify data gaps in the existing site characterisation. The previous DSI, (NEO 7th July 2021) produced a CSM for the site that integrated all potential sources to provide a broad-spectrum assessment of the connection of receptors and pathways, measured against the potential risk to human health and the environment. The results of the previous CSM produced a set of Data Gaps that are addressed in the present RAP. This updated CSM considers the remaining potential contamination sources, receptors and exposure pathways, connection and potential risk to human health and the environment (**Table 5**).

Table 5. Conceptual Site Model

Potential Sources	Potential Receptor	Potential Exposure Pathway	Complete connection	Risk	Justification/Comment

Petroleum-derived contamination (TRH F2 ($>C_{10}$-C_{16})) (0 - <1m) within fill/topsoil layer on site.	Site occupants, workers, general public, future residents.	Dermal contact, inhalation/ingestion of particulates.	Complete (Current)	High	TRH F2 contamination detected at 0.5m bgl within fill material during DSI. Remedial action required.
			Low (Future)	Low	
	Natural soils.	Leaching and migration of contaminants through fill and natural soils on site.	Complete (Current)	High	
			Low (Future)	Low	
Petroleum-derived contamination (TRH F2 ($>C_{10}$-C_{16})) (1 - <2m) within natural soils.	Site occupants, workers, general public, future residents. Natural soils.	Dermal contact, inhalation/ingestion of particulates.	Complete (Current)	High	TRH F2 ($>C_{10}$-C_{16}) contamination detected at 1.5m bgl within natural soil layer during DSI. Remedial action required.
			Low (Future)	Low	
	Underlying aquifer.	Leaching and migration of contaminants through groundwater infiltration.	Complete (Current)	High	
			Low (Future)	Low	

6. REMEDIATION STRATEGY

6.1 REMEDIATION OBJECTIVE

The remediation program objective is to remove the identified contamination from the site in order to validate the site suitable for its intended land-use. All works undertaken during the remediation program must be monitored by a suitably qualified person, experienced in the assessment and remediation of contaminated sites. The RAP must be adhered to by all personnel and sub-contractors involved in the remediation program. There must be a hard copy of the RAP accessible on site for all remediation personnel. The RAP is to be implemented as part of the site development, this includes site goals and final site validation.

6.2 NSW EPA HIERARCHY OF OPTIONS FOR SITE REMEDIATION

The NSW EPA hierarchy of options for site remediation and/or management are listed below:

- If practical, on-site treatment of the contamination so that it is depleted, and the associated risk is reduced to an acceptable level; and
- Off-site treatment of excavated soil, so that the contamination is depleted, and the associated risk is reduced to an acceptable level.

If the above is not practical:

- Consolidation and isolation of the soil on-site by containment with a properly designed barrier; and
- Removal of contaminated material to an appropriately licenced facility to receive such waste, and if necessary, replacement with appropriate materials; or
- Where the assessment indicates remediation would have no overall environmental benefit or would have an adverse effect, implementation of an appropriate management strategy.

6.3 REMEDIATION OPTIONS

6.3.1 AVAILABLE REMEDIATION & MANAGEMENT STRATEGIES

A range of remediation and management strategies are available for implementation on contaminated sites applicable to the contamination identified on site. A review of the available soil remediation methods and management strategies indicated that the following strategies may be applicable:

- Excavation and off-site disposal of contaminated soil to an appropriately licensed landfill facility;
- Treatment (on-site or off-site);
- Managing the risks posed by contaminants by preventing any direct exposure pathway between the known and potential contaminated soil and users of the proposed development, through implementing physical barriers such as concrete/synthetic material liners (geofabric)/clean soil capping; and
- Further assessment of soil contamination and health risks.

6.3.2 EXCAVATION & OFF-SITE DISPOSAL

This method involves the excavation of contaminated materials and disposal of these materials off-site to an appropriately licensed landfill facility. Excavated materials must be classified according to the NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014). Depending on the level of contamination, excavated materials may need to be pre-treated to reduce or immobilise contaminants prior to off-site disposal.

6.3.3 TREATMENT

Soil treatment strategies depend on the type of contaminant identified and where the soil is in-situ or ex-situ. Most applied strategies are applied to ex-situ soils through excavation of the contaminated soil materials. In-situ treatments usually require longer a timeframe for completion than ex-situ strategies. Most of the treatment strategies which require the soil material to be excavated can be undertaken on or off-site, subject to obtaining licences.

6.3.4 ON-SITE CAPPING

Capping can be a suitable strategy for managing health risks associated with soil contamination by preventing any direct exposure pathway between contaminated soil and site users. Capping is used to isolate areas in the subsurface from the surrounding uncontaminated environment. A physical barrier such as concrete, asphalt, synthetic material liners (geo-fabric), and/or clean soil may be installed to cap the contaminated material. A cap is employed to remove exposure to the contaminated soils, where the contaminated soils are not mobile and there is no contact with groundwater and/or groundwater is not contaminated.

A Site Management Plan (SMP) is required with any capping strategy. The SMP identifies the personnel responsible for adhering to the plan and includes commitments for on-going monitoring and maintenance of the cap as well as controls of future excavations, which must be minimised or if required, the appropriate occupational health and safety procedures are adopted, and permits acquired before works are carried out.

6.3.5 BIOREMEDIATION

Soil microorganisms degrade contaminants, thereby reducing concentrations and the associated toxicity of contaminants within soils. These microorganisms are ubiquitous in soils. The TRH and BTEX compounds are readily degraded under aerobic conditions. The process of bioremediation is achieved by excavating, stockpiling (using a physical barrier to prevent leeching) and aerating the contaminated soil material. This approach requires minimal energetic output and is cost effective. However, bioremediating stockpiles require sufficient space on-site including an exclusion zone surrounding the stockpiled material, in addition, the bioremediation process can take months and may not be suitable to projects with operational and construction deadlines.

6.4 RATIONALE FOR SELECTION OF REMEDIATION STRATEGY

Considerations in selecting and implementing a suitable remediation strategy for a site include:

- Proven strategy: the remediation method should have a proven track record of success;
- Reliability: The remediation method should succeed in meeting the site remediation goals in the short and long term;
- Regulatory Approvals: The remediation method must be supported by the relevant regulatory authorities;
- Cost: Financial budgets provide an indication as to the likelihood of implanting a particular remediation strategy;
- Implementation Time: Timeframes associated with implementing particular strategies will govern the likelihood of their application;
- Land-Use Restrictions: If contaminated soil material is left on-site, the regulatory authority may place restrictions on the land use and/or require notification of the contamination on the property title;
- Liabilities; Maintenance and monitoring of an applied remediation strategy which does not involve complete removal of all contaminated materials from the site will necessitate some form of on-going maintenance and/or monitoring to ensure the long-term integrity of the remediation strategy. Any

remediation strategy that does not involve the complete removal of all contaminants from the site will result in future liability for the landowner;

- Contractor Experience: The effectiveness and success of a remediation strategy partially depends on the experience of contractors implementing the applied remediation strategy;
- Space Requirements: Some remediation strategies require large amounts of space to spread soil and will only be feasible if sufficient land is available. In addition, if contaminated materials come into direct contact with (or are spread across) clean soils, the clean soils may also be subject to remediation once contaminated materials have been removed;
- Disturbance to Operations: Remediation for the site is likely to cause disruption to usual operations undertaken at the site;
- Human Health Risks: Remediation workers, site users and the general public may be exposed to hazards posted by contamination during the remediation (i.e. through dust generation); and
- Availability of Landfill Facilities; Excavation and off-site disposal of contaminated materials are only feasible if the appropriately licensed landfill facility capable to receive such waste is a reasonable distance from the site.

6.4.1 PREFERRED REMEDIATION STRATEGY

For this site NEO considers the following approach preferred for remediation:

- Excavation and off-site dispose of TRH contaminated soil;

This approach was selected for the following reasons:

- Relatively quick and cheap remediation process, given the type and extent of known contamination;
- The method aligns in with the proposed development design, which includes the excavation of soils for the basement level; and
- This approach is demonstrated to be suitable for petroleum-based contamination of soils.

6.4.2 SUPERVISION

NEO recommends an experienced and qualified environmental scientist to be appointed to the project to ensure:

- The coordination of the stages for remediation and validation are appropriately implemented;
- Any deviations from the works outlined in this RAP are verified, documented and approved as required under NSW EPA, *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines* (2020); and
- Completion of remediation works without the supervision of a qualified environmental scientist may result in additional requirements imposed by a third party to confirm the contamination, remediation and/or validation status of the site.

Any soil and/or waste materials removed or acquired to the site without sufficient classification may lead to regulatory action. This could result in project delays and additional costs imposed on the client.

7. STAGE ONE – DATA GAP CLOSURE

NEO Consulting considers that all Data Gaps have been adequately addressed.

8. STAGE TWO – REMEDIATION

NEO Consulting conceived a systematic sampling pattern to ensure the extent of the TRH contamination hotspots are appropriately mapped and analysed, as per the NSW EPA, *Sampling Design Guidelines,* (1995). The TRH contaminated soil material will need to be classified in accordance with NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014). The sampling pattern most suited to assessing volatile and semi-volatile contaminated stockpiled material is systematic sampling. Samples must be collected quickly from the excavator bucket and should be 500mm or greater depth from the surface of the stockpile soil material, to avoid loss of contaminants for analysis.

Excavation of the test pit will be offset 2m from each hotspot location, DSI borehole BH9 (see **Figure 4, Appendix A**). The hotspot soils will be excavated and stockpiled. Excavated soil materials are to be stockpiled on-site on, impermeable heavy-duty plastic sheeting is to cover the ground surface where the stockpile is to be staged, in an allocated location on-site. Provision should be made to allow for expansion of the stockpile staging area should this be required during the works.

Soil samples will be placed in laboratory prepared 250mL soil jars, labelled appropriately and placed on ice in an esky for transport under Chain of Custody (COC) to a NATA accredited laboratory for the analysis of Chemicals.

The number of samples taken of the stockpiled soil material on site will adhere to the recommended sampling frequency as per NEPM, *Schedule B2, Guideline on Site Characterisation* (2013) (**Table 6**).

Table 6. Stockpile Sampling Frequencies.

Stockpile volume (m³)	Number of samples
<75	3
75-100	4
100-125	5
125 - <150	6
150 - <175	7
>200	8

All reusable equipment in the sampling program must be decontaminated between each excavation with potable water followed by deionised water, including the excavator bucket. The excavated pits will be sampled at a rate of; five (5) samples, four (4) wall and (1) floor of test pit. These Validation samples will be assessed for TRH fractions only. Once the laboratory results return for both the waste classification and validation, they will be assessed to determine the next step.

If the levels of TRH fractions within the Validation samples are found to be below the Validation Criteria; HSL and ESL for Residential sites, then the hotspot can be considered appropriately remediated and off-site disposal of the

waste material can proceed. If there are any exceedances of analytes within any of the Validation samples, excavations will need to continue in the direction of the exceedance until the levels are considered suitable for the proposed land use and Validation Criteria.

If the hotspot increases in size due to wall collapse or accumulation of an adjacent hotspot, the minimum samples required are: excavated test pit floor samples: one sample per 25m^2, or one per floor <25m^2; and excavated test pit wall samples: one sample per 5 linear metres, or one per wall <5 linear metres.

The excavated hotspots will need to be classified and removed off-site in accordance with the NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014).

9. STAGE THREE - VALIDATION

The remediation activities of the contaminated soils will be considered validated once the following objectives have been met:

- The Data Gaps have been investigated and considered closed;
- Each excavated hotspot has been remediated and the remaining excavations have been validated at a rate of; five (5) samples, four (4) wall and (1) floor of test pit, 2m between locations in a systematic formation, 2m offset from hotspot locations. Additional sampling batches following the same sampling pattern are required until contamination levels are below NEPM Guideline acceptable limits for HSL and ESL for Residential sites;
    - Remediation excavations will continue to beyond the boundary of contamination impact and the validation samples analytical data fall within the applicable guideline criteria.

9.1 SOIL VALIDATION REPORTING

All fieldwork, sample analysis, remediation findings, conclusions and recommendations will be provided in a final Site Validation Report.

9.2 VALIDATION SAMPLE FAILURES

If samples collected contain insufficient soil material for chemical analysis or if sample location cannot be confidently identified, re-sampling procedures are required. This re-sampling procedure will follow the original sampling plan for both test pit samples and stockpile samples.

9.3 VALIDATION PROGRAM

The validation program is undertaken to confirm that remedial works are complete and successful.

Following the excavation of soils at the hotspot location, a photographic record of the excavated test pit floor and walls or ground surface will be collected for reference in the Site Validation Report.

9.5 VALIDATION OF IMPORTED SOIL MATERIAL

If soil materials are required to be imported onto the site, soils must be classified as virgin excavated natural material (VENM) and will also be analysed in accordance with the requirement of the NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014), at a rate of one sample per 100m^3. All VENM imported material must

be accompanied by VENM certification. Excavated natural material (ENM) soils may be acceptable and will be analysed and classified in accordance with the NSW EPA, *Resource Recovery Order* (2014). Both VENM and ENM will be visually inspected for ACM and will be analysed for asbestos if suspected.

To validate the backfill soil material, a minimum of three (3) composite sample (comprising of four (4) randomly collected subsamples) will be collected and analysed for heavy metals, TRH, BTEX, PAH, metals, pesticide-related organochlorine and organophosphate compounds to confirm that concentration levels are below NEPM Guideline acceptable limits for the intended use of the site.

If larger quantities of backfill soil material is required, regular sampling pattern will be required to demonstrate that the material is; below the NEPM Guidelines acceptable limits for the intended use of the site; or the 95% UCL of the average concentrations of the backfill soil material is below the NEPM Guidelines acceptable limits for the intended use of the site.

9.6 DURATION OF REMEDIATION AND VALIDATION WORKS

Based on the proposed scope of remediation and validation works for the site, it can be expected the works will take approximately four to eight weeks following receipt of all regulatory approvals. This timeframe does not include the reporting of works which could be expected to be completed approximately four weeks after completion of the remediation and validation works.

10. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

The quality assurance/quality control (QA/QC) procedures ensure the data collected is sufficiently accurate, precise and reproducible to be used for the Site Validation Report. QA/QC should be done so in accordance with NEPM (2013) and relevant Australian standards and guidelines.

Table 7. QA/QC Frequencies

	Inter laboratory	Intra laboratory	Rinsate	Spikes and blanks
Sample frequency	1 in 20	1 in 20	1 per day	1 set per day

Soil samples are to be collected using laboratory prepared glass jars with Teflon lid inserts. Standard identification labels are to be used which state the following; project reference, sample reference, sample depth, date, sample/personnel.

All reusable sampling equipment is to be decontaminated between sampling locations to prevent cross-contamination. Decontamination involves:

- Washing equipment with potable water;
- Subsequent equipment in deionised water; and
- Rinsing equipment in demineralised water and wiping dry with a clean lint free cloth (cloth replaced after each sample).

11. CHEMICAL ANALYSIS OF SAMPLES

All samples are to be couriered to a NATA accredited laboratory under suitable Chain of Custody (COC). The COC will clearly state the project reference, sample reference, analytes to be tested, date, sampler, project manager and all relevant contact details.

All samples are to be placed in an iced esky once collected and remain below 4°C at all times/ Asbestos samples are not required to be kept on ice.

Inter-laboratory QA/QC samples are to be forwarded from the primary laboratory to a secondary NATA accredited laboratory for analysis.

The primary laboratory will conduct in-house routine QA/QC procedures including:

- Reagent blanks;
- Spike recoveries
- Intra-laboratory duplicates;
- Calibration standards;
- QC statistical data; and
- Control standards and recovery plans.

12. DATA QUALITY OBJECTIVE

In accordance with the NEPM APPENDIX B OF SCHEDULE B2 and the NSW EPA, *Guidelines for the NSW Site Auditor Scheme* (3rd edition) (2017), the process of developing Data Quality Objectives (DQO) was used to determine the appropriate level of data quality needed for the specific data requirements of the project. The DQO process that was applied for this assessment is documented below.

Table 8. DQOs Step 1-7

Step 1: *State the problem.*	TRH contamination identified in borehole BH9 of Lot 3 and requires remediation.
Step 2: *Identify the decision.*	Remediation and validation required for the site to be considered suitable for its intended land use as proposed hotel. The decisions required to meet these remediation and validation goals are as follows: • Was the Data Gap Closure, Remediation and Validation design appropriate to achieve the aim of the RAP? • Is on-site contamination capable of migrating off-site? • Was all waste material classified appropriately and disposed of through a licenced landfill facility? • Were the imported backfill material certified as suitable for the proposed landuse?

	• Are there any unacceptable risks to the future on site or off-site receptors in the soil or groundwater following remediation? • Is the site suitable for its intended land use?
Step 3: *Identify inputs into the decision.*	Identification of issues of potential environmental concern; • Appropriate identification TRH contaminated locations; • Systematic soil sampling for test pit and stockpiled material; • Appropriate quality assurance/quality control to enable an evaluation of the reliability of the analytical data; and • Screening sampler analytical results against appropriate assessment criteria for the intended land use.
Step 4: *Define the boundaries of the study.*	The project boundaries are: • Lateral boundary: The legally defined area of the site; • Vertical boundary: The soil interface to the maximum depth reached during sampling; and • Temporal boundary: Constrained to a single visit to the site, unless additional sampling is required for the soil contamination.
Step 5: *Develop the analytical approach.*	• If existing Data Gaps remain open, unacceptable risks may persist into the future. Data Gaps must be addressed and closed to ensure on-site and off-site receptors are not at an unacceptable risk. • If the findings of the Remediation and Validation process identify 250% exceedance of the adopted assessment criteria TRH, Benzene and Xylene in soil, then further assessment may be required to confirm suitability of the site. • For analytical results across the Data Gap Closure, Remediation and Validation process, if adopted RPD for QC are not met, further assessment may be required to confirm suitability of the site.
Step 6: *Specify performance or acceptance criteria*	To determine if the soils are within acceptable ranges, we employ the following NEPM criteria: • The 95% UCL is calculated for the mean concentration of each contaminant for each individual sample across a sampling plane (eg. surface samples, depth samples), which provides the probability that 95% of the data obtained will meet the acceptance criteria; and • a limit on decision error will be 5% that the conclusion may be incorrect.

Step 7: *Develop the plan for obtaining data.*	Systematic sampling pattern for the hotspot locations and stockpiled material will provide suitable coverage of the site to produce reliable data in alignment with the Data Quality Indicators (DQIs) to cover precision, accuracy, representativeness, completeness and comparability (PARCC). Validation data is collected to confirm the following: • The effectiveness of the implemented remediation methods and strategies; • Any contaminated soils on site are sufficiently contained/capped; • Any imported soils to be used as clean backfill are classified as appropriate for the site's intended land-use; and • Record the site as being suitable for its intended land-use.
The DQOs align with the CSM	Yes

13. DATA QUALITY INDICATORS

An assessment of the Data Quality Indicators (DQIs) has been undertaken in accordance with the NEPM Appendix B of Schedule B2 to provide an evaluation of the field and laboratory procedures and ensure appropriate documentation for this RAP.

Table 9. Field Data Quality Indicators

Completeness	The RAP ensures that all critical locations will be sampled, and samples will be collected within the proposed sampling pattern (systematic for test pit and stockpile) at the appropriate depths during a single visit to the site (unless additional hotspots are identified or the extent of contamination from one of the hotspots is extended). This plan also aligns with Standard Operating Practices (SOP), to produce valid and reproducible data. NEO's qualified environmental consultants are experience and will ensure compliance and completion of all sample recording, labelling and COC procedures.
Comparability	The RAP aligns with SOP to produce qualitative data. NEO's qualified environmental consultants will sample uniformly to ensure that each individual sample collection contains sufficient soil (g) to produce a dataset that is reflective of the environmental conditions of the site at time of collection. All samples will be handled and stored in a

	manner that maximises the preservation of all potential CoPC within the soil samples. Climatic and physical conditions at the time of sample collection will be recorded.
Representativeness	The RAP aligns with SOP to produce a qualitative dataset that is representative of soil contamination on site. NEO's qualified environmental consultants will ensure sample collection, handling, storage and transfer is appropriate for soil samples. Additionally, samples reflect environmental conditions at time of collection and samples are homogenised to maximise detection during laboratory analysis.
Precision	The RAP aligns with SOP to produce qualitative data that measures the variability of results. The primary technique for evaluating field precision is by collection of duplicate samples, to measure the difference in response between two (2) different samples from the sample location. NEO's qualified environmental consultants will ensure that duplicate frequency is appropriate to sampling plan and area of site.
Accuracy	The RAP aligns with SOP to produce qualitative data that measures bias within the results. NEO's qualified environmental consultants will ensure all COC procedures are carried out appropriately to minimise incidents of cross contamination or incorrect handling and storage of samples.

Table 10. Laboratory Data Quality Indicators

Completeness	The allocated NATA accredited laboratory produce reliable and thorough datasets. All samples will be analysed for CoPC using an appropriate and standardised extraction method and analytical instrument. Samples to be received, extracted and injected within specified holding times. The laboratory qualified environmental organic chemists will ensure completion of COC procedures, wet chemistry, data integration and calculation.
Comparability	Analytical procedures within the NATA accredited laboratory are specialised and standardised for samples. The qualified environmental organic chemists will determine the appropriate extraction methods and analytical instruments to be used based on response factor and ability to target CoPC. Spikes and surrogates to be chosen based on appropriateness to avoid coelution with contaminants indigenous to the samples and across varying retention times to map response factor. The chosen spikes and surrogates to be used for all samples and analysis to be completed within

	the same batch to account for analytical instrument calibration (in addition system blanks support instrument calibration baseline results).
Representativeness	The NATA accredited laboratory will undertake procedures to ensure the data is representative of the site by using appropriate extraction and analytical instrument methods. The qualified environmental organic chemists will follow COC procedures; ensure that extraction methods are specialised for each potential contaminant and standardised across all samples; and use analytical instruments suitable for the sample type, targeted CoPC, extraction method, instrument sensitivity, response factor and detection limit.
Precision	Quantitative measures undertaken by the NATA accredited laboratory include field and laboratory duplicates. The qualified environmental organic chemists will undertake a field duplicate analysis that measures the precision of field sampling and maps the potential heterogeneity of contamination across a field sampling location. The laboratory duplicate procedure is undertaken by taking two (2) laboratory sub-samples for extraction and analysis from the one (1) field sample in the collection container (250mL jar). The two (2) laboratory sub-samples map the potential heterogeneity of contamination that can occur within the one (1) field samples collection.
Accuracy	Quantitative measures undertaken by the NATA accredited laboratory's qualified environmental organic chemists include the analysis of field, rinsate and method blanks; spike and surrogate analysis to measure response factor and retention time; laboratory control samples; appropriateness of analytical method; and timing and completion of analysis.

14. ENVIRONMENTAL MANAGEMENT PLAN

A site-specific Environmental Management Plan (EMP) will be produced for the remediation works. The EMP will be monitored by an Environmental Scientist who will be on-site during all critical remediation and validation works. The EMP is outlined below and will detail the following:

- Site access;
- Working hours;
- Stormwater and soil management;

- Traffic management;
- Dust and odour control;
- Noise Control; and
- Work health and safety

All remediation and validation works must be carried out in accordance with relevant Australian standards and guidelines.

Contact details: Nick

Contractors: TBC

14.1 GENERAL

The site manager for the remediation contractor should have a thorough understanding of the content of the RAP, associated EMP, Work Health & Safety Plans and should ensure all workers and sub-contractors involved in the remediation and validation works understand the contents of these documents.

14.2 SITE ACCESS

The remediation contractor is responsible for securing the site with adequate barriers and warning signs to prevent unauthorised access. All workers must sign in daily, and visitor must sign a visitor logbook outlining the purposes of the visit, representing company and time-on/time-off site.

14.3 WORKING HOURS

Site operating hours for remediation and validation works will be between 7:00am and 5:00pm Monday to Fridays and 8:00am to 1:00pm on Saturdays. No site works are to be undertaken on Sundays and Public Holidays.

14.4 DEMOLITION & ASBESTOS MANAGEMENT

All demolition works are to be carried out in accordance with relevant NOHSC, SafeWork Australia and WorkCover NSW Codes of Practice. Any asbestos identified within the building materials should be managed in accordance with relevant Codes of Practice.

14.5 STORMWATER & SOIL MANAGEMENT

Appropriate measures must be taken to ensure that potentially contaminated sediment and water does not leave the site. This could include, but is not limited to:

- Stormwater flowing through the site should be avoided, if possible, stormwater should be diverted to runoff outside the site;
- Construction of stormwater diversion channels and linear drainage sumps with catch pits in the remediation area to divert and isolate stormwater from any contaminated areas;
- Discharge of any groundwater and/or surface water to drains or water bodies must meet the appropriate discharge consent conditions under relevant Australian standards and guidelines; and
- Installation of sediment traps such as sediment fencing should be installed where stormwater may flow off-site.

Soil material to be stockpiled on-site must be done in such a way that the material is well contained and surrounded with adequate erosion controls such as sediment fencing. If stockpiles are to remain on-site for an extended period, they must be covered with geo-fabric or heavy-duty plastic to avoid erosion. Stockpiles must be maintained to allow for identification in the case of them being reused on site.

14.6 TRAFFIC MANAGEMENT

All vehicle traffic is to use only the routes approved by the Goulburn Mulwaree Council to and from the approved landfill. All loads are to be covered and wetted to ensure no material or dust escape the load. Prior to leaving site, each truck must be inspected for cleanliness. If trucks have sediment on the wheels, chassis and/or body, they must be washed down within the designated wash bay until confirmed 'clean'. No sediment track marks are to be visible on public roads.

14.7 DUST & ODOUR CONTROL

Dust and odour shall be monitored during the remediation and validation works and must be managed by the remediation contractor. Management options include, but are not limited to:

- Water carts to wet dust-prone surfaces;
- Mist cannons/dust suppression sprinklers on stockpiles and excavation activities which generate dust;
- Covering stockpiles with plastic sheeting/geo-fabrics;
- Restricting stockpile heights to a maximum height of 2m above ground level;
- Ceasing remediation and validation works during extreme weather events such as high winds and heavy rain; and
- Odorous materials may be placed in a bunded area and covered with impermeable plastic sheeting, if odours are reported on site, the on-site environmental scientist will notify a technician, who may produce an additional report.

14.8 NOISE CONTROL

Noise and vibration will be restricted to a reasonable level. All machinery on-site must ensure noise levels do not exceed statutory levels. Working hours are restricted to the above mentioned 30 days prior to remediation and validation works commencing, every owner and occupier of land within 100m of all site boundaries are to be notified.

14.9 WORK HEALTH & SAFETY PLAN

The remediation contractor is responsible for implementing a site-specific Work Health & Safety Plan (WHS Plan) prior to remediation and validation works in accordance with relevant Australian standards and guidelines. The WHS Plan must identify hazards and assess risks which may be imposed on site workers, occupants and the public. The WHS Plan should detail subjects as vehicle decontamination, suitable Personal Protective Equipment (PPE) and safety controls. The WHS plan must be read and understood by site workers as part of their site induction, prior to beginning any remediation and validation works.

15. WASTE TRACKING & DISPOSAL

All transport and disposal of waste must be done so in accordance with relevant Australian standards and guidelines. All licenses and approvals required for disposal of the material will be obtained prior to removal of the materials from the site.

Details of all soils removed from the site must be documented by the remediation contractor. Weighbridge dockets, landfill receipts and consignment disposal confirmation are to be provided to the on-site environmental scientist and remediation contractor.

A truck log will be kept by the remediation contractor detailing disposed loads against on-site origin

All soil material to be removed from the site must be classified in accordance with NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014). No soil material is to leave the site without such classification.

16. DUTIES OF ON-SITE ENVIRONMENTAL SCIENTIST

The duties of the on-site environmental scientist include:

- Ensure the RAP, Work Health & Safety Plan, Environmental Management Plan and any other plans or processes are strictly followed;
- Supervise all contaminated material excavations, handling, stockpiling and loading;
- Supervise the environmental compliance of contractors and site workers;

Undertake asbestos air monitoring in accordance with SafeWork NSW Codes of Practice and when ACM contaminated hotspots or suspected ACM contaminated soils are to be excavated, handled, stockpiled and/or loaded for transport;

If strong odours are reported, regularly monitor the open excavation with a PID;

Inspect sediment and stormwater controls;

Inspect the roadway in the vicinity of the site for soil materials being tracked off-site;

- Report non-compliances to the principal environmental representative who will report to the appropriate regulatory body
- Conduct validation sampling in accordance with the validation program as requested by the principal environmental representative; and
- Maintain a daily site log with relevant site data.

16.1 NON-COMPLIANCES

If any works are suspected of not following procedures outlined in the RAP, WHS Plan or any other document which governs the remediation and validation work procedures, this will be reported immediately to the principal environmental representative. The on-site environmental scientist has the authority to cease all remediation and validation works until the issue is resolved.

17. UNEXPECTED FINDS

In the event that any unexpected materials, contamination and/or underground storage tanks (USTs) are discovered, all remediation and validation works must cease, the on-site environmental scientist is to be notified and refer to the Unexpected Find Protocol.

If during remediation or validation works, significant contamination and/or odours are discovered, works in that area must cease immediately, the on-site environmental scientist must the notified, and management of cross-contamination must be established. If required, the administering authority will be notified within 2 working days of significant unexpected discovery and informed of the remediation actions taken.

The sampling strategy for unexpected material which could potentially be contaminated will be designed by the principal environmental representative. The objective of the strategy will be to determine the nature of the material, whether it is hazardous, and if so, what apply appropriate guideline criteria for its classification, remediation and/or validation.

The sampling frequency for the unexpected materials will meet the following minimum requirements:

Excavation Test Pit Floor:

- One (1) sample per 25m^2, with a minimum of three (3) samples collected; and
- Samples will be analysed for CoPC as determined by the principal environmental representative.

Excavation Test Pit Wall

- One (1) sample every 5m (from each horizon/material type, within the impacted area); and
- Samples will be analysed for CoPC as determined by the principal environmental representative.

The on-site environmental scientist will be required to document and report all discoveries of unexpected materials.

18. CONTINGENCY MANAGEMENT

Because subsurface conditions can vary over limited distance, the remediation and validation plan must be dynamic and capable of adapting to and unexpected condition and materials. Unexpected conditions and materials can be result in harm to human and environmental health and must be managed appropriately. **Table 11** below summarises conditions and materials which may be discovered during remediation and validation works.

Table 11. Contingency Plan

Unexpected Condition/Material	Remedial Action
Excessive dust	Use mist cannons of dust generating activities; employ water carts to wet site roads
Excessive rain	Maintain stormwater divergent channels and drainage sumps; maintain site roads and cover high traffic areas with gravel; cover stockpiles with heavy duty plastic and surround with sediment fencing; shut down site until stormwater is manageable.
Excessively wet materials	Leave in-situ if already stockpiled, dewater; surround with sediment fencing

Sediment pond water for discharge, analytical exceedance	Perform water in-situ treatment methods until acceptable analytical levels are reported. Arrange off-site disposal by an appropriately licenced contractor.
Excessive odours	On-site scientist to constantly monitor with PID; remediation contractor is to upgrade PPE if necessary.
Excessive noise	Identify source of noise, inspect equipment and repair accordingly; provide noise silencers if necessary/
Compliant management	Notify remediation contractor, principal environmental representative and on-site environmental scientist. Report complaints as per internal WHS plan procedures.
Sediment fence failures	Cease works and repair; change sediment control method (hay bales, geofabric)
Oil/fuel spill	Cease works, refer to WHS plan, utilise spill kit, move source to above impermeable surface.
Chemical spill	Cease works, refer to WHS plan, notify on-site environmental scientist immediately.
Equipment/ Machinery failures	Maintain spare parts, maintain alternate rental options;
Discovery of cultural and/or building heritage items	Cease works, notify on-site environmental scientist immediately.
Discovery of drummed material	Cease works, notify on-site environmental scientist immediately.
Discovery of underground storage tank (UST)	Cease works, notify on-site environmental scientist immediately.
Excavation extends below the water table into soil materials confirmed to consist of Potential Acid Sulphate Soils (PASS)	Cease works, notify on-site environmental scientist immediately.
Asbestos Containing Material (ACM)	Cease works, notify on-site environmental scientist immediately. Employ appropriate PPE, wet the area to limit dust generation, cover with heavy duty plastic and create a 10m exclusion zone around excavation.
Non-spadable sludge	Contact on-site environmental scientist; employ appropriate PPE, segregation and bunding of discovered material, use of odour suppressant; cover with heavy duty plastic; environmental scientist to employ appropriate sampling of material; off-site disposal will require appropriate waste classification.

18.1 GROUNDWATER CONTINGENCY

If groundwater is discovered during the remediation and validation works, an assessment into the impact of the proposed development is recommended.

19. REGULATORY APPROVALS & LICENCES

19.1 DUTY TO REPORT

Under section 60 of the Contaminated Land Management Act 1997, the owner of land which has become contaminated, whether before or during the owner's ownership, must notify the EPA in writing.

19.2 STATE ENVIRONMENTAL PLANNING POLICIES

The State Environmental Planning Policy No 55 (SEP 55) – Remediation of Land sets the regulatory framework for contaminated land and remediation works for NSW. SEP 55 defines the requirements for remediation work to be carried out. The remediation works to be carried out at the site meet Category 2 criteria.

19.3 GOULBURN MULWAREE COUNCIL

All remediation and validation works are to be undertaken in accordance with Goulburn Mulwaree Council.

19.4 ASBESTOS REGULATIONS

Asbestos must be managed in accordance with the Work Health and Safety Act (2011), the Work Health and Safety Regulation (2011), How to Safely Remove Asbestos: Code of Practice, SafeWork NSW Codes of Practice and NSW EPA, *Waste Classification Guidelines, Part 1: Classifying Waste* (2014).

Asbestos removal must be completed under the supervision of a NSW Licensed Asbestos Assessor (LAA) and by a licensed asbestos removalist appropriately licensed to carry out Class A (friable) or Class B (non-friable) removals. SafeWork NSW must be notified by the licensed asbestos removalist contractor 5 days before the asbestos removal work is scheduled to commence.

Asbestos air monitoring should be undertaken at the site while asbestos removal works and/or excavation works within areas suspected to be contaminated with asbestos are being completed. The asbestos removalist contractor is required to notify SafeWork NSW if respirable asbestos fibre levels reach or exceed 0.02 fibres/mL. Asbestos air monitoring must be undertaken in accordance with SafeWork NSW Codes of Practice.

If a structure or plant is suspected of containing asbestos and must undergo emergency demolition, notification to SafeWork NSW must be made. This is to be done by the principal contractor in site and/or the licensed asbestos removalist.

19.5 PROTECTION OF THE ENVIRONMENT OPERATIONS (WASTE) REGULATIONS 2014

Part 7 of the POEO (Waste) Regulations 2014, details the special requirements relating to asbestos waste and must be followed when dealing with asbestos waste transportation and disposal.

The general requirements applying to the transportation of asbestos include:

- Bonded asbestos must be securely packed at all times during transportation (i.e. wrapped in a double layer of heavy – duty plastic);

- Friable asbestos must be kept in a sealed container at all times during transportation;
- Asbestos contaminated soils must be wetted down;
- All asbestos waste (other than bonded or friable asbestos material) including asbestos contaminated soils must be covered and leak-proof during transportation; and
- Reporting on transportation of asbestos waste must follow Section 79, Part 7 of the POEO (Waste) Regulations 2014.

The general requirements applying to the disposal of asbestos include:

- Only appropriately licensed landfill facilities are allowed to receive asbestos waste;
- The person transporting the asbestos waste must notify the landfill facility manager that the load contains asbestos;
- Unloading the asbestos waste must be done so that no dust it generated and employ dust suppression techniques; and
- Once deposited at the licensed landfill facility, asbestos waste it to be stored appropriately.

19.6 ADDITIONAL LICENSING

- Transporters of contaminated waste are required to be appropriately licensed to transport such wastes.
- Waste classification documentation and landfill facility receipts must be kept on fil for the site validation program.
- Appropriate dewatering licenses must be obtained if water is to be discharged from the site.
- The remediation contractor should prepare an appropriate Construction Environmental Management Plan (CEMP), WHS Plan and other plans required by Goulburn Mulwaree Council Development Application.

20. CONCLUSION

The property located at 16 George Street, Marulan NSW 2579 (the site) can be made suitable for its intended land-use subject to implementation of the following:

- Data Gap Closures;
- Revision of this RAP, if required;
- Adequate remediation and validation works in accordance with this RAP; and
- A Site Validation Report should be prepared for the site detailing the successful methodology of remediation and validation works to make the site suitable for the proposed childcare centre.

REFERENCES

- Department of Urban Affairs and Planning, NSW Environmental Protection Authority, *Managing Land Contamination – Planning Guidelines – SEPP 55 – Remediation of Land*, 1998.
- Google Earth, https://www.google.com/earth.
- NSW EPA, *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines* (2020).
- National Environment Protection Measures, *Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater*, 2013.
- National Environment Protection Measures, *Schedule B2 – Guideline on Site Characterisation*, 2013.
- NSW Environmental Protection Authority, *Waste Classification Guidelines Part 1: Classifying Waste*, 2014.
- NSW Environmental Protection Authority, *Sampling Design Guidelines*, 1995.
- NSW Environmental Protection Authority, *Guidelines on the Duty to Report Contamination under Contaminated Land Management Act*, 1997.
- Six Maps, https://www.maps.six.nsw.gov.au.
- State Environment Protection Policy 55 (SEPP 55). *Remediation of Land Under the Environmental Planning and Assessment Act.*
- WaterNSW, waternsw.com.au.

LIMITATIONS

The findings of this report are based on the scope of work outlined in Section 2. NEO performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental consulting profession. No warranties, express or implied are made.

The results of this assessment are based upon the information documented and presented in this report. All conclusions and recommendations regarding the site are the professional opinions of NEO personnel involved with the project, subject to the qualifications made above. While normal assessments of data reliability have been made, NEO assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of NEO, or developments resulting from situations outside the scope of this project.

The results of this assessment are based on the site conditions identified at the time of the site inspection and validation sampling. NEO will not be liable to revise the report to account for any changes in site characteristics, regulatory requirements, assessment criteria or the availability of additional information, subsequent to the issue date of this report.

NEO is not engaged in environmental consulting and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes.

NEO Consulting Pty Ltd (NEO)

Prepared by:

Luke Breva
Environmental Scientist

Reviewed by:

Nick Caltabiano
Project Manager

APPENDIX A

Figures and Photographic Log

N

Figure 1: The distance between the site and Wollongong CBD is approximately 88.36km.

Site location

Source: Six Maps 2021

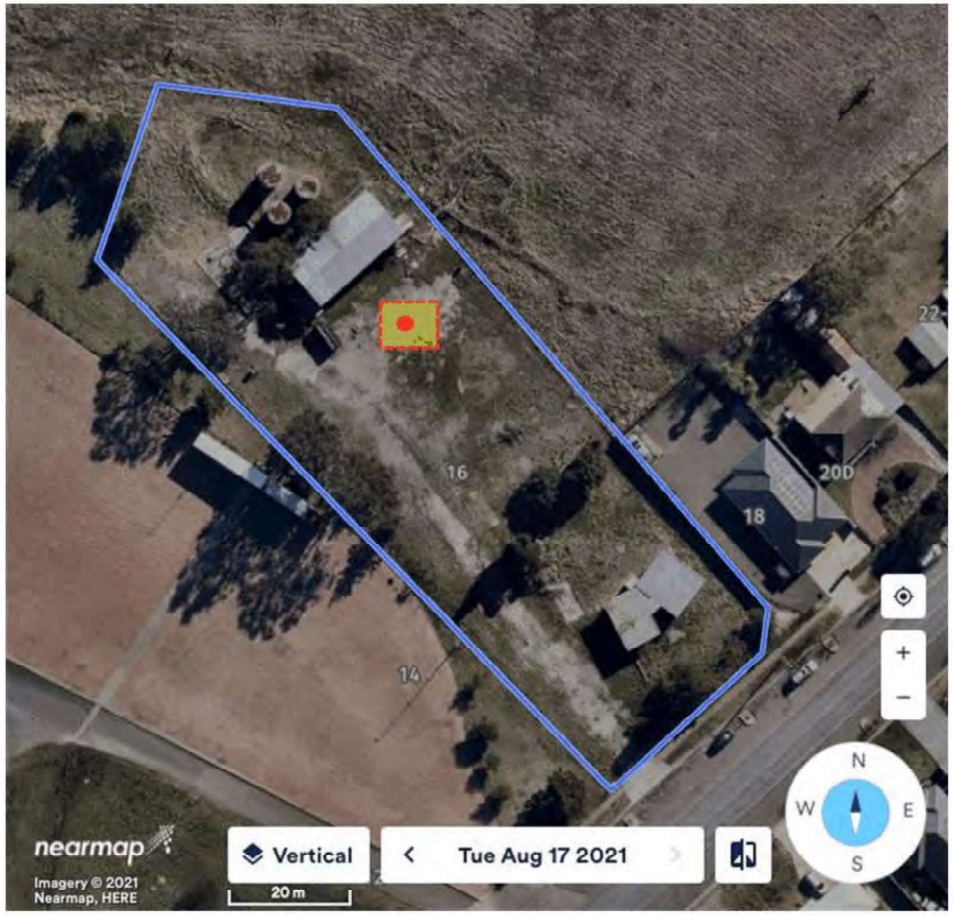
Figure 1	Locality Map
Project	16 George St, Marulan NSW 2579

N

Figure 4. Hotspot location for remediation.

Hotspot location

Proposed remedial sample locations (offset 2m from hotspot, sample from test pit floor collected 2m below hotspot depth)



Source: Near maps 2021

Figure 4	Hotspot Location
Project	16 George St, Marulan NSW 2579

Attachment 3a: Water NSW Pre-gateway Referral_10 June 2021

PO Box 398, Parramatta NSW 2124
Level 14, 169 Macquarie Street
Parramatta NSW 2150
www.waternsw.com.au
ABN 21 147 934 787

10 June 2021

Contact: *Stuart Little*
Telephone: *0436 948 347*
Our ref: *D2021/66096*

David Kiernan
Senior Strategic Planner
Goulburn Mulwaree Council
Locked Bag 22
GOULBURN NSW 2580

Dear Mr Kiernan,

Planning Proposal for Additional Permitted Uses – REZ/0002/2021

I refer to your email of 7 May 2021 regarding a Planning Proposal for 14 & 16 George Street Marulan and 159 Rifle Range Road Goulburn (REZ/0002/2021) that seeks to expand the range of uses allowed at an existing truck stop at Marulan and to facilitate the permissibility of a dwelling on a parcel of land at Goulburn. WaterNSW's concerns relate to the protection of water quality in the Sydney Drinking Water Catchment.

The proposed additional proposed uses for a food and drink premises and hotel/motel accommodation and pub for the Marulan site will require significantly improved sewerage management arrangements. The site is unsewered and the Marulan sewage treatment plant (STP) is currently at capacity. There is also no current site-specific development control plan for the site to address the sewerage management issue. The Proposal flags that a DA will be lodged these uses and that any consent issued will condition the development based on connection to the reticulated sewerage network and completion of the upgrade of the STP. WaterNSW also notes that any DA would need to demonstrate a neutral or beneficial effect on water quality and be referred to WaterNSW for concurrence under State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011. WaterNSW does not object to the progression of the Planning Proposal on the basis that the sewerage management issue will be addressed at DA stage and prior to any occupation of new development associated with the uses put forward by this Proposal.

We understand that contamination assessments are currently being undertaken for the Marulan site. We have not had the benefit of that information in undertaking our current assessment of the Planning Proposal. As any site contamination may also have implications for water quality, we would ask that the Planning Proposal be referred to us again at exhibition stage with the accompanying contamination assessment reports.

We have no objections to the Proposal with respect to 159 Rifle Range Rd and we support Council's rationalisation of the planning provisions for northern parcel of land at this site

Detailed comments are provided in Attachment 1 while Attachment 2 includes a relevant Strategic Land and Water Capability Assessment map for the 159 Rifle Range Road site.

If you have any questions regarding the issues raised in this letter, please contact Stuart Little at stuart.little@waternsw.com.au.

Yours sincerely

ALISON KNIHA
Catchment Protection Planning Manager

ATTACHMENT 1 – Detailed Comments

14 & 16 George Street, Marulan – Marulan Truckstop 31

The proposal in Marulan is developer-led and seeks to expand the ranges of uses allowed at Truckstop 31 as part of a wider proposed redevelopment of the site. The Marulan Truckstop 31 site comprises two lots, 14 George Street (Lot 2 DP 1053945) and 16 George Street (Lot 3 DP 1053945), occupying a combined area of approximately 4 ha. Both lots are currently zoned IN1 General Industrial under the *Goulburn Mulwaree Local Environmental Plan 2009* (the LEP). An existing service station occurs on Lot 2 and includes a fuel forecourt and restaurant. Lot 3 adjoins Lot 2 but is substantially smaller and contains a small residential property.

The Proposal seeks to make permissible with development consent the use of food and drink premises for Lot 2 and motel/hotel accommodation and pub with ancillary bottle shop for Lot 3. This will be done by amending Schedule 1 of the LEP to allow a fast food restaurant on Lot 2 and a motel, pub and bottle shop on Lot 3. This would overcome the current IN1 zoning restrictions that currently prohibit retail premises and tourist and visitor uses within the IN1 zone.

As noted in the Planning Proposal, the main constraint to the redevelopment of the service station and the associated uses is sewerage connection and management. While the Truckstop area is generally serviced by mains water and infrastructure, the site is not connected to the Marulan sewer network and is currently reliant on the use of on-site septic tanks. Additionally, Marulan sewerage treatment plant (STP) is at capacity and is unable to accommodate additional sewerage generated as a result of the proposed uses. No site-specific development control plan provisions are proposed for the site, leaving the sewerage issue to be managed by means of the development consent process (discussed below). We note the intention to connect the site to the reticulated sewage network once the STP upgrade has been completed.

The Planning Proposal identifies that the site redevelopment is being staged to coincide with the STP upgrade. A current development application (DA) is being progressed on part of the service station upgrade which omits Lot 3 (intended for motel/hotel and pub) and that part of Lot 2 where the fast food restaurant is anticipated to be sited. Further DAs will be submitted for the remaining areas subject to successful progression of this Planning Proposal. It is intended to manage the 'sewerage' constraint by conditioning any future development consent so that the operation/occupation of any premises will be subject to completion of the STP upgrade and connection to the reticulated sewerage network. Additionally, under the provisions of the SDWC SEPP, any future DA will be required to have a neutral or beneficial effect (NorBE) on water quality and will require the concurrence of WaterNSW.

Given the above intent and provisions, we believe that the sewerage management issue can be addressed at DA stage and are generally supportive of Council's proposed approach regarding the conditioning of the redevelopment to align it with the upgrade of Marulan STP. Any proposed conditions on the sewerage management issue will need to reasonably relate to the development and have appropriate certainty and finality. These are matters than can be addressed through the DA assessment and consent process.

159 Rifle Range Road, Goulburn

The Planning Proposal includes amendments to the LEP to rectify a planning anomaly that has resulted from the construction of the Hume Highway across 159 Rifle Range Road, Goulburn, which has given rise to divergent zonings and planning controls across the land. This is a council-initiated component of the Planning Proposal.

159 Rifle Range Road is a single large lot of approximately 119 ha which is bisected by the Hume Highway. The northern parcel of the Lot is about 76 ha and zoned E2 Environmental Conservation with a Minimum Lot Size (MLS) of 100 ha. The southern parcel is about 46 ha and zoned RU6 Transition with a MLS of 20 ha and includes an existing dwelling house. The main issue is that the northern E2 portion of the land prohibits a residential use while the 100 ha MLS prevents a dwelling entitlement. The Proposal seeks to amend Schedule 1 of the LEP to permit development for the purposes of a dwelling house with consent and to adopt a MLS of 70 ha for the site. This would

enable the land to be subdivided and facilitate the establishment of a single dwelling house on the northern portion, thereby enabling each parcel to be managed under separate ownerships.

We note that the area is unsewered. A non-perennial natural drainage flows from the North-West to the South-East through the site, with minor tributaries extending northward. The Planning Proposal notes that the large allotment size and the location of the drainage path enables a dwelling to be sited away from watercourses/drainage paths and that there is sufficient land area to accommodate on-site wastewater facilities without adversely affecting water quality. WaterNSW has also conducted a Strategic Land and Water Capability Assessment (SLWCA) for the site which confirms that the site has sufficient land of LOW or MODERATE risk to accommodate a dwelling house (see Attachment 2). There is also sufficient area to meet required effluent management area (EMA) buffer distances from waterways for any proposed on-site sewage treatment system.

WaterNSW has no objection to this aspect of the Planning Proposal and supports Council's approach of reconciling the planning provisions applying to 159 Rifle Range Road.

Contamination Risk

The potential risk of land contamination is a relevant matter with respect the Truckstop 31 site. While the Planning Proposal notes that the subject site is not identified on the Councils local contaminated land register or identified as significant contaminated land, the service station has been present on Lot 2 for approximately 50 years. The Planning Proposal notes that for Lot 2, a degree of contamination is likely but that the level of contamination is unknown. However, the Proposal infers that Lot 3 is unlikely to be contaminated.

The current Planning Proposal infers that further contamination assessment of the site is not required. However, having spoken with a relevant Council officer, we now understand that a contamination assessment is underway. WaterNSW's main concern is the potential effect of contaminated land on water quality, and the effect of leaching and mobilisation of contaminants during construction of the sites. We support a precautionary approach that further explores the potential for contamination risk associated with Lots 2 and 3.

We ask that the Planning Proposal be updated to reflect the contamination assessments being undertaken. We also ask that further background information be provided with respect to past land uses for Lot 3 and to clarify whether further detailed contamination assessments are proposed for this Lot. As we do not have the benefit of the contamination assessments at this time of this referral, we ask that the Planning Proposal be referred back to us during the public exhibition phase so that we may further understand the contamination risk associated with the site and the potential implications for water quality.

Strategic Land and Water Capability Assessments

The current Planning Proposal does not include information relating to SLWCAs.

For 14 and 16 George Street Marulan, appropriate SLWCAs for 'restaurants' or 'food and drink premises' have not been produced by WaterNSW, and there are no provisions for SLWCAs for hotels/motels or tourist and visitor accommodation. However, these uses will require appropriate amenities and will be a concentration point for visitors. As the site is currently unsewered, any development of the site to give effect to the said uses should be based on connection to the reticulated sewer and upgrade of the STP as indicated by the Planning Proposal.

For 159 Rifle Range Road, the most applicable SLWCA for the proposed dwelling and building entitlement is 'Residential unsewered Lots 4,000 sqm to 2 ha' (see Attachment 2). This SLWCA shows that the water quality risk for the site varies from LOW to EXTREME, with areas of HIGH and EXTREME risk being associated with waterways and drainage features. Areas of LOW and MODERATE risk occur in the north-west and MODERATE risk areas occur in the north. There is sufficient room for a dwelling house to be accommodated on site and for any EMA to meet the required 100 m EMA buffer distance requirements from waterways. Under State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011, any future development of the site will need to have a NorBE on water quality and be required to comply with relevant WaterNSW current recommended practices (CRPs) or standards at least equivalent to these.

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

The Planning Proposal responds to the SEPP, noting the sewerage constraints to the Marulan Truckstop 31 as previously described. We believe that the ability of the intended uses to provide later developments that can deliver a NorBE on water quality will heavily depend upon the ability to connect to the sewer and the capacity of the STP. We generally agree with the statements made regarding 159 Rifle Range Road. The section on the SEPP currently references the need for developments to have a NorBE on water quality. It would also benefit by recognising that new development should incorporate WaterNSW's CRPs or otherwise apply standards at least equivalent to those. The section could also reference that development in the Catchment requires the concurrence of WaterNSW.

Direction 5.2 Sydney Drinking Water Catchment

The Planning Proposal includes a response to the provisions of section 9.1 Direction Sydney Drinking Water Catchment. The Direction requires Planning Proposals to be consistent with the SEPP, give consideration to the outcomes of any relevant SLWCA, and zoned Special Areas as stated in the Direction. No Special Areas are affected by this Proposal, so this matter is not relevant.

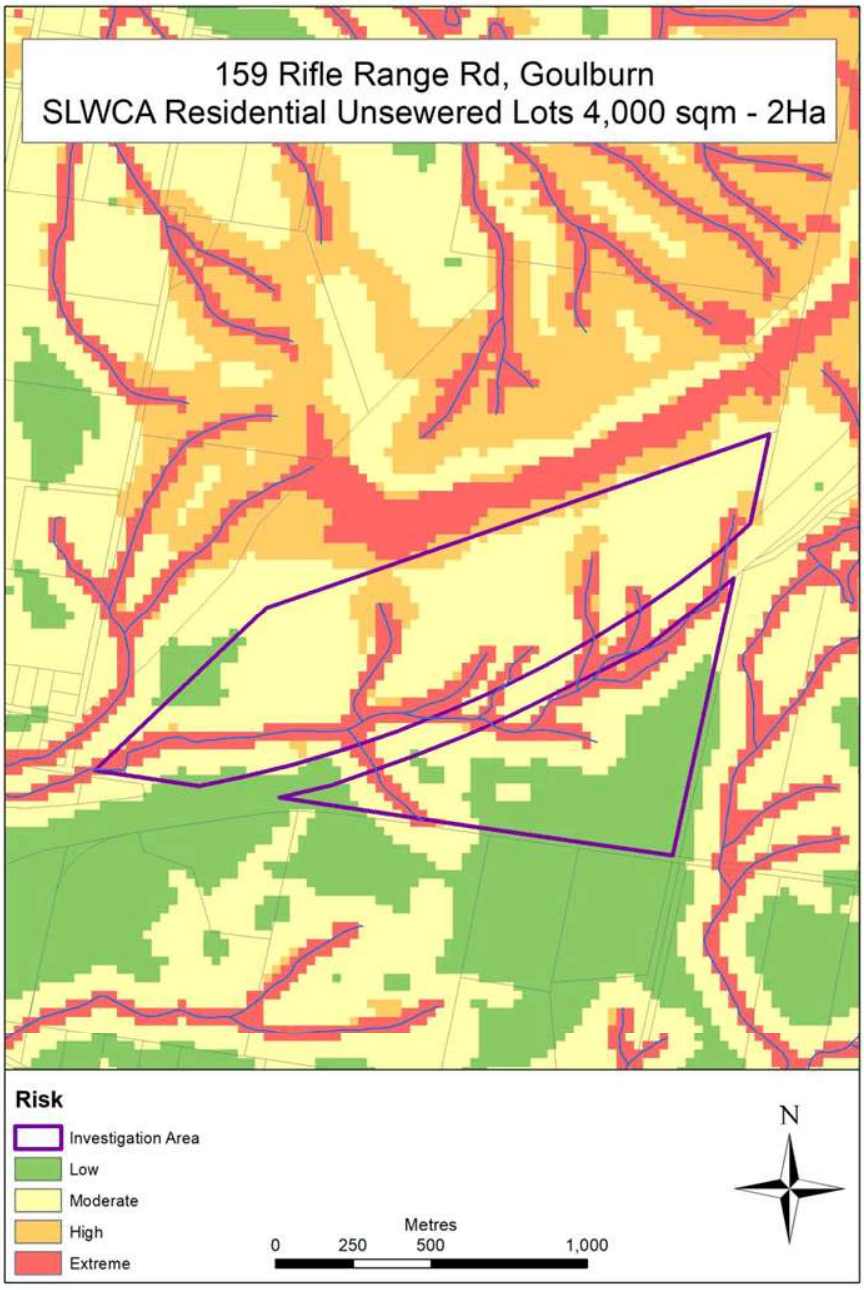
The response discusses the sewerage constraints of the Marulan site, as previously described, and the staging of the redevelopment to coincide with the STP upgrade. It also gives consideration to 159 Rifle Range Road, Goulburn being unsewered.

This section recognises that the SEPP applies to DAs for the permissible uses sought under the Planning Proposal and that any DA will need to have a NorBE on water quality. We support these statements. We provide a relevant SLWCA for 159 Rifle Range Road (see Attachment 2). The outcomes of that SLWCA are described above. SLWCAs are not relevant for Marulan Truckstop 31 for the reasons previously discussed. We ask that the information we have provided on the SLWCAs be included in this section.

Other

Council may wish to check the sewer and water map for the Marulan site to confirm that the annotations and attribution identified in the key accords with the symbology used on the map.

ATTACHMENT 2 – Strategic Land and Water Capability Assessment



Map 1. 159 Rifle Range Road, Goulburn: Strategic Land and Water Capability Assessment (SLWCA) for 'Residential unsewered Lots 4,000 sqm to 2 ha.

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Attachment 3b:Water NSW Post gateway Referral_23 August 2021

PO Box 398, Parramatta NSW 2124
Level 14, 169 Macquarie Street
Parramatta NSW 2150
www.waternsw.com.au
ABN 21 147 934 787

23 August 2021

Contact: *Stuart Little*
Telephone: *0436 948 347*
Our ref: *D2021/92979*

David Kiernan
Senior Strategic Planner
Goulburn Mulwaree Council
Locked Bag 22
GOULBURN NSW 2580

Dear Mr Kiernan,

Planning Proposal for Additional Permitted Uses – Marulan Truckstop 31 and 159 Rifle Range Road, Goulburn (REZ/0002/2021)

I refer to the Post-Gateway Referral of the Planning Proposal for Additional Permitted uses at 14 & 16 George Street, Marulan (Marulan Truckstop 31) and 159 Rifle Range Road, Goulburn (REZ_0002_2021). WaterNSW provided initial comment on this Proposal in our letter of 10 June 2021 (our ref: D2021/66096). However, at that time we did not have the benefit of the Contamination (Site Investigation) reports relating to Truckstop 31. The current Proposal includes those reports, which we have now included in our assessment.

Our main concern relates to the Truckstop 31 site with respect to sewerage availability and potential contamination risks. Our concerns over the sewerage management issue have largely been addressed in our previous correspondence, which is addressed in the Proposal. However, we believe that more conservative Health Investigation Levels may be more relevant to future use of Lot 3 DP 1053945 for overnight accommodation, to help support the suitability of the site for the proposed development.

Our detailed comments are provided in Attachment 1. If you have any questions regarding the issues raised in this letter, please contact Stuart Little at stuart.little@waternsw.com.au.

Yours sincerely

ALISON KNIHA
Catchment Protection Planning Manager

ATTACHMENT 1 – Detailed Comments

Truckstop 31 – 14 & 16 George St Marulan

The Proposal seeks to seeks to expand the permissibility provisions for the Truckstop 31 (Lots 2 & 3 DP 1053945) site to include a fast food restaurant (food and drink premises) on Lot 2 (14 George Street) and motel accommodation and pub with ancillary bottle shop on Lot 3 (16 George Street). The proposed additional uses of motel, pub and food and drink premises will require significantly improved sewerage management arrangements as the site is currently unsewered and the Marulan sewage treatment plant (STP) is at capacity.

Sewerage Management

We understand that upgrading the Marulan STP is a priority for Council, with the upgrade expected to be online by the end of 2023. The Proposal notes Councils intention of conditioning any proposed consent to a development application (DA) preventing operation of operation/ occupation of the development until the upgrade of Marulan STP has been completed. WaterNSW does not object to the progression of the Planning Proposal so long as the sewerage management issue is addressed at DA stage and prior to any occupation of new development associated with the uses put forward by this Proposal. As raised in our previous submission, any condition will need to reasonably relate to the development and have sufficient finality and certainty. Any DA for the site is required to have a neutral or beneficial effect (NorBE) on water quality and be referred to WaterNSW for concurrence under State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011. The ability to meet the NorBE test is heavily dependent upon the ability to connect to the sewer and the capacity of the STP.

Contamination Risk

Since providing our initial comments in June, both a Preliminary Site Investigation (PSI) and a Detailed Site Investigation (DSI) report have been prepared for the Truckstop 31 site (Appendices 12 and 13). The PSI report examined the potential for contamination across Lots 1, 2 and 3 DP 1053945. It found numerous areas of potential contamination concern but that the contaminants were considered to be of low to moderate risk. The report identified that a DSI was required to confirm the presence and extent of contamination to determine the suitability of the site for the proposed development.[1]

The subsequent DSI was undertaken focusing on Lots 2 and 3 DP 1053945 (i.e. the subject area of the current Planning Proposal) and included both soil and groundwater sampling. The chemical analysis targeted Contaminants of Potential Concern, which may have impacted the site based on past and present activities.

The soil results for Lots 2 and 3 have been compared against the National Environment Protection Measures (NEPM) Health Investigation Level (HIL) limits using the HIL D limits which relate to commercial/industrial premises. While this may be appropriate for Lot 2 with respect to the fast food restaurant, Lot 3 involves the creation of a motel involving overnight accommodation. Based on information contained in the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, we believe that the soil analysis results for Lot 3 need to be further examined against the limits set by the HIL A (residential with garden accessible soils) or HIL B (residential with minimal opportunities for soil access) criteria to help demonstrate the suitability of the site for the intended motel use.[2] A supplementary comparison of the Lot 3 soil test results against the HIL A or HIL B limits should be provided.

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[1] The PSI included land in Lots 1-3, DP 1053945 with Lot 1 occurring to the west of, but adjoining, Lot 2. The DSI was limited to Lots 2 and 3 DP 1053945. Lot 1 is not the subject of this Planning Proposal and is not discussed further.

[2] Section 3.2.4 of Schedule B7 (Volume 19) of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* advises, with respect to HIL D values, 'the land use scenario does not include more sensitive uses that may be permitted under relevant commercial or industrial zonings. These more sensitive uses include childcare, educational facilities, caretaker residences and hotels and hostels, etc.

In terms of the soil sampling results, based on the HIL D limits used, TRH, BTEX, PAH OCP/OPP, Metals and Asbestos were found not to exceed the NEPM for all soil samples collected.[3] However, Sites 2 and 3 both had metals above the Level of Reporting (LOR) but below the NEPM HIL D limit, with Site 3 recording all metals above the LOR for all samples. However, these are well below the HIL D limits. Certain Total Recoverable Hydrocarbons were also above the LOR for Site 3 but were well below relevant NEPM HIL D limits. For a water quality impact perspective, the main concern is the mobility of potential contaminants when soils are disturbed such as during excavation. Managing this risk is a matter more relevant to the later development application (DA) stage.

Groundwater was sampled using groundwater monitoring wells, established in both Lots 2 and 3, and a further well on Lot 2 downgradient of the UPSS. The DSI report found only that Copper and Zinc were found in concentrations that slightly exceeded Groundwater Investigation Levels (GILs), however this was attributed to naturally occurring levels within the groundwater; such metals are not directly associated with the service station operations. Our understanding is that none of the proposed development for the site will include excavations beyond the water bearing zone.

The DSI report concludes that current and past service station operations have not impacted the groundwater in the sampling locations. It also concludes that the site is suitable for the proposed development provided that the recommendations of the DSI report are implemented. We believe that the stated recommendations of the DSI report should be implemented as stated in the Planning Proposal, but this can occur through the DA and consent process.

Other - Land Use Permissibility

We envisage that for the Truckstop 31 site, the proposed motel or pub might include a caretaker's residence. We note that under the *Goulburn Mulwaree Local Environmental Plan 2009*, residential accommodation is prohibited on land zoned IN1 General Industrial. Council may wish to consider how the proposed motel, bottle shop and pub is to be managed to ensure that any accommodation envisaged for the proprietors of those establishments is within the remit of the change in the land uses being sought.

159 Rifle Range, Goulburn

Regarding the 159 Rifle Range Road site, we note that the Proposal has taken into account our earlier comments on this site, including providing the relevant Strategic Land and Water Capability Assessment (SLWCA). We support Council's approach of reconciling the planning provisions applying to 159 Rifle Range Road and have no objections to this aspect of the Proposal.

Direction 5.2 Sydney Drinking Water Catchment

The Planning Proposal provides a comprehensive response to the section 9.1 Direction 5.2 Sydney Drinking Water Catchment and incorporates consideration of our advice of 10 June 2021. The response discusses the sewerage constraints of the Marulan site, making any development contingent upon and subject to the completion of the STP upgrade. As reflected in the information, SLWCAs are not relevant for Marulan Truckstop 31 as WaterNSW does not hold appropriate SLWCAs for 'restaurants' or 'food and drink premises' or for hotels/motels or tourist and visitor accommodation.

The response also recognises that the 159 Rifle Range Road Goulburn site is unsewered but that there is sufficient area to accommodate a new dwelling while keeping the associated effluent management area (EMA) 100 m distant from waterways and drainage paths. The response also includes a copy of the relevant SLWCA for the site and incorporates our earlier advice that that land has sufficient land of LOW or MODERATE risk to accommodate a dwelling and meet appropriate EMA buffer distances from waterways.

Information on uses permitted under local council zoning schemes for commercial/industrial land use can be obtained from local council planning zones/schemes. Should these more sensitive uses be permitted, then HIL A or HIL B values should be considered'. See:
https://www.legislation.gov.au/Details/F2013C00288/Html/Volume_19#_Toc351713629.

[3] TRH: Total Recoverable Hydrocarbons (TRH); BTEX: Benzene, Toluene, Ethylbenzene and Xylene; PAH: Polycyclic Aromatic Hydrocarbon; OCP: Organochlorine Pesticides; OPP: Organophosphate Pesticides.

The Proposal also generally notes that DAs for the permissible uses sought through the Planning Proposal will need to have a NorBE on water quality. We support this statement.

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

The Proposal includes a response to the Sydney Drinking Water Catchment 2011 SEPP. The response identifies the current sewerage constraints of the Marulan Truckstop site and reference comments made in our previous response including the importance of sewer connectivity and STP upgrade to achieve a NorBE for later developments. The Proposal also incorporates consideration of our earlier comments made on the Rifle Range Road, Goulburn site.

We are supportive of the information provided in the Proposal.

The responses to both Direction 5.2 and the SEPP will need to be further updated based on our submission herewith.

Attachment 3c: Water NSW Exhibition Response_29 September 2021

PO Box 398, Parramatta NSW 2124
Level 14, 169 Macquarie Street
Parramatta NSW 2150
www.waternsw.com.au
ABN 21 147 934 787

29 September 2021

Contact: *Stuart Little*
Telephone: *0436 948 347*
Our ref: *D2021/107109*

Mr Warwick Bennett
General Manager
Goulburn Mulwaree Council
Locked Bag 22
GOULBURN NSW 2580

Dear Mr Bennett,

Additional Uses Planning Proposal – REZ/0002/2021 – Marulan Truckstop 31 and 159 Rifle Range Road, Goulburn: PP-2021-4197

I refer to the Exhibition of the Planning Proposal for Additional Permitted uses at 14 & 16 George Street, Marulan (Marulan Truckstop 31) and 159 Rifle Range Road, Goulburn (PP-2021-4197). The Proposal seeks to amend Schedule 1 – Additional Permitted Uses of the Goulburn-Mulwaree Local Environmental Plan 2009 (GM LEP) to permit with development consent, a 'food and drink premises' at 14 George St, Marulan (Lot 2 DP 1053945), a 'motel or hotel accommodation, pub and bottleshop' at 16 George St, Marulan (Lot 3 DP 1053945), and a dwelling house at 159 Rifle Range Road, Goulburn (part Lot 1 DP 706477).

WaterNSW has provided previous comments to Council regarding the Proposal on 10 June 2021 (our ref: D2021/66096) and 23 August 2021 (our ref: D2021/92979). Our main concern has been in relation to the Marulan Truckstop 31 site with regard to the separate issues of sewerage management and land contamination risk.

Marulan Truckstop 31

With regard to the Marulan Truckstop 31 Site, the Proposal takes into account and responds to our previous concerns regarding sewerage management and the importance of sewer connectivity and the Marulan sewage treatment plant (STP) for later developments to be able to deliver a neutral or beneficial effect (NorBE) on water quality as required under *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (SDWC SEPP). We stand by those previous comments but believe that these issues can be dealt with in the development application (DA) phase and in the timing of development construction and occupation. These issues need not inhibit the Planning Proposal from proceeding.

Our most recent August correspondence took account of the Contamination Assessment Reports but noted that the Health Investigation Levels (HILs) needed to be more conservative for Lot 3 DP 1053945 (the motel site) having regard to the future use of the site for overnight accommodation. The Proposal notes that an update is currently being prepared for the Detailed Site Investigation (DSI) report comparing the soil test result for Lot 3 against the HIL B limits (which relate to residential uses with minimal opportunities for soil access). This comparison will further help inform the suitability of the site for the intended motel use. The Planning Proposal notes the intention for the update to be provided through a post-exhibition report to Council after the current public exhibition of the Proposal has been completed. **Once the updated DSI report is available, and before the Proposal is finalised, WaterNSW would like an opportunity to examine the updated DSI report regarding the comparison of the soil test results against the HIL B limits**. As reflected in our previous correspondence, we believe that the stated recommendations of the DSI report should be implemented but this can occur through the DA and consent process.

159 Rifle Range Road Goulburn

We note and support Council's proposal to reconcile the planning provisions applying to 159 Rifle Range Road, Goulburn. The site is bisected by the Hume Highway and cannot currently be subdivided due to zoning and minimum lot size (MLS) restrictions. It is proposed to amend the provisions that apply to the northern parcel (E2 Environmental Conservation) to allow a dwelling house and reduce the applicable MLS provisions to enable that portion to subdivided from the southern parcel (zoned RU6 Transition). Council's preferred approach to the matter is to effect the change through the inclusion of a clause within Schedule 1 – Additional Permitted Uses of the GM LEP rather than changing the zoning to a more relaxed E3 Environmental Management or E4 Environmental Living. We support this approach as it will limit the range of land uses available for development at the site. We also note that the proposed provisions for Schedule 1 include an updated MLS from 70 ha to 74 ha. WaterNSW has no objection to this change.

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 (SDWC SEPP)

The Proposal (pp. 19-21) provides a thorough response to the SDWC SEPP, taking into account our previous concerns and issues raised in both the pre- and post-Gateway consultation. We support the information provided and have nothing further to add. We also note that section 3.6.6 Direction 2.6 – Remediation of Contaminated Land takes into account comments made by us in our August correspondence.

Direction 5.2 Sydney Drinking Water Catchment

The Proposal provides a strong consideration of Direction 5.2 Sydney Drinking Water Catchment (pp. 39-41), reflecting comments made in our June advice. However, the response to Direction 5.2 should be updated to reflect comments made in our August correspondence, particularly with respect to the contamination risk issue for the Marulan Truckstop 31 site. Cross-reference could also be made to Section 3.6.6 as that section addresses the contamination risk and takes into account our August advice on that matter. The response to Direction 5.2 includes our previously provided Strategic Land and Water Capability Assessment (SLWCA) and associated advice for the 159 Rifle Range Road Goulburn site. As indicated in the Planning Proposal, we do not hold appropriate SLWCAs for uses such as food and drink premises or tourist and visitor accommodation which would be relevant to the Marulan component of the Proposal. Apart from the need to update the section to reflect our August advice as described above, we support the information with respect to Direction 5.2.

If you have any questions regarding the issues raised in this letter, please contact Stuart Little at stuart.little@waternsw.com.au.

Yours sincerely

ALISON KNIHA
Catchment Protection Planning Manager

Attachment 3d: Water NSW Additional Referral Response_21 October 2021

PO Box 398, Parramatta NSW 2124
Level 14, 169 Macquarie Street
Parramatta NSW 2150
www.waternsw.com.au
ABN 21 147 934 787

20 October 2021

Contact: *Stuart Little*
Telephone: *0436 948 347*
Our ref: *D2021/113008*

David Kiernan
Senior Strategic Planner
Goulburn Mulwaree Council
Locked Bag 22
GOULBURN NSW 2580

Dear Mr Kiernan,

Marulan Truck Planning Proposal Progress & Detailed Site Investigation (DSI) Request- REZ/0002/2021

I refer to your email of 12 October 2021 providing an updated Detailed Site Investigation (DSI) report and accompanying Redial Action Plan in relation to potential contamination at the Marulan Truckstop site in relation to planning proposal REZ/0002/2021 (PP_2021_4107).

The updated information has been provided in response to our request of 23 August 2021 (our ref: D2021/92979) where we indicated that more conservative Health Investigation Levels (HILs) would be appropriate for Lot 3 DP 1053945 given its intended use as a motel providing overnight accommodation. In a follow-up email to Council on 23 August 2021, we indicated that the HIL-B limit (which relate to residential uses with minimal opportunities for soil access) could be used The Planning Proposal was exhibited while the updated DSI report was still being prepared. Our correspondence of 29 September 2021 on the exhibited Planning Proposal sought for the updated DSI report to be made available to us before the Proposal was finalised (our ref: D2021/107109).

The updated DIS report includes soil test results for Lot 3 based on HIL-A limits and the HSL-A Health Screening Levels (HSLs) for petroleum compounds, which are more conservative than the HIL-B limit initially sought by us and take a precautionary approach to the contamination risk. The updated report reveals that several forms of hydrocarbons exceed the HLS-A limits and/ or the Ecological Screening Level (ESL) for Urban, Residential and Public Open Space area leading the preparation of a Remedial Action Plan for Lot 3.

The preparation of the updated DSI Report and Remedial Action Plan has sufficiently addressed our concerns for the Planning Proposal stage of this matter. We may need to make further comment or seek more detail about the remediation at DA stage. Under *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011*, any future development of the site will need to have a neutral or beneficial effect on water quality, meet standards equal or better than those required by WaterNSW Current Recommended Practices, and will require the concurrence of WaterNSW. We also ask that Council keep us informed about any proposed demolition or remediation activity proposed for the site.

If you have any questions regarding the issues raised in this letter, please contact Stuart Little at stuart.little@waternsw.com.au.

Yours sincerely

ALISON KNIHA
Catchment Protection Planning Manager

Attachment 3e: Transport for NSW Post gateway Referral_ 2 August 2021

Transport for NSW

Our ref: STH21/00014/02
Contact: Andrew Lissenden 0418 962 703
Your ref: REZ/0002/2021

2 August 2021

David Kiernan
Goulburn Mulwaree Council
BY EMAIL: council@goulburn.nsw.gov.au

PLANNING PROPOSAL (REZ/0002/2021) – ADDITIONAL PERMITTED USES AT LOT 2 AND 3 DP 1053945 (NO.14-16) GEORGE STREET, MARULAN AND LOT 1 DP 706477 (NO.159) RIFFLE RANGE ROAD, GOULBURN – PUBLIC AUTHORITY CONSULTATION

Dear David

Transport for New South Wales (TfNSW) refers to the notification it received on 27 July 2021 and the subsequent phone discussion regarding the above planning proposal (PP).

TfNSW has reviewed the information provided while focusing on the impact to the state road network (i.e. the Hume Highway). TfNSW notes:

- the PP seeks to amend the provisions of the Goulburn Mulwaree Local Environmental Plan 2009 (GM LEP 2009) for two different sites (Refer to **Attachment 1**);
- each is seeking an additional permissible use beyond those already allowed under the GM LEP 2009. For Lot 2 DP 1053945 (No.14) George Street, Marulan the PP is seeking the additional permissibility of a fast-food restaurant (food and drink premises). For Lot 3 DP 1053945 (No.16) George Street, Marulan the PP is seeking the additional permissibility of motel accommodation and pub with an ancillary bottle shop. For Lot 1 DP 706477 (No.159) Rifle Range Road Goulburn the PP is seeking the additional permissibility of a dwelling within the E2 zoned portion of the site; and
- consultation is required in accordance with the Gateway Determination issued by the NSW Department of Planning, Industry and Environment.

Having regard to the above, TfNSW provides the comments in **Attachment 2** for Council's consideration and information.

If you have any questions please contact me on 0418 962 703.

Yours faithfully

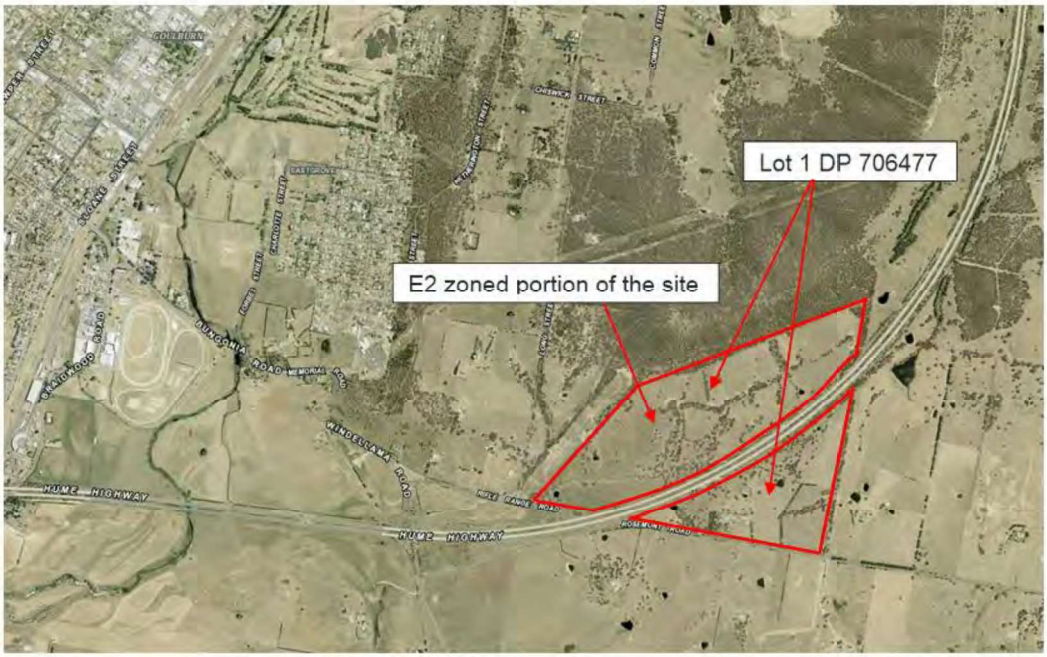
Andrew Lissenden
Development Case Officer
Community and Place I South Region

Cc: david.kiernan@goulburn.nsw.gov.au

Attachment 1

Lots 2 and 3, DP 1053945 (No.14-16) George Street, Marulan

Lot 1 DP 706477 (No.159) Rifle Range Road, Goulburn



Attachment 2

1. ***Comments for consideration at PP Stage***

   a) *Lots 2 and 3 DP 1053945 (No.14-16) George Street, Marulan*

   TfNSW does no object to the PP as it applies to Lot 2 and 3 DP 1053945 in principle, subject to the requirements in Point 2a) below being able to be adequately addressed as part of any future development application(s).

   b) *Lot 1 DP 706477 (No.159) Rifle Range Road Goulburn*

   TfNSW does no object to the PP as it applies to the northern portion of Lot 1 DP 7606477 in principle, subject to the requirements in Point 2b) below being able to be adequately addressed as part of any future development application or complying development application lodged.

2. ***Advisory comments for consideration at subsequent development stages***

   a) *Lots 2 and 3 DP 1053945 (No.14-16) George Street, Marulan*

   Noting the development types proposed, TfNSW has concerns with the access across the Hume Highway median that is currently available. Any additional development on these sites will require a Traffic Impact Study (TIS) to be prepared that in part assesses the suitability of this access point to be retained as well as the applicable requirements in Table 2.1 of the *RTA's Guide to Traffic Generating Developments* and *Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development* and *Part 3: Traffic Studies and Analysis*.

   b) *Lot 1 DP 706477 (No.159) Rifle Range Road Goulburn*

      i) No access to and from the Hume Highway will be allowed. All access will need to be gained via the local road network (i.e. access to Lot 1 DP 706477 will need to be via Rifle Range Road for the section north of the Hume Highway or Rosemont Road for the section south of the Hume Highway). In this regard a 'Restriction as to User' via an 88B Instrument shall be included on the title of Lot 1 DP 760477 to restrict access to/from the Hume Highway.

      ii) Clause 102 of the *State Environmental Planning Policy (Infrastructure) 2007* (SEPP 2007) would apply to the future residential development of the PP site (i.e. construction of a single dwelling house) as it is adjacent to a road corridor with an annual average daily traffic volume of more than 20,000 vehicles. Council will need to satisfy itself as part of any future DA lodged or complying development application for a dwelling that the requirements of Section 102 of SEPP 2007 can be satisfied.

Attachment 3f: Transport for NSW Post gateway Referral_3 September 2021

Transport for NSW

Our ref: STH21/00014/03
Contact: Andrew Lissenden 0418 962 703
Your ref: REZ/0002/2021

3 September 2021

Megan Trotter
Goulburn Mulwaree Council
BY EMAIL: council@goulburn.nsw.gov.au

PLANNING PROPOSAL (REZ/0002/2021) – ADDITIONAL PERMITTED USES AT LOT 2 AND 3 DP 1053945 (NO.14-16) GEORGE STREET, MARULAN AND LOT 1 DP 706477 (NO.159) RIFFLE RANGE ROAD, GOULBURN – PUBLIC EXHIBITION

Dear Megan,

Transport for New South Wales (TfNSW) refers to your email dated 31 August 2021 regarding the public exhibition of the above planning proposal (PP).

TfNSW has reviewed the information provided while focusing on the impact to the state road network (i.e. the Hume Highway). TfNSW notes:

- it has previously provided comments on the PP (i.e. post gateway - refer to the TfNSW letter dated 2 August 2021 – **Appendix 1**);
- the PP, in terms of the amendments to the provisions of the Goulburn Mulwaree Local Environmental Plan 2009 (GM LEP 2009) for the two different sites (i.e. the allowance of additional permissible use beyond those already allowed under the GM LEP 2009), has not significantly changed from when TfNSW provided its previous advice; and
- To address the comments that TfNSW previously made concerning 159 Rifle Range Road, Council has included in draft Schedule 1: Additional Permitted Uses, Clause 7 of the GM LEP 2009, two additional subclauses relating to access and noise.

On the basis that the above is correct, TfNSW does not object to the PP as it applies to both sites subject to the requirements in Point 2a) and Point 2b) in Attachment 2 of the TfNSW letter dated 2 August 2021 being adequately addressed as part of any future development applications lodged.

If you have any questions please contact me on 0418 962 703.

Yours faithfully

Andrew Lissenden
Development Case Officer
Community and Place I South Region

Cc: Megan.Trotter@goulburn.nsw.gov.au

Appendix 1

Please see the document titled **Appendix 1 – TfNSW response 2.08.21**.

Attachment 3g: DPIE Biodiversity & Conservation Division Post gateway Referral_5 August 2021

Planning, Industry & Environment

The General Manager
Goulburn Mulwaree Council
Locked Bag 22
Goulburn NSW 2580

Council@goulburn.nsw.gov.au

Attention: David Kiernan

5 August 2021

Our ref: DOC21/663378-1

Your ref: REZ/0002/2021

Dear Mr Kiernan

Subject: Planning Proposal - Ref-690 - PP-2021-4107– Additional Permitted Uses at 14 & 16 George Street, Marulan and 159 Rifle Range Road, Goulburn

I refer to your request for Biodiversity and Conservation Division's (BCD) review of the above planning proposal which seeks additional permitted uses (restaurant, motel and bottle shop) at George Street, Marulan, and at 159 Rifle Range Road, Goulburn that seeks a split subdivision and the use of a local clause to permit a dwelling.

BCD have considered the planning proposal against the ministerial planning directions set out below:

- 2.1 Environment Protection Zones
- 4.3 Flood prone land
- 5.10 Implementation of Regional Plans

We are satisfied that the planning proposal has adequately addressed the ministerial planning directions, and as such we do not object to the planning proposal.

However, we recommend that the Minimum Lot Size (MLS) for 159 Rifle Range Road, Goulburn, reflect the size of the lot, which means that rather than being 70ha, it should be 76ha. This would reduce the likelihood of the block being further subdivided in the future, and minimise the potential for development to impact the critically endangered ecological community of *White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-gum woodland) located on the site.

In order to avoid future development applications exceeding the threshold for entry into the Biodiversity Offsets Scheme (BOS), we recommend the proposed building envelope including Asset Protection Zone (APZ) be located within the cleared areas (exotic pastures) that are identified in Appendix 24.

If you wish to discuss this matter further, please contact Lyndal Walters, Senior Regional Biodiversity Conservation Officer, on 6229 7157.

Yours sincerely,

ALLISON TREWEEK
Senior Team leader Planning South East
Biodiversity and Conservation

cc George Curtis – DPIE – Planning and Assessment

Attachment 3h: DPIE Biodiversity & Conservation Division Exhibition Referral_21 September 2021

NSW GOVERNMENT | Planning, Industry & Environment

The General Manager
Goulburn Mulwaree Council
Locked Bag 22
Goulburn NSW 2580

Council@goulburn.nsw.gov.au

Attention: David Kiernan

21 September 2021

Our ref: DOC21/782191-2

Your ref: REZ/0002/2021

Dear Mr Kiernan

Subject: Updated Planning Proposal - PP-2021-4107– Additional Permitted Uses at 14 & 16 George Street, Marulan and 159 Rifle Range Road, Goulburn

I refer to your request for Biodiversity and Conservation Division's (BCD) review of the above updated planning proposal which seeks additional permitted uses (restaurant, motel and bottle shop) at George Street, Marulan, and at 159 Rifle Range Road, Goulburn that seeks a split subdivision and the use of a local clause to permit a dwelling.

BCD have considered the updated planning proposal against the ministerial planning directions and we are satisfied that it has adequately addressed them. As such we do not object to the planning proposal:

In addition, we are pleased that our recommendation to have the Minimum Lot Size (MLS) for 159 Rifle Range Road, Goulburn, reflect the size of the lot, which has been recently re-calculated to be approximately 74.5ha by Council, and that the MLS will now be 74ha. This will reduce the likelihood of the block being further subdivided in the future, and minimise the potential for development to impact the critically endangered ecological community of *White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-gum woodland) located on the site.

As advised in our previous letter, in order to avoid future development applications exceeding the threshold for entry into the Biodiversity Offsets Scheme (BOS), we recommend the proposed building envelope including Asset Protection Zone (APZ), be located within the cleared areas (exotic pastures) that are identified in Appendix 24.

If you wish to discuss this matter further, please contact Lyndal Walters, Senior Regional Biodiversity Conservation Officer, on 6229 7157.

Yours sincerely,

ALLISON TREWEEK
Senior Team Leader Planning South East
Biodiversity and Conservation
cc George Curtis – DPIE – Planning and Assessment

Attachment 3i: NSW Rural Fire Service Post gateway referral_ 3 August 2021

NSW RURAL FIRE SERVICE

Goulburn Mulwaree Council
Locked Bag 22
GOULBURN NSW 2580

Your reference: (REF-688) REZ/0002/2021
Our reference: SPI20210725000111

ATTENTION: David Kiernan

Date: Tuesday 3 August 2021

Dear Sir/Madam,

Strategic Planning Instrument
Rezoning – Planning Proposal
The planning proposal involves 2 distinct sites. The Marulan Truckstop is seeking the permissibility of a fast food restaurant on lot 2 at 14 George Street and motel and pub with ancillary bottle shop on lot 3 at 16 George Street. 159 Rifle Range Rd is seeking the permissibility of a dwelling with a restriction of minimum allotment size.

I refer to your correspondence dated 23/07/2021 inviting the NSW Rural Fire Service (NSW RFS) to comment on the above Strategic Planning document.

The NSW RFS has considered the information submitted and provides the following comments.

The NSW RFS has reviewed the proposal with regard to Section 4.4 of the directions issued in accordance with Section 9.1 of the *Environmental Planning and Assessment Act 1979*.

The objectives of the direction are:

(a) to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and
(b) to encourage sound management of bush fire prone areas.

The direction provides that a planning proposal must:

(a) have regard to Planning for Bushfire Protection 2019,
(b) introduce controls that avoid placing inappropriate developments in hazardous areas, and
(c) ensure that bushfire hazard reduction is not prohibited within the APZ.

Based upon an assessment of the information provided, NSW RFS raises no objections to the proposal.

For any queries regarding this correspondence, please contact Bradley Bourke on 1300 NSW RFS.

Yours sincerely,

Postal address
NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address
NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
www.rfs.nsw.gov.au

Anna Jones
Supervisor Development Assessment & Plan
Built & Natural Environment

Attachment 3j: NSW Rural Fire Service Exhibition Response_8 September 2021

NSW GOVERNMENT

NSW RURAL FIRE SERVICE

Goulburn Mulwaree Council
Locked Bag 22
GOULBURN NSW 2580

Your reference: REZ/0002/2021 / PP-2021-4107
Our reference: SPI20210901000143

ATTENTION: Megan Trotter

Date: Wednesday 8 September 2021

Dear Sir/Madam,

Strategic Planning Instrument
Draft LEP
Goulburn Mulwaree Council gives notice of the public exhibition of a Planning Proposal under Schedule 1 Clause 4 of the *Environmental Planning and Assessment Act 1979*. The intended outcome of this Planning Proposal is to amend the *Goulburn Mulwaree Local Environmental Plan 2009, Schedule 1: Additional Permitted Uses* by including the following as additional permissible uses:
- food and drink premises on Lot 2, DP 1053945 at 14 George Street, Marulan
- motel or hotel accommodation, pub and bottle shop on Lot 3, DP 1053945 at 16 George Street, Marulan.
- Dwelling house on part of Lot 1, DP 706477 at 159 Rifle Range Road, Goulburn

I refer to your correspondence dated 31/08/2021 inviting the NSW Rural Fire Service (NSW RFS) to comment on the above Strategic Planning document.

The NSW RFS has considered the information submitted and subsequently raise no concerns or issues in relation to bush fire.

For any queries regarding this correspondence, please contact Bradley Bourke on 1300 NSW RFS.

Yours sincerely,

Martha Dotter
Supervisor Development Assessment & Plan
Built & Natural Environment

Postal address
NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address
NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
www.rfs.nsw.gov.au

Attachment 4a: Public Exhibition Submission_Donna Ryall_10 September 2021

To the General Manager

Good afternoon,

I am writing in regard to the **Planning Proposal – Additional Permitted Uses at 14 & 16 George Street, MARULAN, 2579,** more specifically the proposal for a motel or hotel accommodation, pub and bottle shop at Lot 3 DP 1053945 at 16 George Street, Marulan.

I reside directly opposite this address at 15 George Street, Marulan. Whilst I am keen to see the area tidied up and am not against development, my concerns are:

1. Where the driveway or entrance to the proposed motel/hotel, pub and bottle shop would be located. If located directly opposite my own driveway I strongly object on the grounds that it would cause an increase in traffic, both noise and headlights shining directly into the front room of my premises from vehicles exiting the location.

2. I have concerns where the parking for the proposed motel or licenced premises would be. The area is already quite busy with vehicles being parked in the street both on my footpath and across the road in front of 16 George St when people are attending the Marulan Medical Centre.

3. I am concerned as to the extra amount of rubbish that would be generated. Already the truck stop at 14 George St generates a lot of rubbish that blows across into my yard. I am constantly having to pick up rubbish and use my own bins for it. This also relates to the proposal for a fast food restaurant in front of the current truck stop at 14 George Street, Marulan. I would propose that high fences be erected around any fast food premises in order to stop the rubbish from blowing across into my yard.

4. If this proposal is to go ahead, I seek your approval to increase the allowed front fence height of my property from the current 1.2m to much higher than that so that I may have some privacy.

I would also like to know what the proposed hours of operation would be for any licenced premises at 16 George Street, Marulan and depending on this, I may make further submissions. I bought the land and built the house on it as a residential property, not an industrial property and believe this area, and my specifically my property, is zoned residential. Please correct me if this is not the case.

I look forward to your response.

Attachment 4b_Public Exhibition Submission_Lee Environmental Planning on behalf of Ken McCourt_2 October 2021

1

LEE ENVIRONMENTAL PLANNING

P 0408 473 857
E lep.planning@gmail.com
W www.lepplanning.com.au
A 33 Holly Street, Bowral NSW 2576
ABN 16 820 474 487

Ken McCourt

Dear Ken,

RE: Planning Proposal for additional permitted uses at 14 & 16 George Street, Marulan

As requested, I am writing to you in regards to the above Planning Proposal that has only recently been drawn to your attention by Goulburn Mulwaree Council. Your interest arises as a landowner of commercial property on George Street within the town centre of Marulan.

You forwarded a copy of a Council report that I understand will be presented shortly to a meeting of Goulburn Mulwaree Council. It follows from an earlier planning report of April 2021.

Whilst this report deals with both the George Street site and Rifle Range Road site, your concerns relate directly to George Street and my comments are confined to that aspect of the Planning Proposal. (Council's Reference PP-2021-4197).

I believe the following comments should be presented to the Council's Strategic Planning department as soon as possible to ensure your concerns are properly considered, either before the matter is reported to Council or at the very least at that meeting so Councilors are aware of your concerns and the potentially divisive nature of the report recommendation.

Consultation

You have advised that the existence of the Planning Proposal has come as a surprise not only to yourself, but also to many other of the landowners within the Marulan town centre.

I am unaware of what processes Council has undertaken to make people aware of the Planning Proposal to ensure comprehensive and meaningful involvement with the community. Clearly if a large proportion of an affected community is unaware of imminent changes to planning controls, then whatever public engagement process was undertaken has been unsuccessful. Council may not therefore have satisfied its obligations to its community. Such a failure could call into doubt the procedural fairness of the process.

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P 0408 473 857
E lep.planning@gmail.com
W www.lepplanning.com.au
A 33 Holly Street, Bowral NSW 2576
ABN 16 820 474 487

Intention of the Planning Proposal

The stated intended outcome of the Planning Proposal for the property at 14-16 George Street Marulan is to allow certain land uses that are not currently permissible, namely a motel, pub and bottle shop.

It is intended to do so through providing an 'exception' for the site through listing in Schedule 1 of the GMLEP2009. This in effect keeps the underlying zoning of the land (IN1 General Industrial) but allows other uses which presumably, have been handpicked by the proponent.

The report confirms that this aspect of the Planning Proposal has not emanated from any strategic study or direction. In that sense it is not unfair to call it simply an opportunistic spot rezoning aimed at adding market value to the land that the proponent believes will be profitable.

A land owner cannot be criticized for seeking profitable land uses, however that desire does not necessarily translate into a solid reason for a Planning Proposal.

Marulan is a recognised and important service centre along the Hume Highway corridor, but it is also a local centre servicing a local population. The current land use zoning of the GMLEP2009 reflects this. This makes this 'spot rezoning' approach to the site somewhat confusing.

Strategic merit

It is necessary for all Planning Proposals to demonstrate strategic planning merit. At this stage it is not apparent to me as to what the strategic merit is for this Proposal.

As noted above, the Council report recognizes that the Planning Proposal is not linked to any strategic study or report.

At this point in time, the best guide to long term strategic outcomes for Marulan are viewed through the existing land use zoning and the range of land uses that those zones allow. For the subject land, the prevailing zone is IN1 General Industrial. This zone allows for a wide range of land uses that can be long term contributors to the broader Marulan economy and community. The report makes no compelling case as to why the current zoning is deficient. The argument that other non industrial type uses are more profitable is not a planning reason of any substance.

LEE ENVIRONMENTAL PLANNING

P 0408 473 857
E lep.planning@gmail.com
W www.lepplanning.com.au
A 33 Holly Street, Bowral NSW 2576
ABN 16 820 474 487

Conversely, there is a defined Marulan town centre that is within the B2 Local Centre zone. This area contains the building blocks for a vibrant and successful town. This is through both the existing businesses that can consolidate and/or expand and sufficient zoned land to allow for new opportunities. I am unaware that there is a case that insufficient commercial land is available, or that the current B2 zoned land is ill equipped to cater for the needs of the locality.

There can be no argument that uses such as motel, pub and bottle shop should be seen as key town centre uses. I am unsure why Council would support dislocating the town centre by encouraging such key uses to leak outside of the town centre. This would be a failure of strategic planning,

The lack of strategic merit is concerning and coupled with the apparent lack of community involvement in this Planning Proposal, it would not be unreasonable to request Council to pause on this specific Planning Proposal in favour of a more comprehensive and collaborative strategic planning exercise for Marulan.

Economic Impact

The Council report states that the Planning Proposal was supported by an Economic Impact Statement. I have not viewed that report, but Council's report includes information on some of its conclusions.

It is not surprising that the proposed development that would result from the Planning Proposal would generate positive economic numbers. However, the more critical question is why Council would believe such potential benefits should be stripped out of the identified Marulan town centre to a site outside of the town centre. That would appear to be an outcome at complete odds with the preferred long term strategic planning for the Marulan town and a question not answered within the Council report.

Site Specific merit

It is also necessary for a Planning Proposal to exhibit site specific merit. No doubt that through a Development Application process, it could be demonstrated that the site has the physical capacity to accommodate the proposed uses.

LEE ENVIRONMENTAL PLANNING

P 0408 473 857
E lep.planning@gmail.com
W www.lepplanning.com.au
A 33 Holly Street, Bowral NSW 2576
ABN 16 820 474 487

However, it is questionable as to the site suitability when the potential negative impacts on the town centre are considered. The economic viability of a project is a different question to the economic impact of development. As already noted, it is unclear as to why Council would redirect development that acts as a town centre stimulus, away from the actual town centre.

Similarly, the social impact assessment as presented in the Council report is unconvincing. The greatest positive social impact must accrue through a strong cohesive town centre, which is being undermined by this Planning Proposal.

Summary

Please note that these comments are on the basis of the limited information available and the time frame in which to make a submission to Council.

My initial conclusion is that the Planning Proposal lacks strategic merit and on that basis alone it should not proceed and certainly not without first being the subject of meaningful public scrutiny and comment. Clearly that is a decision for the Council to make.

Yours Faithfully,

Scott Lee

2 October 2021

Attachment 4c: Public Exhibition Submission_Jos Roberts_5 October 2021

Development at 14-16 George Street Marulan

I wite as a member of the Marulan community who has focussed much effort to develop the town as a coherent community. Personal wishes and benefits should not influence the overall considerations. Marulan has great potential, but I believe that a bigger picture should be maintained.

What is good for the town is key and the regulations should ensure that result; the regulations are not an end in themselves. Having two town centers in the town creates division. This proposal will commence the hollowing out of the town retail centre doubtless to be followed by other local spot rezonings unless these are done on a first in best dressed basis. It will benefit some but detract from the town's master plan. We all need to think in the 25-year term not just a quick returns.

Due to the hollowing out the retail centre it will become less commercially attractive to develop that centre. Why remodel the Terminus pub when there is another new competitor down the road taking trade away? I am hoping for more and varied retail businesses to open in the centre – its beginning to develop having been asleep for years. A new Garden Centre and a new Café are proposed in the Marulan Village Center – a new hire shop has opened adjacent. The pub has changed hands and has a huge block of land behind enabling it to develop and become a social magnet. The town is just beginning to falteringly develop and has new blood and owners are seeing the potential. The existing center still needs investment and this proposal will be create a disincentive.

The residential areas around the town are growing – they need to be serviced and not solely rely on Goulburn and Mittagong. We know the traffic on the Hume is going to become much heavier as more and more quarry trucks will roll by, so local shopping and employment in a vibrant centre is to be encouraged.

The pub type establishment close by this site, part of the existing motel, has been empty for a long time – the Duck Inn opened there for a brief period but did not survive. Marulan Rural Supplies seems to be doing well. KFC is already there. The BP station now serves fast food. Will another fast food outlet stifle the current offerings? The local area planning/architecture has had no apparent master plan, there are roads everywhere; its all been designed on a component basis, not as a whole. It's a mess. I believe this proposal has long term negative effects for the town as a whole and does not contribute to cleaning up the current incoherent planning in that area. The long term costs may be felt for years.

I ask the Council to consider what is best for the town in the longer term. I do support appropriate development contributing to this area but I believe this proposal seeks to alter the regulations to suit this component of the town, not the whole.

Attachment 4d:Public Exhibition Submission_G.Spicer & S.Atkinson_5 October 2021

Attention Ryan Gill

I have been advised of your name and email address to email you in relation to the amended proposal for 14 -16 George street.

- food and drink premises on Lot 2, DP 1053945 at 14 George Street, Marulan
- motel or hotel accommodation, pub and bottle shop on Lot 3, DP 1053945 at 16 George Street, Marulan

I don't agree with the works that are being suggested for 16 George street. I dont believe this is something that will benefit our area as there is already a number of locations in marulan that alcohol can be purchased. Marulan already has a pub located on the main street and a tavern not even 200m from the proposed location. Our town is not big enough to warrant 2 pubs and a tavern. As for the accomodation there is also a number of locations in George street marulan. the marulan motor inn 200 meters down the road. And we also have the terminus pub and marulan stayz that are on George street as well and im pretty sure that they always have vacancies.

As I live at 17 George street marulan I also have 3 young children and am concerned of the possibility of increased traffic on the road and an increase in noise. we already have issues with trucks using their Jake breaks at all hours of the day and night. We are a trucking family so we are all for trucks in the area however My bedroom is at the front of the house. How will the increase in noise and traffic affect us?

How will this affect the residential property prices around and near this site?

In regards to the fast food. Marulan already has a number of fast food drive through options in and around town. With KFC, 2x hungry Jack's, 2x subways, an Indian restaurant as well as the numerous cafes throughout town. We also have McDonald's only a short drive out of town in either north or south directions.

I honestly do not believe that marulans town or population warrents any of these proposed ideas and the location is Inappropriate

Regards

Gary Spicer and Samantha Atkinson

Attachment 4e: Public Exhibition Submission_Julie Graham_5 October 2021

Julie Graham
26 Station Street
Marulan NSW 2579

05 October 2021

The General Manager
Goulburn Mulwarree Council
Bourke Street
Goulburn NSW 2580

Dear Sir/Madam

Re: **Additional Uses Planning Proposal - REZ/0002/202**

I am writing in response to the Proposed Development at 14-16 George Street Marulan with submissions closing this afternoon.

I have reviewed the proposed submission and although not against progress I request you consider my points below.

I have serious concerns regarding the height and roof to facilities proposed within the hotel. The proposed development is the adjacent property to our town's family doctors clinic and then our residential area. The report acknowledges noise and traffic considerations however noise carries a considerable distance at night and while one can adjust to the slow drone of traffic. Noise produced from alcohol is loud often high pitched and sudden. Noise from patrons travelling from a venue which is well supported such as this will certainly have a long term impact on our community.

A roof top bar area is something I would expect to see in a more densely populated community and while I acknowledge this will be targeted at growth. I question if council would approve such an item with a development proposal if it was placed next door to their property. Why Marulan we are growing yes, and need services yes, but with consideration.

We already have alcohol available at two venues within our town- the Terminus and IGA and while this development appears to be targeting travellers it is a third venue for our village and while the opening hours are not yet proposed it is still a disproportionate amount of alcohol for a village location.

Heritage: How offensive it was for the applicant to select a 'horders' home to showcase our heritage area. Not only as this is an ongoing concern and has been referred to Goulburn Mulwarree Council with fire concerns and also the impact on the heritage church next door but because it is well known the Marulan Community has worked continuously to support our local businesses who have contributed so much to retaining our beautiful buildings. Please see the attach photos of our town centre where the new shopping centre is integrated and supported by locals.

Transport: Marulan has a train/bus service for those working north of Marulan mostly. Unfortunately Goulburn to Marulan services are limited and not well patronised. Private car from Marulan 30 minutes to Goulburn – 30-45 minutes Moss Vale and 45 Minutes Mittagong.

Waste waste waste.. Oh my goodness it's amazing how this impacts the entrance to Marulan. The Council street area from the BP to the roundabout and the fence area of the Meridian Park is continuously littered with takeaway rubbish. People literally drive away throwing their waste out the vehicle window. A drive though takeaway will not change people's behaviour and I can only see this issue becoming a major problem without it being seriously addressed by Council. Not only for the takeaway and Hotel Motel proposed development but the whole stretch as mentioned above. It is the older people in the community who collect the loose waste not young people or those to drive through...

Electricity Grid: This winter we noticed the substantial difference in our cooking. Is sustainable energy and solar option to be integrated within the development? I would have thought this was an extremely important conversation to have pre development and would assist with any submission.

Demographics: Well wasn't this enlightening! Marulan has had considerable growth within the last five years and development is active in all directions. I would like to point out the most recent census should have us above the 40% so proudly quoted, so we can be assisted to improve ourselves. Offensive completely!! Our population has changed considerably over the last five years and families and retirees are finding a beautiful village atmosphere which was supported through the difficult years by the previous volunteers and older residents yes the 40%. The Lions Club, Marulan Progress Association and Chamber of Commerce and Marulan Volunteers.

Thank you for reading.

Kind regards
Julie Graham

[redacted]

Historic roadside waste blocking drainage (taken 5 Oct 2021)

Historic roadside waste (taken 5 Oct 2021)