

RGS50080.2-AH

21 May 2024

Central Coast Council
Po Box 20
WYONG NSW 2259

Attention: Breelle Varman

Dear Breelle,

RE: Proposed Multistorey Apartment Building Development – 23-25 Ashton Avenue, The Entrance NSW

Waste Classification

Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken contamination and geotechnical investigations and assessment for the proposed multistorey apartment building development to be constructed at 23-25 Ashton Avenue, The Entrance NSW. A preliminary waste classification provided in the Detailed Site Investigation (DSI) report prepared by RGS (Ref. RGS50080.2-AG) indicated the fill at the site would be classified as restricted solid waste due to elevated nickel levels exceeding the threshold for general solid waste in multiple samples and elevated lead levels exceeding the threshold for general solid waste in one sample (S203). The material could potentially be reclassified as general solid waste following leachate testing for both nickel and lead.

As such, subsequent leachate testing was undertaken on selected samples.

Table 2 of the 'Waste Classification Guidelines (2014)' nominates a suite of analytes to be tested (Column 1) and also provides the maximum concentration (CT1) allowable within the soil for classification without the need for additional toxicity characteristics leaching procedure (TCLP) testing for both general solid waste (Column 2) and restricted solid waste (Column 3) for each analyte. Should the CT1 values be exceeded, the guidelines provide a Specific Contaminant Concentration (SCC) value to allow further evaluation of contaminant concentrations in conjunction with TCLP testing.

An evaluation of the laboratory test results for sampled soils against the waste classification guidelines outlined above are presented in the summary table in Appendix B.

Based on the results of the DSI and the subsequent leachate testing the fill would be classified as General Solid Waste.

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



For and on behalf of **Regional Geotechnical Solutions Pty Ltd**

Louis Davison

Senior Geotechnical Engineer

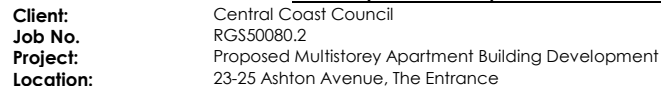
Figures and Attachments:

Figure 1

Laboratory Test Results Sheets



	Client:	Central Coast Council	Job No.	RGS50080.2
	Project:	Proposed Multistorey Apartment Building Development	Drawn By:	LD
		23-25 Ashton Avenue, The Entrance	Scale:	NTS
	Title:	DSI Sample Plan	Date:	3-May-24
			Drawing No.	Figure 1



 REGIONAL GEOTECHNICAL SOLUTIONS	Client: Central Coast Council Job No.: RGS50080.2 Project: Proposed Multistorey Apartment Building Development Location: 23-25 Ashton Avenue, The Entrance	<u>Summary Table - Comparison of Contamination Analysis Results With Waste Classification Threshold Limits (Results in mg/kg)</u>
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SAMPLE	Depth (m)	Material (m)	TOTAL PETROLEUM HYDROCARBONS					PAH	PCBs (Total)	OC/OP Pesticides	HEAVY METALS									
			C6-C9	C10-C14	C15-C28	C29-C36	TOTAL				Arsenic	TCLP	Cadmium	TCLP	Nickel	TCLP	Lead	TCLP	Mercury	TCLP
S201	0.05 - 0.1	Fill: Gravelly SAND	<10	<50	<100	<100	<50	<0.5			<5		<1		97	<0.8	<5		<1	
S202	0.05 - 0.1	Fill: Gravelly SAND	<10	<50	<100	<100	<50	<0.5			<5		<1		6		24		<1	
S203	0.05 - 0.1	Fill: Gravelly SAND	<10	<50	<100	<100	<50	1.2			55		<1		4		102	0.6	<1	
S204	0.05 - 0.1	Fill: Gravelly SAND	<10	<50	<100	<100	<50	<0.5			8		<1		17		26		<1	
S205	0.05 - 0.1	Fill: Gravelly SAND	<10	<50	<100	<100	<50	0.5			6		<1		3		17		<1	
S206	0.05 - 0.1	Fill: Clayey SAND	<10	<50	<100	<100	<50	<0.5			26		<1		4		19		<1	
S207	0.05 - 0.1	Fill: Sandy CLAY	<10	<50	<100	<100	<50	<0.5			14		<1		4		24		<1	
S208	0.05 - 0.1	Fill: Sandy CLAY	<10	<50	<100	<100	<50	<0.5			<5		<1		96	<0.8	<5		<1	
S209	0.05 - 0.1	Fill: GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		75	<0.8	<5		<1	
S210	0.05 - 0.1	Fill: GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		9		9		<1	
S211	0.05 - 0.1	Fill: GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		9		13		<1	
S212	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		106	<0.8	<5		<1	
S213	0.05 - 0.1	Fill: Gravelly SAND	<10	<50	<100	<100	<50	<0.5			<5		<1		8		6		<1	
S214	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		10		8		<1	
S215	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		8		7		<1	
S216	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		103	<0.8	<5		<1	
S217	0.05 - 0.1	Fill: SAND	<10	<50	<100	<100	<50	<0.5			<5		<1		10		15		<1	
S218	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			12		<1		22		84		<1	
S219	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		11		12		<1	
S220	0.05 - 0.1	Fill: Sandy GRAVEL	<10	<50	<100	<100	<50	<0.5			<5		<1		99	<0.8	<5		<1	
THRESHOLD LIMITS																				
GENERAL SOLID WASTE		CT1								4	100		20		40		100		4	
		SCC1	650				10000	200	<50	7.5	500		100		1050		1500		50	
		TCLP1								0.2	5				2		5		0.2	
RESTRICTED SOLID WASTE		CT2							16	400		80		160		400		16		
		SCC2	2600				40000	800	<50	30	2000		400		4200		6000		200	
		TCLP2								0.8	20		4		8		20		0.8	

NOTES

CT	Contaminant Threshold (without TCLP)
SCC	Specific Contaminant Concentrations (used with TCLP)
TCLP	Toxicity Characteristics Leaching Procedure (used with SCC)
Shaded	Exceeds General Solid Waste Threshold = Restricted Solid Waste
BOLD and Shaded	Exceeds Restricted Solid Waste Threshold = Hazardous Waste

CRITERIA:

Waste Classification - Classifying Waste, Part 1 (NSW EPA 2014)



CERTIFICATE OF ANALYSIS

Work Order : **ES2415612**
Client : **REGIONAL GEOTECHNICAL SOLUTION**
Contact : LOUIS DAVIDSON
Address : 2 Murray Dwyer Cct
Mayfield West 2304
Telephone : +61 02 6553 5641
Project : RGS50080.2 Apartment Development
Order number : ----
C-O-C number : ----
Sampler : ----
Site : The Entrance
Quote number : EN/222
No. of samples received : 7
No. of samples analysed : 7

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : Customer Services ES
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61-2-8784 8555
Date Samples Received : 26-Mar-2024 14:00
Date Analysis Commenced : 16-May-2024
Issue Date : 20-May-2024 17:39



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- This is a rebatch of WO ES2409795.
- EN33: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	S201 ES2409795_001	S208 ES2409795_008	S209 ES2409795_009	S212 ES2409795_012	S216 ES2409795_016
Sampling date / time				26-Mar-2024 00:00	26-Mar-2024 00:00	26-Mar-2024 00:00	26-Mar-2024 00:00	26-Mar-2024 00:00
Compound	CAS Number	LOR	Unit	ES2415612-001	ES2415612-002	ES2415612-003	ES2415612-004	ES2415612-005
Result				Result	Result	Result	Result	Result
EN33: TCLP Leach - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	9.8	10.1	9.7	10.0	10.1
After HCl pH	----	0.1	pH Unit	1.6	2.5	1.8	2.6	2.5
Extraction Fluid Number	----	1	-	1	1	1	1	1
Final pH	----	0.1	pH Unit	5.2	5.3	5.1	5.3	5.2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	S220 ES2409795_020	S203 ES2409795_003	----	----	----
			Sampling date / time	26-Mar-2024 00:00	26-Mar-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2415612-006	ES2415612-007	-----	-----	-----
				Result	Result	----	----	----
EN33: TCLP Leach - Inorganics/PFAS (Plastic Vessel)								
Initial pH	----	0.1	pH Unit	10.0	8.0	----	----	----
After HCl pH	----	0.1	pH Unit	2.6	1.4	----	----	----
Extraction Fluid Number	----	1	-	1	1	----	----	----
Final pH	----	0.1	pH Unit	5.3	5.0	----	----	----



Analytical Results

Sub-Matrix: TCLP LEACHATE (Matrix: WATER)				Sample ID	S201 ES2409795_001	S208 ES2409795_008	S209 ES2409795_009	S212 ES2409795_012	S216 ES2409795_016
Sampling date / time					26-Mar-2024 00:00	26-Mar-2024 00:00	26-Mar-2024 00:00	26-Mar-2024 00:00	26-Mar-2024 00:00
Compound	CAS Number	LOR	Unit	ES2415612-001	ES2415612-002	ES2415612-003	ES2415612-004	ES2415612-005	
				Result	Result	Result	Result	Result	
EG005(ED093)C: Leachable Metals by ICPAES									
Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	



Analytical Results

Sub-Matrix: TCLP LEACHATE (Matrix: WATER)				Sample ID	S220 ES2409795_020	S203 ES2409795_003	----	----	----
Sampling date / time					26-Mar-2024 00:00	26-Mar-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2415612-006	ES2415612-007	-----	-----	-----	-----
Result				Result	Result	----	----	----	----
EG005(ED093)C: Leachable Metals by ICPAES									
Lead	7439-92-1	0.1	mg/L	----	0.6	----	----	----	----
Nickel	7440-02-0	0.1	mg/L	<0.1	----	----	----	----	----