23 May 2025

Fulton Hogan
Attn: Gregory Dewe

By email: gregory.dewe@fultonhogan.com and andy.hall@dls.co.nz

Lot Validation Sampling – 642 Ellesmere Road, Lincoln, Canterbury

Dear Gregory and Andy,

As requested, a Momentum Environmental Ltd (MEL) staff member attended 642 Ellesmere Road ('the site') on 16 May 2025 to complete lot validation sampling of Lot 914, Lot 915 and Lot 916. The lot validation sampling was required to support future disposal of soils off-site as part of the residential development of each individual lot.

Background Information

The site was previously investigated and areas containing arsenic and lead contamination above 'residential 10% produce' soil guideline values (SGVs) subsequently remediated, with a Site Validation Report (SVR) issued in February 2023. There were no other contaminants of concern identified for the site. The SVR included validation sampling which showed heavy metal concentrations were below the 'residential 10% produce' SGVs but above expected background values. Arsenic concentrations ranged from 4-13mg/kg and lead concentrations ranged from 18.7-109mg/kg. The previously remediated area covers Lot 914, Lot 915 and Lot 916 of the residential subdivision of 642 Ellesmere Road. Following remediation, subdivision earthworks were undertaken and the lots are now in a finished state.

Disposal Assessment

A MEL staff member attended site on 16 May 2025 to complete lot validation sampling of Lot 914, Lot 915 and Lot 916. Soils within the lots consisted of brown silts with minor gravel. There was no visible anthropogenic material present in the sampled soils.

Two samples were collected from surface soils and 250mm deep in each lot, totalling six samples. The samples were submitted to Hill Laboratories for seven heavy metal analysis. The samples were collected by a Suitably Qualified and Experienced Practitioner (SQEP) in accordance with the Contaminated Land Management Guidelines.

The results show heavy metal concentrations below the 'Regional, Recent' background concentrations used to show compliance with cleanfill acceptance criteria.

Based on the results of the soil sampling, the soils are suitable for disposal as cleanfill and are likely to be accepted by most cleanfill facilities depending on specific acceptance criteria at the facility.

Please see attached the Laboratory Results Table and Laboratory Reports. A copy of the previous reports completed for 642 Ellesmere Road can be made available upon request.

Should you require anything further, please get in touch.

Yours faithfully,

Hollie Griffith, CEnvP
Senior Environmental Scientist
Email: hollie@momentumenviro.co.nz

Table of Laboratory Results - Lot Validation Sampling - 642 Ellesmere Road, Lincoln, Canterbury

Date of sampling: 16 May 2025

Analyte	Sample Name:	Lot 914.1	Lot 914.2	Lot 915.1	Lot 915.2	Lot 916.1	Lot 916.2	Disposal Acceptance Criteria			
Soil Results	Lab Number:	3891135.1	3891135.2	3891135.3	3891135.4	3891135.5	3891135.6	**Cleanfill Facilities [1]**	**Wheatsheaf Quarry**	**Hororata Managed Fill**	**Burwood Landfill**
	Depth (mm):	0-50	250	0-50	250	0-50	250				
Heavy Metals											
Total Recoverable Arsenic	mg/kg dry wt	4	4	4	7	3	6	12.58	17	140	80
Total Recoverable Cadmium	mg/kg dry wt	0.13	0.11	0.11	0.12	< 0.10	0.15	0.19	0.8	55	400
Total Recoverable Chromium	mg/kg dry wt	13	12	11	14	13	12	22.70	290	375	2,700
Total Recoverable Copper	mg/kg dry wt	4	5	4	6	4	10	20.30	10,000	500	10,000
Total Recoverable Lead	mg/kg dry wt	14.4	13.9	13.9	15.6	14.1	25	40.96	160	500	880
Total Recoverable Nickel	mg/kg dry wt	8	8	8	10	8	9	20.70	400	2,000	600
Total Recoverable Zinc	mg/kg dry wt	48	47	47	53	47	75	93.94	7,000	1,800	14,000

[1] Concentrations for 'Regional, Recent' soil group from Background concentrations in Canterbury soils, Tonkin and Taylor, July 2007. Generally used by Cleanfill

Indicates result exceeds cleanfill criteria
Indicates result exceeds Wheatsheaf Quarry criteria
Indicates result exceeds Hororata Managed Fill/Burwood Landfill criteria

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Certificate of Analysis

Client:	Momentum Environmental Limited	**Lab No:**	3891135 SPv1
Contact:	Hollie Griffith	**Date Received:**	16-May-2025
	C/- Momentum Environmental Limited	**Date Reported:**	21-May-2025
	19 Robertsons Road	**Quote No:**	72157
	Kirwee 7671	**Order No:**	
		Client Reference:	646-642 Ellesmere Road
		Submitted By:	Hollie Griffith

Sample Type: Soil

Sample Name:		Lot 914.1 16-May-2025 2:50 pm	Lot 914.2 16-May-2025 2:55 pm	Lot 915.1 16-May-2025 2:42 pm	Lot 915.2 16-May-2025 2:45 pm	Lot 916.1 16-May-2025 2:41 pm
Lab Number:		3891135.1	3891135.2	3891135.3	3891135.4	3891135.5
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	4	4	4	7	3
Total Recoverable Cadmium	mg/kg dry wt	0.13	0.11	0.11	0.12	< 0.10
Total Recoverable Chromium	mg/kg dry wt	13	12	11	14	13
Total Recoverable Copper	mg/kg dry wt	4	5	4	6	4
Total Recoverable Lead	mg/kg dry wt	14.4	13.9	13.9	15.6	14.1
Total Recoverable Nickel	mg/kg dry wt	8	8	8	10	8
Total Recoverable Zinc	mg/kg dry wt	48	47	47	53	47

Sample Name:		Lot 916.2 16-May-2025 2:45 pm
Lab Number:		3891135.6
Heavy Metals, Screen Level		
Total Recoverable Arsenic	mg/kg dry wt	6
Total Recoverable Cadmium	mg/kg dry wt	0.15
Total Recoverable Chromium	mg/kg dry wt	12
Total Recoverable Copper	mg/kg dry wt	10
Total Recoverable Lead	mg/kg dry wt	25
Total Recoverable Nickel	mg/kg dry wt	9
Total Recoverable Zinc	mg/kg dry wt	75

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

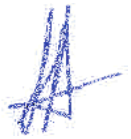
Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-6
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion US EPA 200.2. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required.	0.10 - 4 mg/kg dry wt	1-6

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 17-May-2025 and 21-May-2025. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.



Ara Heron BSc (Tech)
Client Services Manager - Environmental