

Appendix B Walkover observations

- Presented from south to north.



Photograph 1: Northbound carriageway State Highway 1 from Kaiapoi River Bridge and Lineside Road and Smith Street overbridge in background (Google street view).



Photograph 2: Example of buildings along Project route, shed at 567 Williams Street, Kaiapoi (looking south-east) (15 June 2025).



Photograph 3: Current Williams Street and State Highway 1 intersection and route of Project (looking north-east) (Google street-view).



Photograph 4a, 4b: Example of interior of sheds at 788 Main North Road, Kaiapoi (16 June 2025).



Photograph 5a, 5b: Example of shed exteriors at 788 Main North Road, Kaiapoi (16 June 2025).



Photograph 6: Looking east across quarry lakes (15 June 2025).



Photograph 7a, 7b: Examples of buildings at 1 Fullers Road, roofing material at right side of shed in background potential ACM (21 June 2025).



Photograph 8a, 8b: Example of buildings and stock pens at 189 Woodend Beach Road, Woodend (21 June 2025).



Photograph 9: Footprint of former dwelling at 176 Woodend Beach Road, Woodend, looking south-east (16 May 2025).



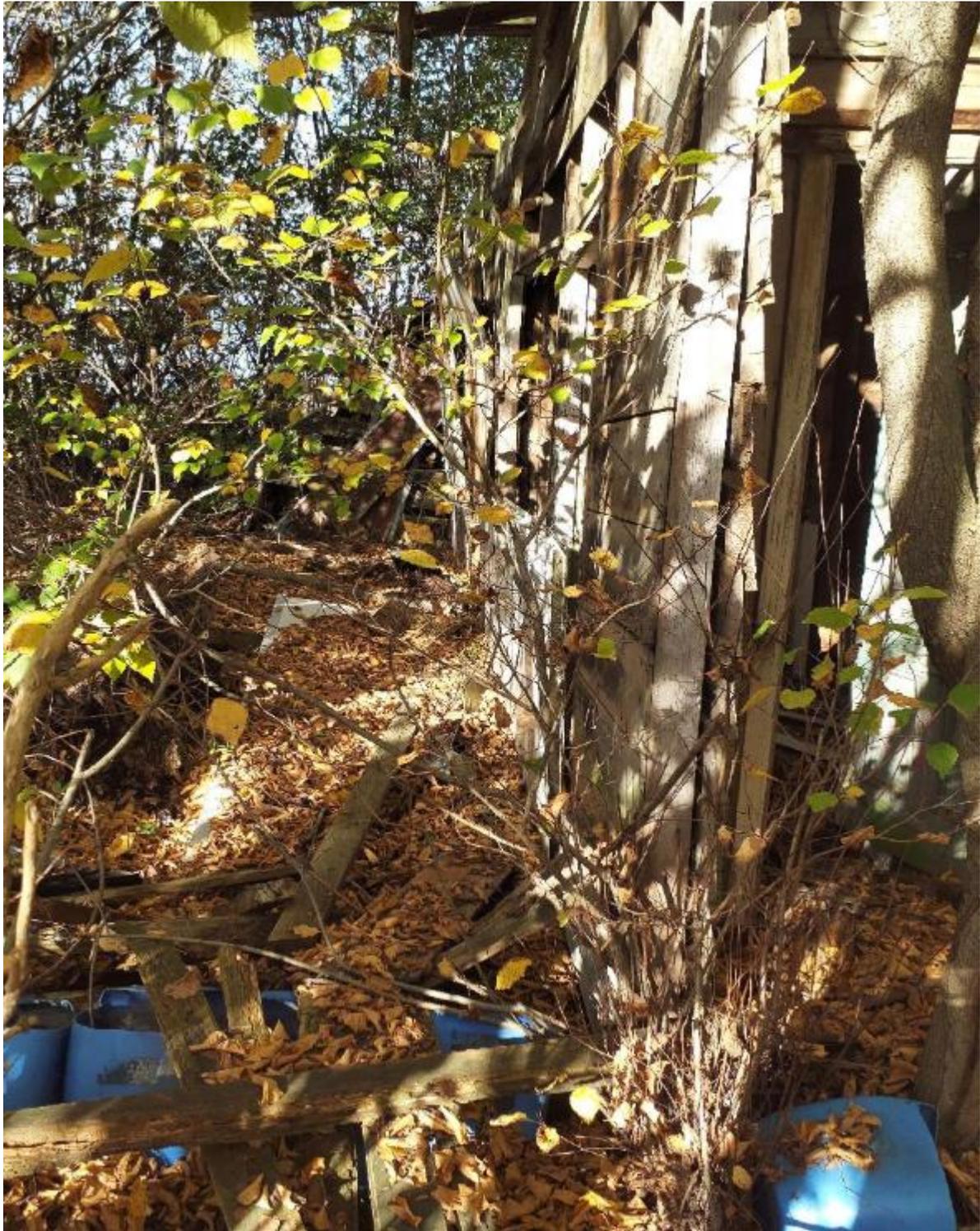
Photograph 10a, 10b: 167 Gladstone Road, Woodend, moto-x track at looking south-east, and sample of fill material of unknown origin, including concrete (28 May 2025).



Photograph 11a, 11b, 11c: Example of buildings at 160 Gladstone Road, Woodend including (un banded) diesel AST, and small area of staining below hose (21 May 2025).



Photograph 12a, 12b: Bunded materials at 130B Main North Road, Woodend, looking westerly (21 May 2025).



Photograph 13: Historic homestead, 130b Main North Road, Woodend including discarded plastic (unlabelled) containers (21 May 2025).



Photograph 14a, 14b: Example of buildings at 138 Main North Road, Woodend (looking north and south respectively) (21 May 2025).





Photograph 15a, 15b, 15c: Example of conditions and materials at 138 Main North Road (16 June 2025).



Photograph 16: St Barnabas Church and Cemetery, looking north-westerly (Google street-view).



Photograph 17: State Highway 1, looking north to Pegasus roundabout, golf course and Ravenswood left and right of frame respectively (Google street-view).



Photograph 18: Example of modified watercourse, rear of Harvey Norman Store, Garlick Street, Ravenswood, looking north-west (10 June 2025).



Photograph 19: (New) service stations at Garlick Street, Ravenswood, Gull and BP (foreground, background respectively), looking northly (28 May 2025).



Photograph 20: (Current) end of Garlick Street, looking northerly (6 My 2025).



Photograph 21: (Approximate) northern terminus end of by-pass, golf course left of frame, looking southerly (18 June 2025).

Appendix C Locations of interest

Key

	Denotes investigated and reported in this DSI.
	Denotes yet to be investigated.
	Denotes excluded from this DSI.

Location	Name/address	HAIL(s) ¹ /dates of activity-activities ²	Included/excluded	Commentary	Impact on project	Information source(s) ³
1	89 Sneyd Street, Kaiapoi	E1 – asbestos I – any other land (both unknown to present)	Excluded	<ul style="list-style-type: none"> • Within buffer, abuts eastern edge of designation, does not intersect carriageway. • Project construction limited to improvements to existing road detail; no excavation below current carriageway materials planned. • LLUR ref SIT376090. • Low risk to construction works. 	<ul style="list-style-type: none"> • None – on basis of no project excavation within this area. 	<ul style="list-style-type: none"> • PSI (Appendix F, Section 1), LLUR
2	SH1 and Lineside Road	G3 – landfill sites (1965 – 1970)	Excluded	<ul style="list-style-type: none"> • Within buffer and intersects western edge of designation, not within carriageway. • Project construction limited to improvements to existing road detail; no excavation below current carriageway materials planned. • LLUR ref SIT170253. • Low risk to construction works. 	<ul style="list-style-type: none"> • None – on basis of no project excavation within this area. 	<ul style="list-style-type: none"> • PSI (Appendix F, Section 1), LLUR
3	732 Main North Road, Kaiapoi – former Burows Motors Ltd	F4 – motor vehicle workshop F7 – service station (both 1945 to current)	Excluded	<ul style="list-style-type: none"> • Within buffer but not the designation or roadway. • 4 underground storage tanks removed 2001, exceedance of Tier 1 screening criteria in backfill materials recorded at the time. • LLUR ref SIT1209. • Residual hydrocarbon may be present in soil and/or groundwater. • Groundwater unlikely to be encountered by workers during construction activities. Dewatering not required in this area of the Project. 	<ul style="list-style-type: none"> • None – on basis of no project excavation within this area. 	<ul style="list-style-type: none"> • PSI (Appendix F, Section 2), LLUR, previous investigation
4	788 Main North Road, Kaiapoi	A8 – livestock dip (1955 – 1973)	Included	<ul style="list-style-type: none"> • Within buffer and designation but not roadway. • Area likely to be disturbed during construction work, e.g., hauling and placement of subgrade materials to construct embankment for carriageway. • LLUR ref SIT169535. • Investigation location Area A. 	<ul style="list-style-type: none"> • Based on proposed soil reuse criteria soils from this area can be reused within the project providing reuse occurs more than 20 m from a surface water feature. • Contamination-related H&S controls not required. • Material likely suitable for disposal to Frew’s Hororata, Burwood Resource Recovery Park or Kate Valley Landfill. 	<ul style="list-style-type: none"> • PSI (Appendix F, Section 3), LLUR
5	788 Main North Road Agricultural Buildings	E1, I – buildings present 1950s-present	To be investigated when access allows.	<ul style="list-style-type: none"> • Within designation. • Galvanised steel roof and cladding, though potential for ACM cannot be excluded. • Currently not investigated as more appropriate to investigate after removal. 	<ul style="list-style-type: none"> • TBC 	<ul style="list-style-type: none"> • Site walkover
6	1 Fuller Road dwellings and associated outbuildings	E1, I – buildings present 1940s-present	To be investigated when access allows.	<ul style="list-style-type: none"> • Within designation. • Potential for ACM and lead-based paints cannot be excluded. • Currently not investigated as more appropriate to investigate after removal. 	<ul style="list-style-type: none"> • TBC 	<ul style="list-style-type: none"> • Site walkover
7	189 Woodened Beach Road, Woodend – former DJ Eder Blackcurrants	A10 – persistent pesticides (1979 – c. 2010)	Included	<ul style="list-style-type: none"> • Within buffer, designation and roadway. 	<ul style="list-style-type: none"> • Detected contaminants comply with background concentrations so reuse unrestricted from a contamination perspective. 	<ul style="list-style-type: none"> • PSI (appendix F, Section 3), LLUR, previous investigation

Location	Name/address	HAIL(s) ¹ /dates of activity-activities ²	Included/excluded	Commentary	Impact on project	Information source(s) ³
				<ul style="list-style-type: none"> Project construction will disturb surficial soils formerly used for horticultural purposes. LLUR ref 7968. Previous investigation (see footnote ¹³) at this site recorded below published background ground levels and/or laboratory methodology limit of detection for the parameters analysed. This investigation was at two locations only (i.e., insufficient density to characterise the area where activity intersects the designation). Investigation location Area B. 	<ul style="list-style-type: none"> Material likely to be suitable for disposal as cleanfill if offsite disposal is required. 	
8	167 Gladstone Road, Woodend - moto-cross track	G5 waste disposal to land, I.	To be investigated when access allows.	<ul style="list-style-type: none"> Currently not investigated (access not permitted for sampling). No previous investigations for this site recorded. Within designation and roadway. Fill of unknown origin observed during site walkover. Project construction will disturb these surficial materials. Investigation location moto-cross track. 	<ul style="list-style-type: none"> TBC 	<ul style="list-style-type: none"> Walkover
9	162 Gladstone Road, Woodend – Gladstone Road Landfill	G3 – landfill (1945 - 1974) ⁴	Included	<ul style="list-style-type: none"> Within designation and roadway. Previous sampling and analysis of fill materials on site recorded above published background levels of some metals and low levels of hydrocarbons (not exceeding commercial/industrial land use criteria). Asbestos in soil testing limited in scope, and not detected in samples analysed. Remedial work (excavation and offsite disposal) at footprint of two burn pits reported June 2025, after arsenic recorded above commercial/industrial land use criterion. Impacted materials have been removed. See notes at end of this appendix. Recent T+T investigations have identified largely similar concentrations of contaminants in fill as previously found at the site, with all concentrations recorded below commercial/industrial land use criteria. Some soil testing results indicate exceedances of the ecological and protection of groundwater quality criteria, however the mean concentrations are likely to meet these criteria. Trace asbestos was found at one location (in ACM and soil), however, no evidence of wide-spreads asbestos contamination was identified. 	<ul style="list-style-type: none"> TBC 	<ul style="list-style-type: none"> PSI (Appendix F, Section 4), LLUR, previous investigation, targeted T+T investigations.

Location	Name/address	HAIL(s) ¹ /dates of activity-activities ²	Included/excluded	Commentary	Impact on project	Information source(s) ³
				<ul style="list-style-type: none"> Project construction will disturb surficial materials and potentially deeper material in this landfill. Some landfill materials may be left in situ. Mean concentrations of soil testing results indicate that fill materials from the site comply with the proposed reuse criteria. Dewatering, if required, will require treatment or dilution prior to discharge, given zinc and copper concentrations recorded above the water quality guidelines beneath the site. LLUR ref 2689. Investigation location Area D. 		
10	128 - 156 Gladstone Road, Woodend	A10 – persistent pesticides (c. 2000 ⁴ – present)	Excluded	<ul style="list-style-type: none"> Within buffer and abuts norther edge of designation, not in carriageway. Area could be disturbed during construction work, e.g., hauling and placement of subgrade materials to construct bridge abutment. LLUR ref. 169883.and 169881 Recent activity commencing c. 2000, low likelihood of the use of persistent organic pesticides (OCP etc.). Low risk to construction works. 	<ul style="list-style-type: none"> Material stockpiled in this area to be placed on sheeting to minimise potential for cross contamination. No operational or concentrated construction phase stormwater discharge to be undertaken in this area. 	<ul style="list-style-type: none"> PSI (Appendix F, Section 4), LLUR
11	160 Gladstone Road, Woodend	<ul style="list-style-type: none"> A17 – storage tanks for fuel, E1, I – buildings present 1940s-present. 	To be investigated when access allows.	<ul style="list-style-type: none"> Currently not investigated. Within roadway. No previous investigations recorded. Area will be disturbed during construction including topsoil strip, placement of fill to form embankment. Small diesel AST observed during site walkover (approximately 1,000 L). Soil staining below hose (<1 m²). Associated buildings present for extended time. Potential for lead based paints and ACM cannot be discounted. DSI location diesel AST. 	<ul style="list-style-type: none"> TBC 	<ul style="list-style-type: none"> Walkover
12	160 Gladstone Road, Woodend	A8 – livestock dip (1973 - present)	Excluded	<ul style="list-style-type: none"> Intersects buffer, does not intersect designation and carriageway. Carriageway will be on an embankment at this area. LLUR ref. 169893 Outside of Project work area. 	<ul style="list-style-type: none"> Material stockpiled in this area to be placed on sheeting to minimise potential for cross contamination. No operational or concentrated construction phase stormwater discharge to be undertaken in this area. 	<ul style="list-style-type: none"> PSI (Appendix F, Section 4)
13, 17, 20	c/o 8 Mapleham Drive, Woodend - <i>Pegasus Golf Club</i>	A10 – persistent pesticide (post 2000 ⁴ - present)	Excluded	<ul style="list-style-type: none"> Within buffer, does not intersect designation and carriageway. 	<ul style="list-style-type: none"> Material stockpiled in this area to be placed on sheeting to minimise potential for cross contamination. 	<ul style="list-style-type: none"> PSI, LLUR

Location	Name/address	HAIL(s) ¹ /dates of activity-activities ²	Included/excluded	Commentary	Impact on project	Information source(s) ³
				<ul style="list-style-type: none"> Project construction limited to improvements to existing road detail and/or construction on embankments. LLUR refs. 169859, 169865, 169867. Recent activity commencing c. 2000, low likelihood of the use of persistent organic pesticides (OCP etc.). 	<ul style="list-style-type: none"> No operational or concentrated construction phase stormwater discharge to be undertaken in this area. 	
14	c/o 70 Parsonage Road, Woodend – Woodlands Estate Subdivision	A10 – persistent pesticide (1973 – 2015) G5 – waste disposal to land (2020)	To be investigated when access allows.	<ul style="list-style-type: none"> Relates to soil stockpile likely derived from adjacent subdivision earthwork (commenced c. 2020). Activity intersects buffer but not the designation or carriageway. LLUR ref. 261443. Previous investigations for the subdivision (see footnote ¹⁷) noted parts of the subdivision area has been used for market gardening, orcharding and a sheep foot dip race. Analysis and assessment of composite soils sample results recorded above published background levels for one or more of the metals analysed. Another investigation (see footnote ¹⁸) focused on an area of stockpiling where uncontrolled and unconsented burning of materials had occurred in 2020. This recorded arsenic concentrations above commercial/industrial and/or recreational land use criteria. PAHs were not analysed. A form of remediation was recommended based on the investigation data, including the removal of the impacted material, and or their mixing with stockpile materials to reduce the contamination to suitable level (for a land use unstated). No LLUR records documenting remediation reported. Requires sampling to assess contamination conditions. DSI location Woodlands stockpiles. 	<ul style="list-style-type: none"> TBC 	<ul style="list-style-type: none"> PSI (Appendix F, Section 4), LLUR, walkover, previous investigation
15	147 Main North Road, Woodend – St Barnabas Church	G1 – cemeteries (1943 - present)	Excluded	<ul style="list-style-type: none"> Activity within buffer, does not intersect designation or carriageway. LLUR ref. 169901. 	<ul style="list-style-type: none"> None – on basis of no project excavation or other activities within this area. 	<ul style="list-style-type: none"> PSI, LLUR
16	1221 Main North Road, Woodend	A8 – livestock dip (1940 to c. 2014 ⁵)	Excluded	<ul style="list-style-type: none"> Activity within buffer, does not intersect designation or carriageway. LLUR ref. 133337. Area subject to extensive earthworks during construction of Ravenswood Development, including realignment of Taranaki Stream. No records to confirm its removal available, assumed contamination remediation (if 	<ul style="list-style-type: none"> Material stockpiled in this area to be placed on sheeting to minimise potential for cross contamination. No operational or concentrated construction phase stormwater discharge to be undertaken in this area. 	<ul style="list-style-type: none"> PSI (Appendix F, Section 4), LLUR

Location	Name/address	HAIL(s) ¹ /dates of activity-activities ²	Included/excluded	Commentary	Impact on project	Information source(s) ³
				required) was completed as a part of site development.		
21	130b Main North Road historic homestead.	E1, I – buildings present 1950s-present	To be investigated when access allows.	<ul style="list-style-type: none"> • Within buffer. • Potential for ACM and lead-based paints cannot be excluded. • Currently not investigated as more appropriate to investigate after removal. 	<ul style="list-style-type: none"> • TBC 	<ul style="list-style-type: none"> • Site walkover
22	138 Main North Road buildings	E1, I – buildings present 1950s-present	To be investigated when access allows.	<ul style="list-style-type: none"> • Within buffer. • Potential for ACM and lead-based paints cannot be excluded. • Currently not investigated as more appropriate to investigate after removal. 	<ul style="list-style-type: none"> • TBC 	<ul style="list-style-type: none"> • Site walkover
23	138 Main North Road miscellaneous	G5, I.	To be investigated when access allows.	<ul style="list-style-type: none"> • Localised waste/scrap items present on ground surface. • Localised burn pit observed. • Potential for metals, hydrocarbons. 	<ul style="list-style-type: none"> • TBC 	<ul style="list-style-type: none"> • Site walkover
18, 19	1 Garlick Street, Woodend – <i>Gull Woodend</i> 2 Kesteven Place, Woodend – <i>BP Woodend</i>	A17 – storage tanks for fuel (2018 – present)	Excluded	<ul style="list-style-type: none"> • Activity within buffer and just intersects designation, does not intersect carriageway. • Modern infrastructure installed 2018 and 2021 (BP and Gull respectively), therefore short duration of use, low likelihood contamination has occurred. • LLUR ref. 239873 (1 Garlick Street not recorded). 	<ul style="list-style-type: none"> • None – on basis of no project excavation within this area. 	<ul style="list-style-type: none"> • Walkover, LLUR
24	128 Main North Road, Woodend	A10 – persistent pesticide (1973 – 1984)	Excluded	<ul style="list-style-type: none"> • Activity within buffer but not designation. • LLUR ref 89146. 	<ul style="list-style-type: none"> • None – on basis of no project excavation within this area. 	<ul style="list-style-type: none"> • PSI (Appendix F, Section 4), LLUR

Notes

¹ Abridged description.

² Dates taken from LLUR.

³ Abridge location detailing from Appendix F of the PSI.

⁴ Dates sourced from Kirk Roberts Consulting Ltd (11 December 2024). 162 Gladstone Road, Woodend – Detailed Site Investigation (refer to footnote ¹¹).

⁵ Dates determined from Canterbury maps - <https://canterburymaps.govt.nz/>.

Area D - Gladstone Road Landfill

The Area D investigation was carried out to address data gaps in the previous investigation at the site, including:

- Potential for asbestos in fill materials within the landfill both laterally and at depth.
- Potential heterogeneity of fill materials in the landfill in terms of composition and types and degree of contamination.

Variability in the composition and/or contamination of fill materials in the bunds. Prior to undertaking the additional investigation at the Gladstone Road Landfill/Area D, the existing information known about ground contamination conditions at this site are (based on existing reports^{14 15}) includes:

- Site was a council owned borrow pit (approximately 0.6 hectares) from at least 1945 and was infilled from 1960s to 1974. Records document infilled with “domestic rubbish and fill material”.
- Site was vegetated and unused from mid 1970s until mid-2000s, since the latter ground disturbance and activity is evident in aerial images.
- Site was purchased from WDC in 2002 by the current owner and used for their drainage business including disposal (unconsented deposition/filling) of materials collected from local drains.
- The bunds surrounding this site are made with material imported to site, purportedly from drains. The centre of this site is approximately 1 to 2 m above surrounding ground level, and the bunds are 2 to 3 m above the site centre, Figure B1 is a schematic cross section of the landfill and environs.

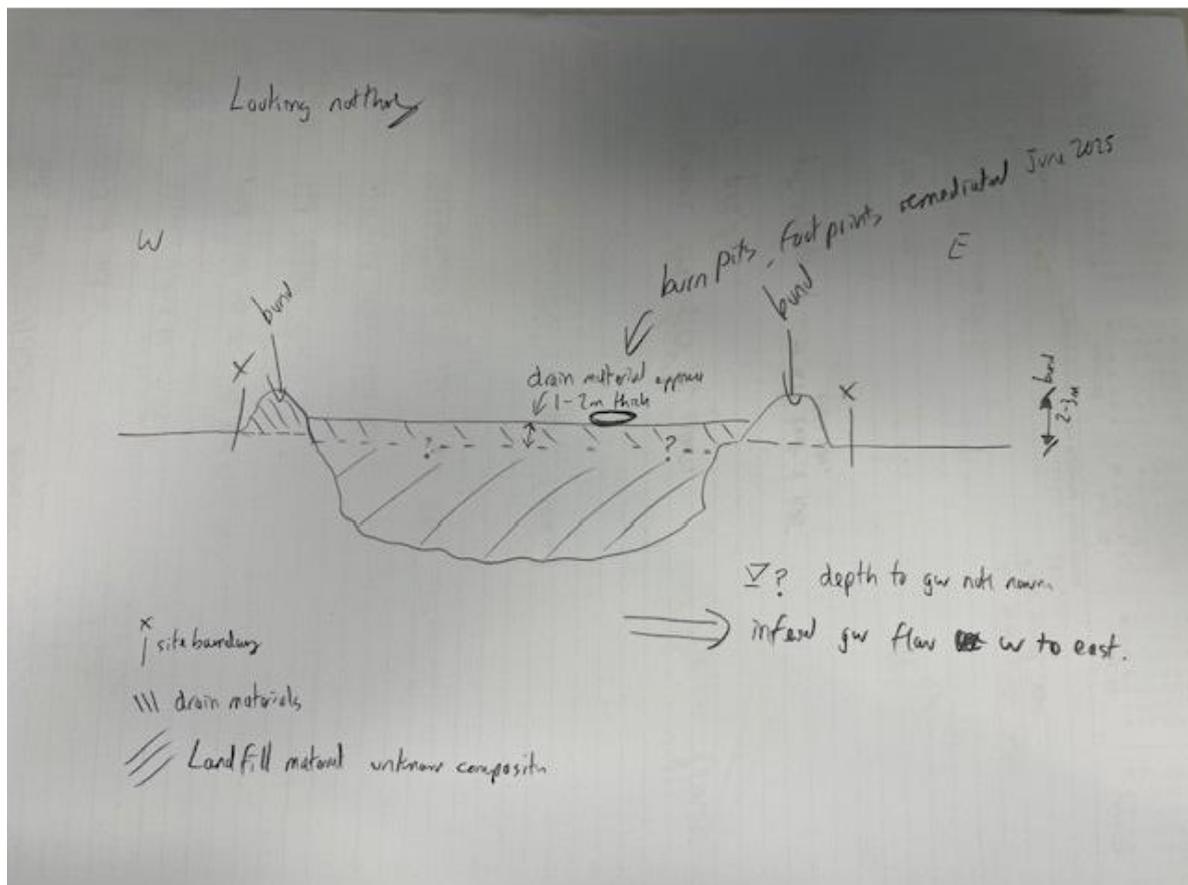


Figure B1: Schematic cross section of Gladstone Landfill (nts).

- Resource consents for drinking water supplies are recorded for 3 sites approximately 140 to 150 m east of the landfill (i.e., down/cross groundwater flow direction). These are at least 150 m deep and take water from the confined aquifer.
There are three private groundwater take boreholes approximately 100 m southeast of the landfill, with screen depths ranging from approximately 20 to 25 mbgl.
- Test pitting recorded the presence of fill materials to approximately 5 mbgl with vertically and laterally variable composition including construction and demolition materials, plastic, metal. The reported proportions of non-soil material to fill material was low and organic/putrescible material was very low.
- Groundwater was not encountered during previous phases of investigation.
- Asbestos in soil was not detected in analysed samples of fill and bund materials (this parameter was not analysed for in the 2014 investigation).
- Concentrations of the metals in fill and bund materials analysed exceeded their published background levels, generally no more than twice the published level.
- Low levels of TPH were recorded in some fill materials, but below commercial/industrial land use assessment criteria.
- In the footprint of two burn piles:
 - Asbestos in soil was not detected in the samples analysed.
 - Except for arsenic, metal concentrations were below commercial/industrial land use criteria.
 - TPH and PAHs were detected, but a concentrations below respective commercial/land use criteria.
- Remedial earthwork for the removal (excavation and offsite disposal) of contaminated soils (per WDC resource consent conditions¹⁸) at the two burn pits was completed in June 2025. Validation sampling after soil removal (see footnote¹⁶) reports the concentration of arsenic was either less than or marginally above its published background level.

Photographs B1 to B.3 illustrate this site conditions before recent remedial works were undertaken.

¹⁸ WDC ref. RC255052, 21 May 2025. – note remedial goal was commercial/industrial land use, not back ground levels.



Photograph B.1: Standing a top of the western bund, looking south-east towards Gladstone Road (23 May 2025).



Photograph B.2: Standing a top north bund, looking south across site and to Gladstone Road (23 May 2025).



Photograph B.3: Looking north across site (23 May 2025).

The landfill is located directly within the roadway footprint, and construction will need some excavation of the fill materials present (depth of removal to be confirmed during detailed design stage, some landfill material may be left in situ, compacted in situ etc.).

Appendix D Data quality (RPDs)

Table D1: Area A - Duplicate samples analytical results and RPDs

Sample ID		HA-A1-09_0.1m	Duplicate	RPD
Lab Report Number	Units	3881838.21	3881838.25	
Arsenic	mg/kg	6	5	18
Cadmium	mg/kg	0.16	0.12	29
Chromium	mg/kg	10	10	0
Copper	mg/kg	11	16	37
Lead	mg/kg	34	36	6
Mercury	mg/kg	0.1	0.1	0
Nickel	mg/kg	7	7	0
Zinc	mg/kg	89	87	2
	Minimum	-	-	0
	Maximum	-	-	37

Notes

RPD- Relative Percentage Difference (%)

For values below limit of detection, the higher-boud value has been adopted for RPD calculations

**Appendix E Area A – Laboratory transcripts and
assessment**

Table E1: Area A - Soil analytical results summary, human and ecological health assessment and offsite disposal assessment

					Asbestos in soil			Total Recoverable Metal							Organochlorine Pesticides *				
					Presence/Absence	Semi-quantitative as ACM	Semi-quantitative as AF/FA	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total DDT***	Beta-BHC	Dieldrin	
Unit					Asbestos form	w/w%	w/w%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Assessment criteria	Background ¹				-	ND	ND	3.5	0.08	12.4	7.9	39	0.05	9.6	58.8	0.431 ²	<LoD	<LoD	
	Human Health		Commercial/Industrial ³			-	0.05 ⁴	0.001 ⁴	70	1,300	6,300 (VI)	>10,000	3,300	4,200	6000 ⁵	400,000 ⁵	1,000	14,200	160 ^{3a}
	Protection of groundwater quality ⁶					-	-	-	140	10	150	280	460	3	32	1200	526	-	0.2
	Ecological Health ⁷					-	-	-	20	2	80	65	50	0.15	21	200	0.0012	-	0.0028
	Offsite disposal		Leggett Road ⁸			ND	5	0.1	12.58	0.19	22.7	20.3	40.96	0.11	20.7	93.94	0.431	-	-
			Wheatsheaf ⁹			ND	ND	ND	17	0.8	290	10,000	160	200	400 ³	7,400 ²	45	-	1.1 ^{3a}
Frews Plantation Road ¹⁰			ND	ND	5	140	55	375	500	500	0.2	2,000	1,800	100	-	2			
		Burwood ¹¹			ND	ND	ND	80	400	2,700 (VI)	>10,000	880	1,800	600	14,000	400	-	70	
Sample ID	Sample depth (m bgl)	Soil type	Sample Date	Lab number															
BH47-A1_1.0m	1.0m	Sand (natural ground)	05-May-2025	3881838.24	-	-	-	6	< 0.10	9	3	104	< 0.10	5	34	< 0.012	< 0.012	< 0.012	
HA-A1-02_0.1m	0.1m	Sandy Gravel (fill?)	05-May-2025	3881838.30	-	-	-	5	0.11	11	14	54	< 0.10	8	86	< 0.013	< 0.013	< 0.013	
HA-A1-02_0.3m	0.3m	Sandy Gravel (fill?)	05-May-2025	3881838.40	-	-	-	4	< 0.10	13	19	20	< 0.10	10	49	< 0.011	< 0.011	< 0.011	
HA-A1-04_0.2m	0.2m	Gravelly Sand (fill?)	05-May-2025	3881838.80	-	-	-	3	< 0.10	8	4	7.9	< 0.10	6	27	< 0.011	< 0.011	< 0.011	
HA-A1-06_0.1m	0.1m	Silty Sand (fill)	05-May-2025	3881838.12	-	-	-	16	0.32	10	24	116	< 0.10	7	430	0.012	< 0.011	0.011	
HA-A1-06_0.3m	0.3m	Sand (natural ground)	05-May-2025	3881838.13	-	-	-	62	< 0.10	8	19	5.9	< 0.10	5	57	< 0.011	< 0.011	0.014	
HA-A1-07_0.34-0.4m	0.34-0.4m	Gravelly Sand (fill)	05-May-2025	3881838.17	-	-	-	10	< 0.10	8	20	5.7	< 0.10	6	39	< 0.011	< 0.011	< 0.011	
HA-A1-07_1.0m	1.0m	Sand (natural ground)	05-May-2025	3881838.18	-	-	-	8	< 0.10	7	7	5.2	< 0.10	6	28	< 0.011	0.015	< 0.011	
HA-A1-08_0.3-0.4m	0.3-0.4m	Sandy Gravel (fill)	05-May-2025	3881838.20	-	-	-	4	< 0.10	12	9	24	< 0.10	9	50	< 0.011	< 0.011	< 0.011	
HA-A1-09_0.1m	0.1m	Silty Sand (fill)	05-May-2025	3881838.21	-	-	-	6	0.16	10	11	34	< 0.10	7	89	< 0.012	< 0.012	< 0.012	
HA-A1-09_0.5-0.6m	0.5-0.6m	Gravelly Sand (fill)	05-May-2025	3881838.22	Amosite, Chrysotile	-	-	8	0.16	13	15	51	< 0.10	8	89	< 0.011	< 0.011	< 0.011	
Minimum					-	-	-	3	< 0.10	7	3	5.2	< 0.10	5	27	< 0.011	< 0.011	< 0.011	
Maximum					-	-	-	62	0.32	13	24	116	< 0.10	10	430	0.012	0.015	0.014	
Average**					-	-	-	12	0.13	10	13	39	-	7	89	-	-	-	

Notes

ACM- asbestos containing material, AF- asbestos fines, FA- fibrous asbestos.

ND - Not Detected

LoR - laboratory limit of reporting.

*Full suite tested, refer Hill Laboratories Ltd certificate for full results.

** For values below limit of detection, the higher-bound value has been adopted for 95% UCL calculations

*** For total DDT, concentrations reported are for 4,4'-DDT as the LoR for total DDT is higher than for 4,4'-DDT.

Bold values indicate concentration is above published background for the site.

Bold orange values indicate concentration is above the ecological health criterion

Indicates Leggett Road acceptance criterion is exceeded

Indicates Wheatsheath acceptance criterion is exceeded

1. Environment Canterbury GIS, Trace Elements Level 2. Background concentrations at the site, from "Background concentrations of selected trace elements in Canterbury soils" prepared for Environment Canterbury by Tonkin & Taylor Ltd, July 2006.

2. ECan has adopted composite sampling results from Christchurch reported in the MFE Ambient Concentrations of Selected Organochlorines in Soils (December 1998) to set an ambient soil concentration of 0.431 mg/kg for total DDT within Christchurch.

3. Ministry for the Environment (MFE) 2011, NESCS Users' guide, Soil Contaminant Standards (SCSs)

3a. The SCS is applicable to either dieldrin or aldrin separately, or to the sum of aldrin and dieldrin if both are involved.

4. New Zealand Guidelines for Assessing and Managing Asbestos in Soil (2024). ACM - Asbestos containing material, AF/FA - Asbestos Fines/Fibres Asbestos

5. ASC NEPM Toolbox- Update February 2014 - www.nepc.gov.au/nepms/assessment-site-contamination/toolbox - Commercial/industrial land use as a conservative proxy for outdoor worker protection.

6. WasteMINZ NZ: Technical Guidelines for Disposal to Land. September 2023.

7. Australian and New Zealand default guideline values for toxicants in sediment. https://www.waterquality.gov.au/anz-guidelines/guideline-values/default/sediment-quality-toxicants

8. Protranz Leggett Road Managed Fill, resource consents RMA/2016/2254, CRC200767, CRC200771, CRC200777.

Notes

1) Criteria can be compared to 95%UCL of relevant results

9. Wheatsheaf Managed Fill, Selwyn - CRC145183, based on Rural Residential landuse (25% produce intake) values from NES.

9a. Value applicable to either dieldrin or aldrin separately, or to the sum of aldrin and dieldrin if both are involved.

10. Frews Hororata Acceptance Criteria, Schedule CRC201182B, Column 3 Maximum concentration, as provided by Frews 13 March 2025.

Notes

1) Criteria for DDT + Isomers is 100 mg/kg.

2) Frews require manganese testing to be completed.

11. Burwood Landfill soil acceptance criteria, as provided by CCC, 9 April 2025.

Notes: 1) Where criteria are not provided for contaminants, recreational land use based values are adopted from other guideline sources.

Certificate of Analysis

Page 1 of 9

Client: Tonkin & Taylor	Lab No: 3881838	SPV1
Contact: M Morley	Date Received: 07-May-2025	
C/- Tonkin & Taylor	Date Reported: 20-May-2025	
PO Box 13055	Quote No: 137591	
Christchurch 8141	Order No: 1095459	
	Client Reference: 1095459	
	Add. Client Ref: B2P_Area A	
	Submitted By: Rebecca van der Krogt	

Sample Type: Soil						
Sample Name:	HA-A1-02_0.1m 05-May-2025	HA-A1-02_0.3m 05-May-2025	HA-A1-04_0.2m 05-May-2025	HA-A1-06_0.1m 05-May-2025	HA-A1-06_0.3m 05-May-2025	
Lab Number:	3881838.3	3881838.4	3881838.8	3881838.12	3881838.13	
Individual Tests						
Dry Matter	g/100g as rcvd	78	92	95	91	98
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	5	4	3	16	62
Total Recoverable Cadmium	mg/kg dry wt	0.11	< 0.10	< 0.10	0.32	< 0.10
Total Recoverable Chromium	mg/kg dry wt	11	13	8	10	8
Total Recoverable Copper	mg/kg dry wt	14	19	4	24	19
Total Recoverable Lead	mg/kg dry wt	54	20	7.9	116	5.9
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	8	10	6	7	5
Total Recoverable Zinc	mg/kg dry wt	86	49	27	430	57
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
alpha-BHC	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
beta-BHC	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
delta-BHC	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
4,4'-DDE	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.011	< 0.011	0.012	< 0.011
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.07	< 0.07	< 0.07	< 0.07
Dieldrin	mg/kg dry wt	< 0.013	< 0.011	< 0.011	0.011	0.014
Endosulfan I	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Endosulfan II	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Endrin	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Endrin ketone	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Heptachlor	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011
Methoxychlor	mg/kg dry wt	< 0.013	< 0.011	< 0.011	< 0.011	< 0.011

Sample Type: Soil						
Sample Name:	HA-A1-02_0.1m 05-May-2025	HA-A1-02_0.3m 05-May-2025	HA-A1-04_0.2m 05-May-2025	HA-A1-06_0.1m 05-May-2025	HA-A1-06_0.3m 05-May-2025	
Lab Number:	3881838.3	3881838.4	3881838.8	3881838.12	3881838.13	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Alachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Atrazine	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Atrazine-desethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Atrazine-desisopropyl	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Azaconazole	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Azinphos-methyl	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Benalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Bitertanol	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Bromacil	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Bromopropylate	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Butachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Captan	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Carbaryl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Carbofuran	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Chlorfluazuron	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Chlorothalonil	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Chlorpyrifos	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Chlorpyrifos-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Chlortoluron	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Cyanazine	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Cyfluthrin	mg/kg dry wt	< 0.08	< 0.07	< 0.06	< 0.07	< 0.06
Cyhalothrin	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Cypermethrin	mg/kg dry wt	< 0.15	< 0.13	< 0.12	< 0.13	< 0.12
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Diazinon	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlofluanid	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Dichloran	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Difenoconazole	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Dimethoate	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Diphenylamine	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Diuron	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Fenpropimorph	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Fluazifop-butyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Fluometuron	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Flusilazole	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Fluvalinate	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Furalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Haloxfop-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Hexaconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Hexazinone	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Kresoxim-methyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Linuron	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Malathion	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Metalaxyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Methamidophos	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Metribuzin	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Molinate	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Myclobutanil	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Naled	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Sample Type: Soil

Sample Name:		HA-A1-02_0.1m	HA-A1-02_0.3m	HA-A1-04_0.2m	HA-A1-06_0.1m	HA-A1-06_0.3m
		05-May-2025	05-May-2025	05-May-2025	05-May-2025	05-May-2025
Lab Number:		3881838.3	3881838.4	3881838.8	3881838.12	3881838.13
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Norflurazon	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Oxadiazon	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Oxyfluorfen	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Paclobutrazol	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Parathion-ethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Parathion-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Pendimethalin	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pirimicarb	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Pirimiphos-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Prochloraz	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Procymidone	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Prometryn	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Propanil	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propiconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyriproxyfen	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Quizalofop-ethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Simazine	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Simetryn	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Sulfentrazone	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.12	< 0.11	< 0.10	< 0.11	< 0.10
Tebuconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Terbacil	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Terbumeton	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Terbuthylazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Terbuthylazine-desethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Terbutryn	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Thiabendazole	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Thiobencarb	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Tolyfluanid	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Triazophos	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Trifluralin	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Vinclozolin	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.06	< 0.05
Sample Name:		HA-A1-07_0.34-0.4m	HA-A1-07_1.0m	HA-A1-08_0.3-0.4m	HA-A1-09_0.1m	HA-A1-09_0.5-0.6m
		05-May-2025	05-May-2025	05-May-2025	05-May-2025	05-May-2025
Lab Number:		3881838.17	3881838.18	3881838.20	3881838.21	3881838.22
Individual Tests						
Dry Matter	g/100g as rcvd	93	94	90	87	89
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	8	4	6	8
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	0.16	0.16
Total Recoverable Chromium	mg/kg dry wt	8	7	12	10	13
Total Recoverable Copper	mg/kg dry wt	20	7	9	11	15
Total Recoverable Lead	mg/kg dry wt	5.7	5.2	24	34	51
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	6	6	9	7	8
Total Recoverable Zinc	mg/kg dry wt	39	28	50	89	89
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
alpha-BHC	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
beta-BHC	mg/kg dry wt	< 0.011	0.015	< 0.011	< 0.012	< 0.011
delta-BHC	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011

Sample Type: Soil

Sample Name:		HA-A1-07_0.34-0.4m 05-May-2025	HA-A1-07_1.0m 05-May-2025	HA-A1-08_0.3-0.4 m 05-May-2025	HA-A1-09_0.1m 05-May-2025	HA-A1-09_0.5-0.6 m 05-May-2025
Lab Number:		3881838.17	3881838.18	3881838.20	3881838.21	3881838.22
Organochlorine Pesticides Screening in Soil						
gamma-BHC (Lindane)	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
cis-Chlordane	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
trans-Chlordane	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
2,4'-DDD	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
4,4'-DDD	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
2,4'-DDE	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
4,4'-DDE	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
2,4'-DDT	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
4,4'-DDT	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Total DDT Isomers	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07
Dieldrin	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Endosulfan I	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Endosulfan II	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Endosulfan sulphate	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Endrin	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Endrin aldehyde	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Endrin ketone	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Heptachlor	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Heptachlor epoxide	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Hexachlorobenzene	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Methoxychlor	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.012	< 0.011
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Alachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Atrazine	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Atrazine-desethyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Atrazine-desisopropyl	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Azaconazole	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Azinphos-methyl	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Benalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Bitertanol	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Bromacil	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Bromopropylate	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Butachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Captan	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Carbaryl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Carbofuran	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Chlorfluazuron	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Chlorothalonil	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Chlorpyrifos	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Chlorpyrifos-methyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Chlortoluron	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Cyanazine	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Cyfluthrin	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07
Cyhalothrin	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Cypermethrin	mg/kg dry wt	< 0.13	< 0.13	< 0.13	< 0.14	< 0.13
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Diazinon	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlofluanid	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Dichloran	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Difenoconazole	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Dimethoate	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Diphenylamine	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11

Sample Type: Soil						
Sample Name:	HA-A1-07_0.34-0.4m 05-May-2025	HA-A1-07_1.0m 05-May-2025	HA-A1-08_0.3-0.4m 05-May-2025	HA-A1-09_0.1m 05-May-2025	HA-A1-09_0.5-0.6m 05-May-2025	
Lab Number:	3881838.17	3881838.18	3881838.20	3881838.21	3881838.22	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Diuron	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Fenpropimorph	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Fluazifop-butyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Fluometuron	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Flusilazole	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Fluvalinate	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Furalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Haloxyfop-methyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Hexaconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Hexazinone	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Kresoxim-methyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Linuron	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Malathion	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Metalaxyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Methamidophos	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Metribuzin	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Molinate	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Myclobutanil	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Naled	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Norflurazon	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Oxadiazon	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Oxyfluorfen	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Paclobutrazol	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Parathion-ethyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Parathion-methyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Pendimethalin	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pirimicarb	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Pirimiphos-methyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Prochloraz	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Procymidone	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Prometryn	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Propanil	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propiconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyriproxyfen	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Quizalofop-ethyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Simazine	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Simetryn	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Sulfentrazone	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
TCMTB [2-(thiocyanomethylthio)benzothiazole,Busan]	mg/kg dry wt	< 0.10	< 0.10	< 0.11	< 0.11	< 0.11
Tebuconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Terbacil	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Terbumeton	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Terbuthylazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Terbuthylazine-desethyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Terbutryn	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Thiabendazole	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Thiobencarb	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Tolyfluanid	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

Sample Type: Soil						
Sample Name:	HA-A1-07_0.34-0.4m 05-May-2025	HA-A1-07_1.0m 05-May-2025	HA-A1-08_0.3-0.4 m 05-May-2025	HA-A1-09_0.1m 05-May-2025	HA-A1-09_0.5-0.6 m 05-May-2025	
Lab Number:	3881838.17	3881838.18	3881838.20	3881838.21	3881838.22	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Triazophos	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Trifluralin	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Vinclozolin	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Sample Name:	BH47-A1_1.0m 05-May-2025	Dup-A1-01 05-May-2025	S-A1-Bund-01-0.1-0.3 m 05-May-2025	S-A1-Bund-02-0.1-0.3 m 05-May-2025		
Lab Number:	3881838.24	3881838.25	3881838.26	3881838.27		
Individual Tests						
Dry Matter	g/100g as rcvd	83	85	90	92	
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	5	3	3	
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.12	< 0.10	< 0.10	
Total Recoverable Chromium	mg/kg dry wt	9	10	8	8	
Total Recoverable Copper	mg/kg dry wt	3	16	3	2	
Total Recoverable Lead	mg/kg dry wt	104	36	6.3	6.8	
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	
Total Recoverable Nickel	mg/kg dry wt	5	7	6	6	
Total Recoverable Zinc	mg/kg dry wt	34	87	23	25	
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
alpha-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
beta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
delta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
4,4'-DDE	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
4,4'-DDT	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Total DDT Isomers	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.07	
Dieldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Endosulfan I	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Endosulfan II	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Endrin	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Endrin ketone	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Heptachlor	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Methoxychlor	mg/kg dry wt	< 0.012	< 0.012	< 0.011	< 0.011	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05	
Alachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	
Atrazine	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05	
Atrazine-desethyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05	
Atrazine-desisopropyl	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10	
Azaconazole	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03	
Azinphos-methyl	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10	
Benalaxyl	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03	
Bitertanol	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10	
Bromacil	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05	

Sample Type: Soil

Sample Name:		BH47-A1_1.0m 05-May-2025	Dup-A1-01 05-May-2025	S-A1-Bund-01-0.1-0.3 m 05-May-2025	S-A1-Bund-02-0.1-0.3 m 05-May-2025
Lab Number:		3881838.24	3881838.25	3881838.26	3881838.27
Organonitro&phosphorus Pesticides Screen in Soil by GCMS					
Bromopropylate	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Butachlor	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Captan	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Carbaryl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Carbofuran	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Chlorfluazuron	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Chlorothalonil	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Chlorpyrifos	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Chlorpyrifos-methyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Chlortoluron	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Cyanazine	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Cyfluthrin	mg/kg dry wt	< 0.08	< 0.07	< 0.07	< 0.07
Cyhalothrin	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Cypermethrin	mg/kg dry wt	< 0.15	< 0.14	< 0.13	< 0.13
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Diazinon	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Dichlofluanid	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Dichloran	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09
Difenoconazole	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09
Dimethoate	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Diphenylamine	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Diuron	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Fenpropimorph	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Fluazifop-butyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Fluometuron	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Flusilazole	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Fluvalinate	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05
Furalaxyl	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Haloxifop-methyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Hexaconazole	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Hexazinone	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3
Kresoxim-methyl	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Linuron	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Malathion	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Metalaxyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Methamidophos	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05
Metribuzin	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Molinate	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Myclobutanil	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Naled	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3
Norflurazon	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Oxadiazon	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Oxyfluorfen	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Paclobutrazol	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Parathion-ethyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Parathion-methyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Pendimethalin	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Pirimicarb	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Pirimiphos-methyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05

Sample Type: Soil					
Sample Name:	BH47-A1_1.0m 05-May-2025	Dup-A1-01 05-May-2025	S-A1-Bund-01-0.1-0.3 m 05-May-2025	S-A1-Bund-02-0.1-0.3 m 05-May-2025	
Lab Number:	3881838.24	3881838.25	3881838.26	3881838.27	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS					
Prochloraz	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3
Procymidone	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Prometryn	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Propachlor	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Propanil	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Propiconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05
Pyriproxyfen	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Quizalofop-ethyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Simazine	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Simetryn	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Sulfentrazone	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.13	< 0.11	< 0.11	< 0.10
Tebuconazole	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Terbacil	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Terbutometon	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Terbuthylazine	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Terbuthylazine-desethyl	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Terbutryn	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Thiabendazole	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3
Thiobencarb	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Tolyfluanid	mg/kg dry wt	< 0.04	< 0.03	< 0.03	< 0.03
Triazophos	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Trifluralin	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05
Vinclozolin	mg/kg dry wt	< 0.07	< 0.06	< 0.06	< 0.05

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.

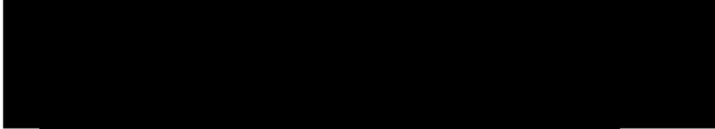
Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	3-4, 8, 12-13, 17-18, 20-22, 24-27
Heavy Metals with Mercury, 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	3-4, 8, 12-13, 17-18, 20-22, 24-27
Organochlorine/nitro&phosphorus Pest.s Screen in Soils, GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.010 - 0.2 mg/kg dry wt	3-4, 8, 12-13, 17-18, 20-22, 24-27
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	3-4, 8, 12-13, 17-18, 20-22, 24-27

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

Testing was completed between 13-May-2025 and 19-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.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Kim Harrison MSc
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 2

Client: Tonkin & Taylor Contact: M Morley C/- Tonkin & Taylor PO Box 13055 Christchurch 8141	Lab No: 3881855 Date Received: 07-May-2025 Date Reported: 14-May-2025 Quote No: 137591 Order No: 1095459 Client Reference: 1095459 Add. Client Ref: B2P_Area A Submitted By: Rebecca van der Krogt	A2Pv1
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Sample Type: Building Material

Sample Name	Lab Number	Sample Category	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
HA-A1-09-0.5m-asb	3881855.1	Fibre Cement	36.10	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected. Organic fibres detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

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: Building Material

Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.01 g	1
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1



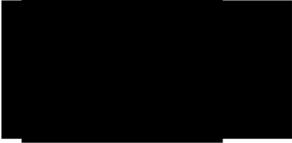
This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

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

Testing was completed on 13-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.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Jessica Griffin BSc, BOHS W504
Team Leader - Asbestos

**Appendix F Area B – Laboratory transcripts and
assessment**

Table F1: Area B - Soil analytical results summary, human and ecological health assessment and offsite disposal assessment

			Asbestos in soil		Total Recoverable Metal								Organochlorine Pesticides *			
			Semi-quantitative as ACM	Semi-quantitative as AF/FA	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total DDT	Dieldrin		
Unit			w/w%	w/w%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Assessment criteria	Human Health	Background ¹	ND	ND	12.58	0.19	22.7	20.3	40.96	0.11	20.7	93.94	0.431 ²	<LoD		
		Commercial/Industrial ³	0.05 ⁴	0.001 ⁴	70	1,300	6,300 (VI)	>10,000	3,300	4,200	6000 ⁵	400,000 ⁵	1,000	160 ^{6a}		
		Protection of groundwater quality ⁷			140	10	150	280	460	3	32	1200	526	0.2		
	Offsite disposal	Ecological Health ⁸	-	-	20	2	80	65	50	0.15	21	200	0.0012	0.0012		
		Leggett Road ⁹	5	0.1	12.58	0.19	22.7	20.3	40.96	0.11	20.7	93.94	0.431	-		
		Wheatstear ⁹	ND	ND	17	0.8	290	10,000	160	200	400 ⁵	7,400 ⁵	45	1.1 ^{6a}		
		Frews Plantation Road ¹⁰	ND	5	140	35	375	500	500	0.2	2,000	1,800	100	2		
		Burwood ¹¹	ND	ND	80	400	2,700 (VI)	>10,000	880	1,800	600	14,000	400	70		
Sample ID	Sample depth (m bgl)	Soil type	Sample Date	Lab number												
HA-B-01	0.1m	Dark brown sandy SILT	21-May-2025	3896337.1	-	-	3	0.23	14	8	10.8	<0.10	12	57	<0.07	<0.012
HA-B-02	0.1m	Dark brown sandy SILT	21-May-2025	3896337.2	-	-	3	0.19	13	8	10.6	<0.10	12	57	<0.08	<0.012
HA-B-03	0.1m	Dark brown sandy SILT	21-May-2025	3896337.3	-	-	8	0.20	15	12	14.0	<0.10	13	63	<0.08	<0.012
HA-B-04	0.1m	Dark brown sandy SILT	21-May-2025	3896337.4	-	-	8	0.20	16	12	14.3	<0.10	14	64	<0.08	<0.013
HA-B-05	0.1m	Dark brown silty SAND	21-May-2025	3896337.5	-	-	10	0.19	16	11	12.9	<0.10	13	60	<0.08	<0.013
HA-B-06	0.1m	Dark brown sandy SILT	21-May-2025	3896337.6	-	-	6	0.21	14	9	12.0	<0.10	12	57	0.13	<0.012
HA-B-07	0.1m	Dark brown sandy SILT	21-May-2025	3896337.7	-	-	7	0.21	15	10	12.0	<0.10	12	56	0.16	<0.012
TP42-B-8	0.1m	Dark brown SILT with some sand	14-May-2025	3896337.8	-	-	6	0.18	14	10	11.5	<0.10	12	63	0.15	<0.013
TP44-B-9	0.1m	Dark brown SILT with some sand	15-May-2025	3896337.9	-	-	6	0.23	14	9	12.5	<0.10	12	60	<0.08	<0.013
TP47-B-9	0.1m	Dark brown SILT with trace sand	15-May-2025	3896337.10	-	-	5	0.25	15	10	12.9	<0.10	13	64	<0.08	<0.013
		Minimum			-	-	3	0.18	13	8	10.6	<0.10	12	56	<0.07	<0.012
		Maximum			-	-	10	0.25	16	12	14.3	<0.10	14	64	0.16	<0.013
		Average **			-	-	7	0.21	15	10	12.4	-	13	60	-	-

Notes

ACM- asbestos containing material, AF- asbestos fines, FA- fibrous asbestos.

ND - Not Detected

LoR - laboratory limit of reporting.

* Full suite tested, refer Hill Laboratories Ltd certificate for full results.

** For values below limit of detection, the higher-bound value has been adopted for 95% UCL calculations

Bold values indicate concentration is above published background for the site.

Bold orange values indicate concentration is above the ecological health criterion

Indicates Leggett Road acceptance criterion is exceeded

Indicates Wheatstear acceptance criterion is exceeded

1. Environment Canterbury GIS, Trace Elements Level 2. Background concentrations at the site, from "Background concentrations of selected trace elements in Canterbury soils" prepared for Environment Canterbury by Tonkin & Taylor Ltd, July 2006.

2. ECan has adopted composite sampling results from Christchurch reported in the MFE Ambient Concentrations of Selected Organochlorines in Soils (December 1998) to set an ambient soil concentration of 0.431 mg/kg for total DDT within Christchurch.

3. Ministry for the Environment (MFE) 2011, NESCS Users' guide, Soil Contaminant Standards (SCS)

3a. The SCS is applicable to either dieldrin or aldrin separately, or to the sum of aldrin and dieldrin if both are involved.

4. New Zealand Guidelines for Assessing and Managing Asbestos in Soil (November 2024). ACM - Asbestos containing material, AF/FA - Asbestos Fines/Fibres Asbestos

5. ASC NEPM Toolbox- Update February 2014 - www.nepc.gov.au/nepms/assessment-site-contamination/toolbox - Commercial/Industrial land use as a conservative proxy for outdoor worker protection.

6. WasteMINZ NZ: Technical Guidelines for Disposal to Land. September 2023.

7. Australian and New Zealand default guideline values for toxicants in sediment. <https://www.waterquality.gov.au/eng-guidelines/guideline-values/default/sediment-quality-toxicants>

8. Protranz Leggett Road Managed Fill, resource consents RMA/2016/2234, CRC200767, CRC200771, CRC200777.

Notes

1) Criteria can be compared to 95%UCL of relevant results

2) Additional assessment of asbestos content required

3. Wheatstear Managed Fill, Selwyn - CRCL45183, based on Rural Residential landuse (25% produce intake) values from NES.

3a. Value applicable to either dieldrin or aldrin separately, or to the sum of aldrin and dieldrin if both are involved.

10. Frews Hororata Acceptance Criteria, Schedule CRC2011828, Column 3 Maximum concentration, as provided by Frews 13 March 2025.

Notes

1) Criteria for DDT + Isomers is 100 mg/kg

2) Frews require manganese testing to be completed.

11. Burwood Landfill soil acceptance criteria, as provided by CCC, 9 April 2025.

Notes: 1) Where criteria are not provided for contaminants, recreational land use based values are adopted from other guideline sources.

Certificate of Analysis

Page 1 of 6

Client: Tonkin & Taylor	Lab No: 3896357	SPV1
Contact: M Morley	Date Received: 22-May-2025	
C/- Tonkin & Taylor	Date Reported: 28-May-2025	
PO Box 13055	Quote No: 137716	
Christchurch 8141	Order No: 1095459	
	Client Reference: 1095459	
	Add. Client Ref: B2P_Area B	
	Submitted By: M Morley	

Sample Type: Soil						
Sample Name:	HA-B-01-0.1m 21-May-2025	HA-B-02-0.1m 21-May-2025	HA-B-03-0.1m 21-May-2025	HA-B-04-0.1m 21-May-2025	HA-B-05-0.1m 21-May-2025	
Lab Number:	3896357.1	3896357.2	3896357.3	3896357.4	3896357.5	
Individual Tests						
Dry Matter	g/100g as rcvd	83	83	80	78	81
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	5	5	8	8	10
Total Recoverable Cadmium	mg/kg dry wt	0.23	0.19	0.20	0.20	0.19
Total Recoverable Chromium	mg/kg dry wt	14	13	15	16	16
Total Recoverable Copper	mg/kg dry wt	8	8	12	12	11
Total Recoverable Lead	mg/kg dry wt	10.8	10.6	14.0	14.3	12.9
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	12	12	13	14	13
Total Recoverable Zinc	mg/kg dry wt	57	57	63	64	60
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.038	0.038	0.030	0.020	0.017
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	0.022	0.029	0.021	0.018	0.018
Total DDT Isomers	mg/kg dry wt	< 0.07	< 0.08	< 0.08	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.012	< 0.012	< 0.012	< 0.013	< 0.013

Sample Type: Soil						
Sample Name:	HA-B-01-0.1m 21-May-2025	HA-B-02-0.1m 21-May-2025	HA-B-03-0.1m 21-May-2025	HA-B-04-0.1m 21-May-2025	HA-B-05-0.1m 21-May-2025	
Lab Number:	3896357.1	3896357.2	3896357.3	3896357.4	3896357.5	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Alachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Atrazine	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Atrazine-desethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Atrazine-desisopropyl	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Azaconazole	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Azinphos-methyl	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Benalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Bitertanol	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Bromacil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Bromopropylate	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Butachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Captan	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Carbaryl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Carbofuran	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorfluazuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorothalonil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorpyrifos	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorpyrifos-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlortoluron	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Cyanazine	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Cyfluthrin	mg/kg dry wt	< 0.07	< 0.07	< 0.08	< 0.08	< 0.07
Cyhalothrin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Cypermethrin	mg/kg dry wt	< 0.14	< 0.14	< 0.15	< 0.15	< 0.14
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Diazinon	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlofluanid	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Dichloran	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Difenoconazole	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Dimethoate	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Diphenylamine	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Diuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fenpropimorph	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fluazifop-butyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fluometuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Flusilazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fluvalinate	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Furalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Haloxifop-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Hexaconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Hexazinone	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Kresoxim-methyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Linuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Malathion	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Metalaxyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Methamidophos	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Metribuzin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Molinate	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Myclobutanil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Naled	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Sample Type: Soil

Sample Name:	HA-B-01-0.1m 21-May-2025	HA-B-02-0.1m 21-May-2025	HA-B-03-0.1m 21-May-2025	HA-B-04-0.1m 21-May-2025	HA-B-05-0.1m 21-May-2025
Lab Number:	3896357.1	3896357.2	3896357.3	3896357.4	3896357.5
Organonitro&phosphorus Pesticides Screen in Soil by GCMS					
Norflurazon	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12
Oxadiazon	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Oxyfluorfen	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Paclobutrazol	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Parathion-ethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Parathion-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Pendimethalin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Pirimicarb	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Pirimiphos-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Prochloraz	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3
Procymidone	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Prometryn	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Propachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Propanil	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Propiconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05
Pyriproxyfen	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Quizalofop-ethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Simazine	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Simetryn	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Sulfentrazone	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12
Tebuconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Terbacil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Terbumeton	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Terbuthylazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Terbuthylazine-desethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Terbutryn	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Thiabendazole	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3
Thiobencarb	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Tolyfluanid	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Triazophos	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Trifluralin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Vinclozolin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06
Sample Name:	HA-B-06-0.1m 21-May-2025	HA-B-07-0.1m 21-May-2025	TP42-B-B-0.1m 14-May-2025	TP44-B-B-0.1m 15-May-2025	TP47-B-B-0.1m 15-May-2025
Lab Number:	3896357.6	3896357.7	3896357.8	3896357.9	3896357.10
Individual Tests					
Dry Matter	g/100g as rcvd	81	82	81	79
Heavy Metals with Mercury, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	6	7	6	6
Total Recoverable Cadmium	mg/kg dry wt	0.21	0.21	0.18	0.23
Total Recoverable Chromium	mg/kg dry wt	14	15	14	14
Total Recoverable Copper	mg/kg dry wt	9	10	10	9
Total Recoverable Lead	mg/kg dry wt	12.0	12.0	11.5	12.5
Total Recoverable Mercury	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	12	12	12	12
Total Recoverable Zinc	mg/kg dry wt	57	56	63	60
Organochlorine Pesticides Screening in Soil					
Aldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013
alpha-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013
beta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013
delta-BHC	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013

Sample Type: Soil

Sample Name:		HA-B-06-0.1m 21-May-2025	HA-B-07-0.1m 21-May-2025	TP42-B-B-0.1m 14-May-2025	TP44-B-B-0.1m 15-May-2025	TP47-B-B-0.1m 15-May-2025
Lab Number:		3896357.6	3896357.7	3896357.8	3896357.9	3896357.10
Organochlorine Pesticides Screening in Soil						
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
4,4'-DDE	mg/kg dry wt	0.078	0.069	0.087	0.034	0.017
2,4'-DDT	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
4,4'-DDT	mg/kg dry wt	0.055	0.069	0.057	0.020	0.013
Total DDT Isomers	mg/kg dry wt	0.15	0.16	0.15	< 0.08	< 0.08
Dieldrin	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Endosulfan I	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Endosulfan II	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Endrin	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Endrin ketone	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Heptachlor	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Methoxychlor	mg/kg dry wt	< 0.012	< 0.012	< 0.013	< 0.013	< 0.013
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Alachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Atrazine	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Atrazine-desethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Atrazine-desisopropyl	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Azaconazole	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Azinphos-methyl	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Benalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Bitertanol	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Bromacil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Bromopropylate	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Butachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Captan	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Carbaryl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Carbofuran	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorfluazuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorothalonil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorpyrifos	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlorpyrifos-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chlortoluron	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Cyanazine	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Cyfluthrin	mg/kg dry wt	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Cyhalothrin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Cypermethrin	mg/kg dry wt	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Diazinon	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlofluanid	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Dichloran	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Difenoconazole	mg/kg dry wt	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Dimethoate	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Diphenylamine	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12

Sample Type: Soil						
Sample Name:	HA-B-06-0.1m 21-May-2025	HA-B-07-0.1m 21-May-2025	TP42-B-B-0.1m 14-May-2025	TP44-B-B-0.1m 15-May-2025	TP47-B-B-0.1m 15-May-2025	
Lab Number:	3896357.6	3896357.7	3896357.8	3896357.9	3896357.10	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Diuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fenpropimorph	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fluazifop-butyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fluometuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Flusilazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Fluvalinate	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Furalaxyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Haloxyfop-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Hexaconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Hexazinone	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Kresoxim-methyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Linuron	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Malathion	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Metalaxyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Methamidophos	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Metribuzin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Molinate	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Myclobutanil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Naled	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Norflurazon	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Oxadiazon	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Oxyfluorfen	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Paclobutrazol	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Parathion-ethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Parathion-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Pendimethalin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pirimicarb	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Pirimiphos-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Prochloraz	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Procymidone	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Prometryn	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Propanil	mg/kg dry wt	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propiconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyriproxyfen	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Quizalofop-ethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Simazine	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Simetryn	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Sulfentrazone	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Tebuconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Terbacil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Terbutometon	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Terbutylazine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Terbutylazine-desethyl	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Terbutryn	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Thiabendazole	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Thiobencarb	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Tolyfluanid	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

Sample Type: Soil						
Sample Name:	HA-B-06-0.1m 21-May-2025	HA-B-07-0.1m 21-May-2025	TP42-B-B-0.1m 14-May-2025	TP44-B-B-0.1m 15-May-2025	TP47-B-B-0.1m 15-May-2025	
Lab Number:	3896357.6	3896357.7	3896357.8	3896357.9	3896357.10	

Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Triazophos	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Trifluralin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Vinclozolin	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06

Sample Name:	Duplicate 1 B 21-May-2025					
Lab Number:	3896357.11					

Heavy Metals with Mercury, Screen Level		
Total Recoverable Arsenic	mg/kg dry wt	5
Total Recoverable Cadmium	mg/kg dry wt	0.25
Total Recoverable Chromium	mg/kg dry wt	16
Total Recoverable Copper	mg/kg dry wt	8
Total Recoverable Lead	mg/kg dry wt	11.5
Total Recoverable Mercury	mg/kg dry wt	< 0.10
Total Recoverable Nickel	mg/kg dry wt	12
Total Recoverable Zinc	mg/kg dry wt	57

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).	-	1-11
Heavy Metals with Mercury, 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	1-11
Organochlorine/nitro&phosphorus Pest.s Screen in Soils, GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.010 - 0.2 mg/kg dry wt	1-10
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1-10

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

Testing was completed between 23-May-2025 and 28-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.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Ara Heron BSc (Tech)
Client Services Manager - Environmental

Appendix G Area D – Laboratory transcripts and analytical results

- **Table G1 – Soil sampling analytical results**
- **Table G2 – Groundwater sampling analytical results**
- **95 % UCL calculation sheets for soil sampling results**
- **Groundwater sampling field sheets**
- **Laboratory transcripts**

Table H2: BH_38 - Groundwater analytical results summary

Assessment criteria	Unit	Arsenic		Cadmium		Chromium		Copper		Lead		Nickel		Zinc		PAH*		TPH				ONOP*				OCP*					
		Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Benzo[a]pyrene (BAP)	Naphthalene	C7 - C9	C10 - C14	C15 - C36	Total (C7-C36)	Atrazine	Simazine	Terbutylazine	Diuron	Chlorpyrifos	Diazinon	Total DDT	Aldrin + Dieldrin		
Human health ¹	MAV	-	0.01	-	0.004	-	0.05	-	2	-	0.01	-	0.08	-	-	0.0007	-	-	-	-	-	0.1	0.002	0.008	0.02	0.04	-	0.001	0.00004		
ECan groundwater limits ²	50% MAV	-	0.005	-	0.002	-	0.025	-	1	-	0.005	-	0.04	-	-	0.00035	-	-	-	-	-	0.05	0.001	0.004	0.01	0.02	-	0.0005	0.00002		
Sample ID	Sample Date	Lab number																													
BH_38	5/09/2025	3978883.1		0.0018	0.0011	<0.000053	<0.00005	0.0035	0.0006	0.004	0.0019	0.0046	0.00072	0.0046	0.0033	0.036	0.0174	<0.00010	<0.0005	<0.10	<0.2	<0.4	<0.7	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004**	<0.00002**	<0.00006**	<0.00005
BH_38	10/09/2025	3982000.1		0.0017	<0.001	<0.000053	<0.00005	0.0022	<0.0005	0.0032	0.0014	0.0025	0.00065	0.0042	0.003	0.029	0.021	<0.00010	<0.0005	<0.10	<0.2	<0.4	<0.7	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004**	<0.00002**	<0.00006**	<0.00005

Notes

PAH = Polycyclic Aromatic Hydrocarbons

TPH = Total Petroleum Hydrocarbons

ONOP = Organonitro & organophosphorus Pesticides

OCP = Organochlorine Pesticides

^ Unknown level of species protection. DGV is for Dieldrin which is more persistent in the environment.

* Samples were tested for Organonitro & organophosphorus Pesticides (ONOP), Polycyclic Aromatic Hydrocarbons (PAH), Total Petroleum Hydrocarbons (TPH), and Organochlorine Pesticides (OCP). The reported values were below the limit of detection for all compounds and only selected compounds have been included in the results summary table. Refer to Hill Laboratories Ltd certificate of analysis for full results.

** indicates that the limit of detection is higher than at least one assessment criterion

Blue values indicate concentration is above the human health criterion

Green values indicate concentration is above the LWRP criterion

1. Water Services (Drinking Water Standards for New Zealand) Regulations 2022. Maximum acceptable values (MAVs).

2. Environment Canterbury Regional Council. Canterbury Land and Water Regional Plan, Volume 1, 2025. Water Quality Limits and Targets for Groundwater (Table 8i), based on the NZ drinking water standards MAVs.

Certificate of Analysis

Page 1 of 18

Client: Tonkin & Taylor	Lab No: 3964338	SPV1
Contact: Genevieve Palmer	Date Received: 19-Aug-2025	
C/- Tonkin & Taylor	Date Reported: 26-Aug-2025	
PO Box 9544	Quote No: 80842	
Hamilton 3240	Order No: 1095459.0000-0012-060	
	Client Reference: 1095459.0000-0012-060	
	Submitted By: Alan Spooner	

Sample Type: Soil						
Sample Name:		TR3_0.1-1.0 19-Aug-2025	TR3_1.2-2.2 19-Aug-2025	TP91_0.2 19-Aug-2025	TP91_1.0 19-Aug-2025	TP91_1.7 19-Aug-2025
Lab Number:		3964338.1	3964338.3	3964338.4	3964338.5	3964338.7
Individual Tests						
Dry Matter	g/100g as rcvd	89	85	81	73	84
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	8	18	-	8	6
Total Recoverable Cadmium	mg/kg dry wt	0.11	0.11	-	0.16	0.11
Total Recoverable Chromium	mg/kg dry wt	17	16	-	18	17
Total Recoverable Copper	mg/kg dry wt	14	13	-	16	14
Total Recoverable Lead	mg/kg dry wt	26	25	-	23	40
Total Recoverable Nickel	mg/kg dry wt	13	12	-	16	14
Total Recoverable Zinc	mg/kg dry wt	78	94	-	111	98
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
alpha-BHC	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
beta-BHC	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
delta-BHC	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
gamma-BHC (Lindane)	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
cis-Chlordane	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
trans-Chlordane	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
2,4'-DDD	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
4,4'-DDD	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
2,4'-DDE	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
4,4'-DDE	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
2,4'-DDT	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
4,4'-DDT	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Total DDT Isomers	mg/kg dry wt	-	< 0.07	< 0.08	-	< 0.07
Dieldrin	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Endosulfan I	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Endosulfan II	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Endosulfan sulphate	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Endrin	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Endrin aldehyde	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Endrin ketone	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Heptachlor	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Heptachlor epoxide	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Hexachlorobenzene	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012
Methoxychlor	mg/kg dry wt	-	< 0.012	< 0.013	-	< 0.012

Sample Type: Soil						
Sample Name:	TR3_0.1-1.0 19-Aug-2025	TR3_1.2-2.2 19-Aug-2025	TP91_0.2 19-Aug-2025	TP91_1.0 19-Aug-2025	TP91_1.7 19-Aug-2025	
Lab Number:	3964338.1	3964338.3	3964338.4	3964338.5	3964338.7	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Alachlor	mg/kg dry wt	-	< 0.05	< 0.05	-	< 0.05
Atrazine	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Atrazine-desethyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Atrazine-desisopropyl	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Azaconazole	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Azinphos-methyl	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Benalaxyl	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Bitertanol	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Bromacil	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Bromopropylate	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Butachlor	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Captan	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Carbaryl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Carbofuran	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Chlorfluazuron	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Chlorothalonil	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Chlorpyrifos	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Chlorpyrifos-methyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Chlortoluron	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Cyanazine	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Cyfluthrin	mg/kg dry wt	-	< 0.07	< 0.09	-	< 0.08
Cyhalothrin	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Cypermethrin	mg/kg dry wt	-	< 0.14	< 0.17	-	< 0.16
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Diazinon	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Dichlofluanid	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Dichloran	mg/kg dry wt	-	< 0.2	< 0.2	-	< 0.2
Dichlorvos	mg/kg dry wt	-	< 0.09	< 0.09	-	< 0.09
Difenoconazole	mg/kg dry wt	-	< 0.09	< 0.10	-	< 0.10
Dimethoate	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Diphenylamine	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Diuron	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Fenpropimorph	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Fluazifop-butyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Fluometuron	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Flusilazole	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Fluvalinate	mg/kg dry wt	-	< 0.05	< 0.05	-	< 0.05
Furalaxyl	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Haloxypop-methyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Hexaconazole	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Hexazinone	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	< 0.3	< 0.4	-	< 0.4
Kresoxim-methyl	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Linuron	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Malathion	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Metalaxyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Methamidophos	mg/kg dry wt	-	< 0.3	< 0.4	-	< 0.4
Metolachlor	mg/kg dry wt	-	< 0.05	< 0.05	-	< 0.05
Metribuzin	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Molinate	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Myclobutanil	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Naled	mg/kg dry wt	-	< 0.3	< 0.4	-	< 0.4

Sample Type: Soil

Sample Name:	TR3_0.1-1.0 19-Aug-2025	TR3_1.2-2.2 19-Aug-2025	TP91_0.2 19-Aug-2025	TP91_1.0 19-Aug-2025	TP91_1.7 19-Aug-2025
Lab Number:	3964338.1	3964338.3	3964338.4	3964338.5	3964338.7

Organonitro&phosphorus Pesticides Screen in Soil by GCMS

Norflurazon	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Oxadiazon	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Oxyfluorfen	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Paclobutrazol	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Parathion-ethyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Parathion-methyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Pendimethalin	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Permethrin	mg/kg dry wt	-	< 0.03	< 0.03	-	< 0.03
Pirimicarb	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Pirimiphos-methyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Prochloraz	mg/kg dry wt	-	< 0.3	< 0.4	-	< 0.4
Procymidone	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Prometryn	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Propachlor	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Propanil	mg/kg dry wt	-	< 0.2	< 0.2	-	< 0.2
Propazine	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Propiconazole	mg/kg dry wt	-	< 0.05	< 0.05	-	< 0.05
Pyriproxyfen	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Quizalofop-ethyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Simazine	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Simetryn	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Sulfentrazone	mg/kg dry wt	-	< 0.3	< 0.4	-	< 0.4
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	< 0.12	< 0.14	-	< 0.13
Tebuconazole	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Terbacil	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Terbutometon	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Terbutylazine	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Terbutylazine-desethyl	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Terbutryn	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Thiabendazole	mg/kg dry wt	-	< 0.3	< 0.4	-	< 0.4
Thiobencarb	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Tolyfluanid	mg/kg dry wt	-	< 0.03	< 0.04	-	< 0.04
Triazophos	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Trifluralin	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07
Vinclozolin	mg/kg dry wt	-	< 0.06	< 0.07	-	< 0.07

Polycyclic Aromatic Hydrocarbons Screening in Soil*

Total of Reported PAHs in Soil	mg/kg dry wt	-	-	-	< 0.4	-
1-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.014	-
2-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.014	-
Acenaphthylene	mg/kg dry wt	-	-	-	< 0.014	-
Acenaphthene	mg/kg dry wt	-	-	-	< 0.014	-
Anthracene	mg/kg dry wt	-	-	-	< 0.014	-
Benzo[a]anthracene	mg/kg dry wt	-	-	-	< 0.014	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	-	< 0.014	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	-	< 0.032	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	-	< 0.032	-
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	-	-	-	< 0.014	-
Benzo[e]pyrene	mg/kg dry wt	-	-	-	< 0.014	-
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	-	< 0.014	-
Benzo[k]fluoranthene	mg/kg dry wt	-	-	-	< 0.014	-
Chrysene	mg/kg dry wt	-	-	-	< 0.014	-
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	-	< 0.014	-

Sample Type: Soil						
Sample Name:	TR3_0.1-1.0 19-Aug-2025	TR3_1.2-2.2 19-Aug-2025	TP91_0.2 19-Aug-2025	TP91_1.0 19-Aug-2025	TP91_1.7 19-Aug-2025	
Lab Number:	3964338.1	3964338.3	3964338.4	3964338.5	3964338.7	
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Fluoranthene	mg/kg dry wt	-	-	-	< 0.014	-
Fluorene	mg/kg dry wt	-	-	-	< 0.014	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	-	< 0.014	-
Naphthalene	mg/kg dry wt	-	-	-	< 0.07	-
Perylene	mg/kg dry wt	-	-	-	< 0.014	-
Phenanthrene	mg/kg dry wt	-	-	-	< 0.014	-
Pyrene	mg/kg dry wt	-	-	-	< 0.014	-
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	< 20	< 20	-	-	-
C10 - C14	mg/kg dry wt	< 20	< 20	-	-	-
C15 - C36	mg/kg dry wt	< 40	62	-	-	-
Total hydrocarbons (C7 - C36)	mg/kg dry wt	< 80	< 80	-	-	-
Sample Name:	TP91_4.0 19-Aug-2025	TR02_0.1 18-Aug-2025	TR02_1.0	TR01_0.3	TR01_1.5	
Lab Number:	3964338.10	3964338.11	3964338.12	3964338.14	3964338.15	
Individual Tests						
Dry Matter	g/100g as rcvd	81	95	91	80	76
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	5	4	9	7
Total Recoverable Cadmium	mg/kg dry wt	0.13	< 0.10	< 0.10	0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	17	10	10	16	18
Total Recoverable Copper	mg/kg dry wt	14	5	3	14	21
Total Recoverable Lead	mg/kg dry wt	54	6.1	7.6	30	26
Total Recoverable Nickel	mg/kg dry wt	14	6	7	13	15
Total Recoverable Zinc	mg/kg dry wt	106	28	29	90	80
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
alpha-BHC	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
beta-BHC	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
delta-BHC	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
cis-Chlordane	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
2,4'-DDD	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
4,4'-DDE	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
2,4'-DDT	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	-	< 0.07	-	< 0.08
Dieldrin	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Endosulfan I	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Endosulfan II	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Endrin	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Endrin ketone	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Heptachlor	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Methoxychlor	mg/kg dry wt	< 0.012	-	< 0.011	-	< 0.013
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Alachlor	mg/kg dry wt	< 0.05	-	< 0.05	-	< 0.05

Sample Type: Soil						
Sample Name:	TP91_4.0 19-Aug-2025	TR02_0.1 18-Aug-2025	TR02_1.0	TR01_0.3	TR01_1.5	
Lab Number:	3964338.10	3964338.11	3964338.12	3964338.14	3964338.15	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Atrazine	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Atrazine-desethyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Atrazine-desisopropyl	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Azaconazole	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Azinphos-methyl	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Benalaxyl	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Bitertanol	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Bromacil	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Bromopropylate	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Butachlor	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Captan	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Carbaryl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Carbofuran	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Chlorfluazuron	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Chlorothalonil	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Chlorpyrifos	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Chlorpyrifos-methyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Chlortoluron	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Cyanazine	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Cyfluthrin	mg/kg dry wt	< 0.09	-	< 0.08	-	< 0.09
Cyhalothrin	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Cypermethrin	mg/kg dry wt	< 0.17	-	< 0.15	-	< 0.18
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Diazinon	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Dichlofluanid	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Dichloran	mg/kg dry wt	< 0.2	-	< 0.2	-	< 0.2
Dichlorvos	mg/kg dry wt	< 0.09	-	< 0.09	-	< 0.09
Difenoconazole	mg/kg dry wt	< 0.10	-	< 0.09	-	< 0.11
Dimethoate	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Diphenylamine	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Diuron	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Fenpropimorph	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Fluazifop-butyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Fluometuron	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Flusilazole	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Fluvalinate	mg/kg dry wt	< 0.05	-	< 0.05	-	< 0.06
Furalaxyl	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Haloxifop-methyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Hexaconazole	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Hexazinone	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.4
Kresoxim-methyl	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Linuron	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Malathion	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Metalaxyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Methamidophos	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.4
Metolachlor	mg/kg dry wt	< 0.05	-	< 0.05	-	< 0.05
Metribuzin	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Molinate	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Myclobutanil	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Naled	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.4
Norflurazon	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Oxadiazon	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08

Sample Type: Soil						
Sample Name:	TP91_4.0 19-Aug-2025	TR02_0.1 18-Aug-2025	TR02_1.0	TR01_0.3	TR01_1.5	
Lab Number:	3964338.10	3964338.11	3964338.12	3964338.14	3964338.15	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Oxyfluorfen	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Paclobutrazol	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Parathion-ethyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Parathion-methyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Pendimethalin	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Permethrin	mg/kg dry wt	< 0.03	-	< 0.03	-	< 0.03
Pirimicarb	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Pirimiphos-methyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Prochloraz	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.4
Procymidone	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Prometryn	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Propachlor	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Propanil	mg/kg dry wt	< 0.2	-	< 0.2	-	< 0.2
Propazine	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Propiconazole	mg/kg dry wt	< 0.05	-	< 0.05	-	< 0.06
Pyriproxyfen	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Quizalofop-ethyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Simazine	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Simetryn	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Sulfentrazone	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.4
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.14	-	< 0.12	-	< 0.15
Tebuconazole	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Terbacil	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Terbumeton	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Terbutylazine	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Terbutylazine-desethyl	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Terbutryn	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Thiabendazole	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.4
Thiobencarb	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Tolyfluanid	mg/kg dry wt	< 0.04	-	< 0.03	-	< 0.04
Triazophos	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Trifluralin	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Vinclozolin	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.08
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	0.6	-	-	-	-
1-Methylnaphthalene	mg/kg dry wt	< 0.012	-	-	-	-
2-Methylnaphthalene	mg/kg dry wt	< 0.012	-	-	-	-
Acenaphthylene	mg/kg dry wt	< 0.012	-	-	-	-
Acenaphthene	mg/kg dry wt	< 0.012	-	-	-	-
Anthracene	mg/kg dry wt	0.016	-	-	-	-
Benzo[a]anthracene	mg/kg dry wt	0.034	-	-	-	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.040	-	-	-	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	0.054	-	-	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	0.053	-	-	-	-
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	0.045	-	-	-	-
Benzo[e]pyrene	mg/kg dry wt	0.024	-	-	-	-
Benzo[g,h,i]perylene	mg/kg dry wt	0.022	-	-	-	-
Benzo[k]fluoranthene	mg/kg dry wt	0.021	-	-	-	-
Chrysene	mg/kg dry wt	0.035	-	-	-	-
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.012	-	-	-	-
Fluoranthene	mg/kg dry wt	0.095	-	-	-	-
Fluorene	mg/kg dry wt	< 0.012	-	-	-	-

Sample Type: Soil						
Sample Name:	TP91_4.0 19-Aug-2025	TR02_0.1 18-Aug-2025	TR02_1.0	TR01_0.3	TR01_1.5	
Lab Number:	3964338.10	3964338.11	3964338.12	3964338.14	3964338.15	
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	0.022	-	-	-	-
Naphthalene	mg/kg dry wt	< 0.06	-	-	-	-
Perylene	mg/kg dry wt	< 0.012	-	-	-	-
Phenanthrene	mg/kg dry wt	0.080	-	-	-	-
Pyrene	mg/kg dry wt	0.091	-	-	-	-
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	-	< 20	< 20	< 20	< 20
C10 - C14	mg/kg dry wt	-	< 20	< 20	< 20	< 20
C15 - C36	mg/kg dry wt	-	< 40	< 40	42	< 40
Total hydrocarbons (C7 - C36)	mg/kg dry wt	-	< 80	< 80	< 80	< 80
Sample Name:	TP88_0.1	TP88_0.35	TP88_1.0	TP88_3.2	TP88_4.2	
Lab Number:	3964338.16	3964338.17	3964338.18	3964338.19	3964338.21	
Individual Tests						
Dry Matter	g/100g as rcvd	88	76	70	88	89
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	-	18	16	4	3
Total Recoverable Cadmium	mg/kg dry wt	-	0.15	0.19	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	-	23	21	16	14
Total Recoverable Copper	mg/kg dry wt	-	28	23	12	9
Total Recoverable Lead	mg/kg dry wt	-	55	30	52	21
Total Recoverable Nickel	mg/kg dry wt	-	11	13	12	11
Total Recoverable Zinc	mg/kg dry wt	-	137	151	68	56
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	-	-	< 0.014	-	< 0.011
alpha-BHC	mg/kg dry wt	-	-	< 0.014	-	< 0.011
beta-BHC	mg/kg dry wt	-	-	< 0.014	-	< 0.011
delta-BHC	mg/kg dry wt	-	-	< 0.014	-	< 0.011
gamma-BHC (Lindane)	mg/kg dry wt	-	-	< 0.014	-	< 0.011
cis-Chlordane	mg/kg dry wt	-	-	< 0.014	-	< 0.011
trans-Chlordane	mg/kg dry wt	-	-	< 0.014	-	< 0.011
2,4'-DDD	mg/kg dry wt	-	-	< 0.014	-	< 0.011
4,4'-DDD	mg/kg dry wt	-	-	< 0.014	-	< 0.011
2,4'-DDE	mg/kg dry wt	-	-	< 0.014	-	< 0.011
4,4'-DDE	mg/kg dry wt	-	-	< 0.014	-	< 0.011
2,4'-DDT	mg/kg dry wt	-	-	< 0.014	-	< 0.011
4,4'-DDT	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Total DDT Isomers	mg/kg dry wt	-	-	< 0.09	-	< 0.07
Dieldrin	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Endosulfan I	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Endosulfan II	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Endosulfan sulphate	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Endrin	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Endrin aldehyde	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Endrin ketone	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Heptachlor	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Heptachlor epoxide	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Hexachlorobenzene	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Methoxychlor	mg/kg dry wt	-	-	< 0.014	-	< 0.011
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Alachlor	mg/kg dry wt	-	-	< 0.05	-	< 0.05
Atrazine	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Atrazine-desethyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Atrazine-desisopropyl	mg/kg dry wt	-	-	< 0.16	-	< 0.13

Sample Type: Soil						
Sample Name:	TP88_0.1	TP88_0.35	TP88_1.0	TP88_3.2	TP88_4.2	
Lab Number:	3964338.16	3964338.17	3964338.18	3964338.19	3964338.21	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Azaconazole	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Azinphos-methyl	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Benalaxyl	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Bitertanol	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Bromacil	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Bromopropylate	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Butachlor	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Captan	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Carbaryl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Carbofuran	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Chlorfluazuron	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Chlorothalonil	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Chlorpyrifos	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Chlorpyrifos-methyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Chlortoluron	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Cyanazine	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Cyfluthrin	mg/kg dry wt	-	-	< 0.10	-	< 0.08
Cyhalothrin	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Cypermethrin	mg/kg dry wt	-	-	< 0.19	-	< 0.15
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Diazinon	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Dichlofluanid	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Dichloran	mg/kg dry wt	-	-	< 0.2	-	< 0.2
Dichlorvos	mg/kg dry wt	-	-	< 0.09	-	< 0.09
Difenoconazole	mg/kg dry wt	-	-	< 0.11	-	< 0.09
Dimethoate	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Diphenylamine	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Diuron	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Fenpropimorph	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Fluazifop-butyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Fluometuron	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Flusilazole	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Fluvalinate	mg/kg dry wt	-	-	< 0.06	-	< 0.05
Furalaxyl	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Haloxfop-methyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Hexaconazole	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Hexazinone	mg/kg dry wt	-	-	< 0.04	-	< 0.04
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	-	< 0.4	-	< 0.4
Kresoxim-methyl	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Linuron	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Malathion	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Metalaxyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Methamidophos	mg/kg dry wt	-	-	< 0.4	-	< 0.4
Metolachlor	mg/kg dry wt	-	-	< 0.05	-	< 0.05
Metribuzin	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Molinate	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Myclobutanil	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Naled	mg/kg dry wt	-	-	< 0.4	-	< 0.4
Norflurazon	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Oxadiazon	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Oxyfluorfen	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Paclobutrazol	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Parathion-ethyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Parathion-methyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07

Sample Type: Soil

Sample Name:		TP88_0.1	TP88_0.35	TP88_1.0	TP88_3.2	TP88_4.2
Lab Number:		3964338.16	3964338.17	3964338.18	3964338.19	3964338.21
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Pendimethalin	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Permethrin	mg/kg dry wt	-	-	< 0.03	-	< 0.03
Pirimicarb	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Pirimiphos-methyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Prochloraz	mg/kg dry wt	-	-	< 0.4	-	< 0.4
Procymidone	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Prometryn	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Propachlor	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Propanil	mg/kg dry wt	-	-	< 0.2	-	< 0.2
Propazine	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Propiconazole	mg/kg dry wt	-	-	< 0.06	-	< 0.05
Pyriproxyfen	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Quizalofop-ethyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Simazine	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Simetryn	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Sulfentrazone	mg/kg dry wt	-	-	< 0.4	-	< 0.4
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	-	< 0.16	-	< 0.13
Tebuconazole	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Terbacil	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Terbumeton	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Terbuthylazine	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Terbuthylazine-desethyl	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Terbutryn	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Thiabendazole	mg/kg dry wt	-	-	< 0.4	-	< 0.4
Thiobencarb	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Tolyfluanid	mg/kg dry wt	-	-	< 0.04	-	< 0.04
Triazophos	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Trifluralin	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Vinclozolin	mg/kg dry wt	-	-	< 0.08	-	< 0.07
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.3	0.6	-	-	7.4
1-Methylnaphthalene	mg/kg dry wt	< 0.011	< 0.013	-	-	0.073
2-Methylnaphthalene	mg/kg dry wt	< 0.011	< 0.013	-	-	0.069
Acenaphthylene	mg/kg dry wt	< 0.011	0.018	-	-	0.110
Acenaphthene	mg/kg dry wt	< 0.011	< 0.013	-	-	0.065
Anthracene	mg/kg dry wt	< 0.011	< 0.013	-	-	0.26
Benzo[a]anthracene	mg/kg dry wt	< 0.011	0.031	-	-	0.51
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.011	0.072	-	-	0.51
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.027	0.101	-	-	0.75
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.027	0.101	-	-	0.73
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	0.015	0.069	-	-	0.51
Benzo[e]pyrene	mg/kg dry wt	< 0.011	0.041	-	-	0.27
Benzo[g,h,i]perylene	mg/kg dry wt	0.011	0.053	-	-	0.24
Benzo[k]fluoranthene	mg/kg dry wt	< 0.011	0.026	-	-	0.22
Chrysene	mg/kg dry wt	< 0.011	0.030	-	-	0.44
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.011	< 0.013	-	-	0.065
Fluoranthene	mg/kg dry wt	0.012	0.054	-	-	1.24
Fluorene	mg/kg dry wt	< 0.011	< 0.013	-	-	0.183
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.011	0.050	-	-	0.26
Naphthalene	mg/kg dry wt	< 0.06	< 0.07	-	-	0.09
Perylene	mg/kg dry wt	< 0.011	0.015	-	-	0.083
Phenanthrene	mg/kg dry wt	< 0.011	0.025	-	-	1.07
Pyrene	mg/kg dry wt	0.013	0.073	-	-	1.16

Sample Type: Soil						
Sample Name:		TP88_0.1	TP88_0.35	TP88_1.0	TP88_3.2	TP88_4.2
Lab Number:		3964338.16	3964338.17	3964338.18	3964338.19	3964338.21
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	-	< 20	-	< 20	< 20
C10 - C14	mg/kg dry wt	-	< 20	-	38	< 20
C15 - C36	mg/kg dry wt	-	54	-	540	74
Total hydrocarbons (C7 - C36)	mg/kg dry wt	-	< 80	-	580	82
Sample Name:		TP90_0.3	TP90_0.5	TP90_1.5	TP90_2.0	TP89_0.3
Lab Number:		3964338.22	3964338.23	3964338.25	3964338.26	3964338.27
Individual Tests						
Dry Matter	g/100g as rcvd	72	-	88	87	85
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	-	11	4	-	-
Total Recoverable Cadmium	mg/kg dry wt	-	0.17	< 0.10	-	-
Total Recoverable Chromium	mg/kg dry wt	-	21	15	-	-
Total Recoverable Copper	mg/kg dry wt	-	20	9	-	-
Total Recoverable Lead	mg/kg dry wt	-	34	11.4	-	-
Total Recoverable Nickel	mg/kg dry wt	-	14	14	-	-
Total Recoverable Zinc	mg/kg dry wt	-	126	48	-	-
Organochlorine Pesticides Screening in Soil						
Aldrin	mg/kg dry wt	-	-	-	< 0.012	-
alpha-BHC	mg/kg dry wt	-	-	-	< 0.012	-
beta-BHC	mg/kg dry wt	-	-	-	< 0.012	-
delta-BHC	mg/kg dry wt	-	-	-	< 0.012	-
gamma-BHC (Lindane)	mg/kg dry wt	-	-	-	< 0.012	-
cis-Chlordane	mg/kg dry wt	-	-	-	< 0.012	-
trans-Chlordane	mg/kg dry wt	-	-	-	< 0.012	-
2,4'-DDD	mg/kg dry wt	-	-	-	< 0.012	-
4,4'-DDD	mg/kg dry wt	-	-	-	< 0.012	-
2,4'-DDE	mg/kg dry wt	-	-	-	< 0.012	-
4,4'-DDE	mg/kg dry wt	-	-	-	< 0.012	-
2,4'-DDT	mg/kg dry wt	-	-	-	< 0.012	-
4,4'-DDT	mg/kg dry wt	-	-	-	< 0.012	-
Total DDT Isomers	mg/kg dry wt	-	-	-	< 0.07	-
Dieldrin	mg/kg dry wt	-	-	-	< 0.012	-
Endosulfan I	mg/kg dry wt	-	-	-	< 0.012	-
Endosulfan II	mg/kg dry wt	-	-	-	< 0.012	-
Endosulfan sulphate	mg/kg dry wt	-	-	-	< 0.012	-
Endrin	mg/kg dry wt	-	-	-	< 0.012	-
Endrin aldehyde	mg/kg dry wt	-	-	-	< 0.012	-
Endrin ketone	mg/kg dry wt	-	-	-	< 0.012	-
Heptachlor	mg/kg dry wt	-	-	-	< 0.012	-
Heptachlor epoxide	mg/kg dry wt	-	-	-	< 0.012	-
Hexachlorobenzene	mg/kg dry wt	-	-	-	< 0.012	-
Methoxychlor	mg/kg dry wt	-	-	-	< 0.012	-
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Acetochlor	mg/kg dry wt	-	-	-	< 0.07	-
Alachlor	mg/kg dry wt	-	-	-	< 0.05	-
Atrazine	mg/kg dry wt	-	-	-	< 0.07	-
Atrazine-desethyl	mg/kg dry wt	-	-	-	< 0.07	-
Atrazine-desisopropyl	mg/kg dry wt	-	-	-	< 0.13	-
Azaconazole	mg/kg dry wt	-	-	-	< 0.04	-
Azinphos-methyl	mg/kg dry wt	-	-	-	< 0.13	-
Benalaxyl	mg/kg dry wt	-	-	-	< 0.04	-
Bitertanol	mg/kg dry wt	-	-	-	< 0.13	-
Bromacil	mg/kg dry wt	-	-	-	< 0.07	-
Bromopropylate	mg/kg dry wt	-	-	-	< 0.07	-
Butachlor	mg/kg dry wt	-	-	-	< 0.07	-

Sample Type: Soil						
Sample Name:	TP90_0.3	TP90_0.5	TP90_1.5	TP90_2.0	TP89_0.3	
Lab Number:	3964338.22	3964338.23	3964338.25	3964338.26	3964338.27	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Captan	mg/kg dry wt	-	-	-	< 0.13	-
Carbaryl	mg/kg dry wt	-	-	-	< 0.07	-
Carbofuran	mg/kg dry wt	-	-	-	< 0.07	-
Chlorfluazuron	mg/kg dry wt	-	-	-	< 0.07	-
Chlorothalonil	mg/kg dry wt	-	-	-	< 0.07	-
Chlorpyrifos	mg/kg dry wt	-	-	-	< 0.07	-
Chlorpyrifos-methyl	mg/kg dry wt	-	-	-	< 0.07	-
Chlortoluron	mg/kg dry wt	-	-	-	< 0.13	-
Cyanazine	mg/kg dry wt	-	-	-	< 0.07	-
Cyfluthrin	mg/kg dry wt	-	-	-	< 0.08	-
Cyhalothrin	mg/kg dry wt	-	-	-	< 0.07	-
Cypermethrin	mg/kg dry wt	-	-	-	< 0.16	-
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	-	-	< 0.07	-
Diazinon	mg/kg dry wt	-	-	-	< 0.04	-
Dichlofluanid	mg/kg dry wt	-	-	-	< 0.07	-
Dichloran	mg/kg dry wt	-	-	-	< 0.2	-
Dichlorvos	mg/kg dry wt	-	-	-	< 0.09	-
Difenoconazole	mg/kg dry wt	-	-	-	< 0.09	-
Dimethoate	mg/kg dry wt	-	-	-	< 0.13	-
Diphenylamine	mg/kg dry wt	-	-	-	< 0.13	-
Diuron	mg/kg dry wt	-	-	-	< 0.07	-
Fenpropimorph	mg/kg dry wt	-	-	-	< 0.07	-
Fluazifop-butyl	mg/kg dry wt	-	-	-	< 0.07	-
Fluometuron	mg/kg dry wt	-	-	-	< 0.07	-
Flusilazole	mg/kg dry wt	-	-	-	< 0.07	-
Fluvalinate	mg/kg dry wt	-	-	-	< 0.05	-
Furalaxyl	mg/kg dry wt	-	-	-	< 0.04	-
Haloxifop-methyl	mg/kg dry wt	-	-	-	< 0.07	-
Hexaconazole	mg/kg dry wt	-	-	-	< 0.07	-
Hexazinone	mg/kg dry wt	-	-	-	< 0.04	-
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	-	-	< 0.4	-
Kresoxim-methyl	mg/kg dry wt	-	-	-	< 0.04	-
Linuron	mg/kg dry wt	-	-	-	< 0.07	-
Malathion	mg/kg dry wt	-	-	-	< 0.07	-
Metalaxyl	mg/kg dry wt	-	-	-	< 0.07	-
Methamidophos	mg/kg dry wt	-	-	-	< 0.4	-
Metolachlor	mg/kg dry wt	-	-	-	< 0.05	-
Metribuzin	mg/kg dry wt	-	-	-	< 0.07	-
Molinate	mg/kg dry wt	-	-	-	< 0.13	-
Myclobutanil	mg/kg dry wt	-	-	-	< 0.07	-
Naled	mg/kg dry wt	-	-	-	< 0.4	-
Norflurazon	mg/kg dry wt	-	-	-	< 0.13	-
Oxadiazon	mg/kg dry wt	-	-	-	< 0.07	-
Oxyfluorfen	mg/kg dry wt	-	-	-	< 0.04	-
Paclobutrazol	mg/kg dry wt	-	-	-	< 0.07	-
Parathion-ethyl	mg/kg dry wt	-	-	-	< 0.07	-
Parathion-methyl	mg/kg dry wt	-	-	-	< 0.07	-
Pendimethalin	mg/kg dry wt	-	-	-	< 0.07	-
Permethrin	mg/kg dry wt	-	-	-	< 0.03	-
Pirimicarb	mg/kg dry wt	-	-	-	< 0.07	-
Pirimiphos-methyl	mg/kg dry wt	-	-	-	< 0.07	-
Prochloraz	mg/kg dry wt	-	-	-	< 0.4	-
Procymidone	mg/kg dry wt	-	-	-	< 0.07	-
Prometryn	mg/kg dry wt	-	-	-	< 0.04	-

Sample Type: Soil						
Sample Name:	TP90_0.3	TP90_0.5	TP90_1.5	TP90_2.0	TP89_0.3	
Lab Number:	3964338.22	3964338.23	3964338.25	3964338.26	3964338.27	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS						
Propachlor	mg/kg dry wt	-	-	-	< 0.07	-
Propanil	mg/kg dry wt	-	-	-	< 0.2	-
Propazine	mg/kg dry wt	-	-	-	< 0.04	-
Propiconazole	mg/kg dry wt	-	-	-	< 0.05	-
Pyriproxyfen	mg/kg dry wt	-	-	-	< 0.07	-
Quizalofop-ethyl	mg/kg dry wt	-	-	-	< 0.07	-
Simazine	mg/kg dry wt	-	-	-	< 0.07	-
Simetryn	mg/kg dry wt	-	-	-	< 0.07	-
Sulfentrazone	mg/kg dry wt	-	-	-	< 0.4	-
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	mg/kg dry wt	-	-	-	< 0.13	-
Tebuconazole	mg/kg dry wt	-	-	-	< 0.07	-
Terbacil	mg/kg dry wt	-	-	-	< 0.07	-
Terbumeton	mg/kg dry wt	-	-	-	< 0.07	-
Terbutylazine	mg/kg dry wt	-	-	-	< 0.04	-
Terbutylazine-desethyl	mg/kg dry wt	-	-	-	< 0.07	-
Terbutryn	mg/kg dry wt	-	-	-	< 0.07	-
Thiabendazole	mg/kg dry wt	-	-	-	< 0.4	-
Thiobencarb	mg/kg dry wt	-	-	-	< 0.07	-
Tolylfluanid	mg/kg dry wt	-	-	-	< 0.04	-
Triazophos	mg/kg dry wt	-	-	-	< 0.07	-
Trifluralin	mg/kg dry wt	-	-	-	< 0.07	-
Vinclozolin	mg/kg dry wt	-	-	-	< 0.07	-
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.4	-	< 0.3	-	< 0.3
1-Methylnaphthalene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
2-Methylnaphthalene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Acenaphthylene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Acenaphthene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Anthracene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Benzo[a]anthracene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.017	-	< 0.011	-	< 0.012
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.034	-	< 0.027	-	< 0.028
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.033	-	< 0.027	-	< 0.028
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	0.026	-	< 0.011	-	< 0.012
Benzo[e]pyrene	mg/kg dry wt	0.018	-	< 0.011	-	< 0.012
Benzo[g,h,i]perylene	mg/kg dry wt	0.020	-	< 0.011	-	< 0.012
Benzo[k]fluoranthene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Chrysene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Fluoranthene	mg/kg dry wt	0.021	-	< 0.011	-	< 0.012
Fluorene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	0.019	-	< 0.011	-	< 0.012
Naphthalene	mg/kg dry wt	< 0.07	-	< 0.06	-	< 0.06
Perylene	mg/kg dry wt	< 0.014	-	< 0.011	-	< 0.012
Phenanthrene	mg/kg dry wt	0.017	-	< 0.011	-	< 0.012
Pyrene	mg/kg dry wt	0.024	-	< 0.011	-	< 0.012
Sample Name:	TP89_0.5	TP89_1.5	TP89_2.4	TP89_3.6		
Lab Number:	3964338.28	3964338.30	3964338.31	3964338.33		
Individual Tests						
Dry Matter	g/100g as rcvd	-	86	-	86	

Sample Type: Soil					
Sample Name:		TP89_0.5	TP89_1.5	TP89_2.4	TP89_3.6
Lab Number:		3964338.28	3964338.30	3964338.31	3964338.33
Heavy Metals, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	5	3	4	8
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	0.14	< 0.10
Total Recoverable Chromium	mg/kg dry wt	12	15	20	15
Total Recoverable Copper	mg/kg dry wt	8	8	36	11
Total Recoverable Lead	mg/kg dry wt	16.4	11.3	49	31
Total Recoverable Nickel	mg/kg dry wt	8	13	13	12
Total Recoverable Zinc	mg/kg dry wt	42	49	116	70
Organochlorine Pesticides Screening in Soil					
Aldrin	mg/kg dry wt	-	< 0.012	-	< 0.012
alpha-BHC	mg/kg dry wt	-	< 0.012	-	< 0.012
beta-BHC	mg/kg dry wt	-	< 0.012	-	< 0.012
delta-BHC	mg/kg dry wt	-	< 0.012	-	< 0.012
gamma-BHC (Lindane)	mg/kg dry wt	-	< 0.012	-	< 0.012
cis-Chlordane	mg/kg dry wt	-	< 0.012	-	< 0.012
trans-Chlordane	mg/kg dry wt	-	< 0.012	-	< 0.012
2,4'-DDD	mg/kg dry wt	-	< 0.012	-	< 0.012
4,4'-DDD	mg/kg dry wt	-	< 0.012	-	< 0.012
2,4'-DDE	mg/kg dry wt	-	< 0.012	-	< 0.012
4,4'-DDE	mg/kg dry wt	-	< 0.012	-	< 0.012
2,4'-DDT	mg/kg dry wt	-	< 0.012	-	< 0.012
4,4'-DDT	mg/kg dry wt	-	< 0.012	-	< 0.012
Total DDT Isomers	mg/kg dry wt	-	< 0.07	-	< 0.07
Dieldrin	mg/kg dry wt	-	< 0.012	-	< 0.012
Endosulfan I	mg/kg dry wt	-	< 0.012	-	< 0.012
Endosulfan II	mg/kg dry wt	-	< 0.012	-	< 0.012
Endosulfan sulphate	mg/kg dry wt	-	< 0.012	-	< 0.012
Endrin	mg/kg dry wt	-	< 0.012	-	< 0.012
Endrin aldehyde	mg/kg dry wt	-	< 0.012	-	< 0.012
Endrin ketone	mg/kg dry wt	-	< 0.012	-	< 0.012
Heptachlor	mg/kg dry wt	-	< 0.012	-	< 0.012
Heptachlor epoxide	mg/kg dry wt	-	< 0.012	-	< 0.012
Hexachlorobenzene	mg/kg dry wt	-	< 0.012	-	< 0.012
Methoxychlor	mg/kg dry wt	-	< 0.012	-	< 0.012
Organonitro&phosphorus Pesticides Screen in Soil by GCMS					
Acetochlor	mg/kg dry wt	-	< 0.07	-	< 0.07
Alachlor	mg/kg dry wt	-	< 0.05	-	< 0.05
Atrazine	mg/kg dry wt	-	< 0.07	-	< 0.07
Atrazine-desethyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Atrazine-desisopropyl	mg/kg dry wt	-	< 0.13	-	< 0.13
Azaconazole	mg/kg dry wt	-	< 0.04	-	< 0.04
Azinphos-methyl	mg/kg dry wt	-	< 0.13	-	< 0.13
Benalaxyl	mg/kg dry wt	-	< 0.04	-	< 0.04
Bitertanol	mg/kg dry wt	-	< 0.13	-	< 0.13
Bromacil	mg/kg dry wt	-	< 0.07	-	< 0.07
Bromopropylate	mg/kg dry wt	-	< 0.07	-	< 0.07
Butachlor	mg/kg dry wt	-	< 0.07	-	< 0.07
Captan	mg/kg dry wt	-	< 0.13	-	< 0.13
Carbaryl	mg/kg dry wt	-	< 0.07	-	< 0.07
Carbofuran	mg/kg dry wt	-	< 0.07	-	< 0.07
Chlorfluazuron	mg/kg dry wt	-	< 0.07	-	< 0.07
Chlorothalonil	mg/kg dry wt	-	< 0.07	-	< 0.07
Chlorpyrifos	mg/kg dry wt	-	< 0.07	-	< 0.07
Chlorpyrifos-methyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Chlortoluron	mg/kg dry wt	-	< 0.13	-	< 0.13
Cyanazine	mg/kg dry wt	-	< 0.07	-	< 0.07

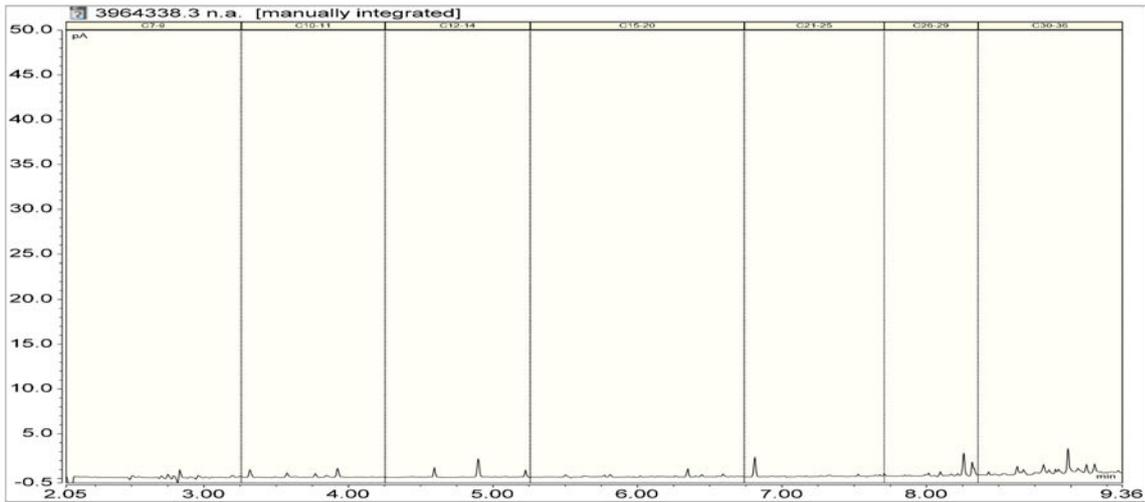
Sample Type: Soil					
Sample Name:		TP89_0.5	TP89_1.5	TP89_2.4	TP89_3.6
Lab Number:		3964338.28	3964338.30	3964338.31	3964338.33
Organonitro&phosphorus Pesticides Screen in Soil by GCMS					
Cyfluthrin	mg/kg dry wt	-	< 0.08	-	< 0.08
Cyhalothrin	mg/kg dry wt	-	< 0.07	-	< 0.07
Cypermethrin	mg/kg dry wt	-	< 0.16	-	< 0.16
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	< 0.07	-	< 0.07
Diazinon	mg/kg dry wt	-	< 0.04	-	< 0.04
Dichlofluanid	mg/kg dry wt	-	< 0.07	-	< 0.07
Dichloran	mg/kg dry wt	-	< 0.2	-	< 0.2
Dichlorvos	mg/kg dry wt	-	< 0.09	-	< 0.09
Difenoconazole	mg/kg dry wt	-	< 0.09	-	< 0.09
Dimethoate	mg/kg dry wt	-	< 0.13	-	< 0.13
Diphenylamine	mg/kg dry wt	-	< 0.13	-	< 0.13
Diuron	mg/kg dry wt	-	< 0.07	-	< 0.07
Fenpropimorph	mg/kg dry wt	-	< 0.07	-	< 0.07
Fluazifop-butyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Fluometuron	mg/kg dry wt	-	< 0.07	-	< 0.07
Flusilazole	mg/kg dry wt	-	< 0.07	-	< 0.07
Fluvalinate	mg/kg dry wt	-	< 0.05	-	< 0.05
Furalaxyl	mg/kg dry wt	-	< 0.04	-	< 0.04
Haloxyfop-methyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Hexaconazole	mg/kg dry wt	-	< 0.07	-	< 0.07
Hexazinone	mg/kg dry wt	-	< 0.04	-	< 0.04
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	< 0.4	-	< 0.4
Kresoxim-methyl	mg/kg dry wt	-	< 0.04	-	< 0.04
Linuron	mg/kg dry wt	-	< 0.07	-	< 0.07
Malathion	mg/kg dry wt	-	< 0.07	-	< 0.07
Metalaxyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Methamidophos	mg/kg dry wt	-	< 0.4	-	< 0.4
Metolachlor	mg/kg dry wt	-	< 0.05	-	< 0.05
Metribuzin	mg/kg dry wt	-	< 0.07	-	< 0.07
Molinate	mg/kg dry wt	-	< 0.13	-	< 0.13
Myclobutanil	mg/kg dry wt	-	< 0.07	-	< 0.07
Naled	mg/kg dry wt	-	< 0.4	-	< 0.4
Norflurazon	mg/kg dry wt	-	< 0.13	-	< 0.13
Oxadiazon	mg/kg dry wt	-	< 0.07	-	< 0.07
Oxyfluorfen	mg/kg dry wt	-	< 0.04	-	< 0.04
Paclobutrazol	mg/kg dry wt	-	< 0.07	-	< 0.07
Parathion-ethyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Parathion-methyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Pendimethalin	mg/kg dry wt	-	< 0.07	-	< 0.07
Permethrin	mg/kg dry wt	-	< 0.03	-	< 0.03
Pirimicarb	mg/kg dry wt	-	< 0.07	-	< 0.07
Pirimiphos-methyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Prochloraz	mg/kg dry wt	-	< 0.4	-	< 0.4
Procymidone	mg/kg dry wt	-	< 0.07	-	< 0.07
Prometryn	mg/kg dry wt	-	< 0.04	-	< 0.04
Propachlor	mg/kg dry wt	-	< 0.07	-	< 0.07
Propanil	mg/kg dry wt	-	< 0.2	-	< 0.2
Propazine	mg/kg dry wt	-	< 0.04	-	< 0.04
Propiconazole	mg/kg dry wt	-	< 0.05	-	< 0.05
Pyriproxyfen	mg/kg dry wt	-	< 0.07	-	< 0.07
Quizalofop-ethyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Simazine	mg/kg dry wt	-	< 0.07	-	< 0.07
Simetryn	mg/kg dry wt	-	< 0.07	-	< 0.07
Sulfentrazone	mg/kg dry wt	-	< 0.4	-	< 0.4

Sample Type: Soil					
Sample Name:	TP89_0.5	TP89_1.5	TP89_2.4	TP89_3.6	
Lab Number:	3964338.28	3964338.30	3964338.31	3964338.33	
Organonitro&phosphorus Pesticides Screen in Soil by GCMS					
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	< 0.13	-	< 0.13
Tebuconazole	mg/kg dry wt	-	< 0.07	-	< 0.07
Terbacil	mg/kg dry wt	-	< 0.07	-	< 0.07
Terbumeton	mg/kg dry wt	-	< 0.07	-	< 0.07
Terbutylazine	mg/kg dry wt	-	< 0.04	-	< 0.04
Terbutylazine-desethyl	mg/kg dry wt	-	< 0.07	-	< 0.07
Terbutryn	mg/kg dry wt	-	< 0.07	-	< 0.07
Thiabendazole	mg/kg dry wt	-	< 0.4	-	< 0.4
Thiobencarb	mg/kg dry wt	-	< 0.07	-	< 0.07
Tolyfluanid	mg/kg dry wt	-	< 0.04	-	< 0.04
Triazophos	mg/kg dry wt	-	< 0.07	-	< 0.07
Trifluralin	mg/kg dry wt	-	< 0.07	-	< 0.07
Vinclozolin	mg/kg dry wt	-	< 0.07	-	< 0.07
Polycyclic Aromatic Hydrocarbons Screening in Soil*					
Total of Reported PAHs in Soil	mg/kg dry wt	-	-	-	< 0.3
1-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.012
2-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.012
Acenaphthylene	mg/kg dry wt	-	-	-	< 0.012
Acenaphthene	mg/kg dry wt	-	-	-	< 0.012
Anthracene	mg/kg dry wt	-	-	-	< 0.012
Benzo[a]anthracene	mg/kg dry wt	-	-	-	< 0.012
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	-	< 0.012
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	-	< 0.028
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	-	< 0.028
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	-	-	-	< 0.012
Benzo[e]pyrene	mg/kg dry wt	-	-	-	< 0.012
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	-	< 0.012
Benzo[k]fluoranthene	mg/kg dry wt	-	-	-	< 0.012
Chrysene	mg/kg dry wt	-	-	-	< 0.012
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	-	< 0.012
Fluoranthene	mg/kg dry wt	-	-	-	< 0.012
Fluorene	mg/kg dry wt	-	-	-	< 0.012
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	-	< 0.012
Naphthalene	mg/kg dry wt	-	-	-	< 0.06
Perylene	mg/kg dry wt	-	-	-	< 0.012
Phenanthrene	mg/kg dry wt	-	-	-	< 0.012
Pyrene	mg/kg dry wt	-	-	-	< 0.012
Total Petroleum Hydrocarbons in Soil					
C7 - C9	mg/kg dry wt	-	< 20	-	-
C10 - C14	mg/kg dry wt	-	< 20	-	-
C15 - C36	mg/kg dry wt	-	< 40	-	-
Total hydrocarbons (C7 - C36)	mg/kg dry wt	-	< 80	-	-

3964338.3

TR3_1.2-2.2 19-Aug-2025

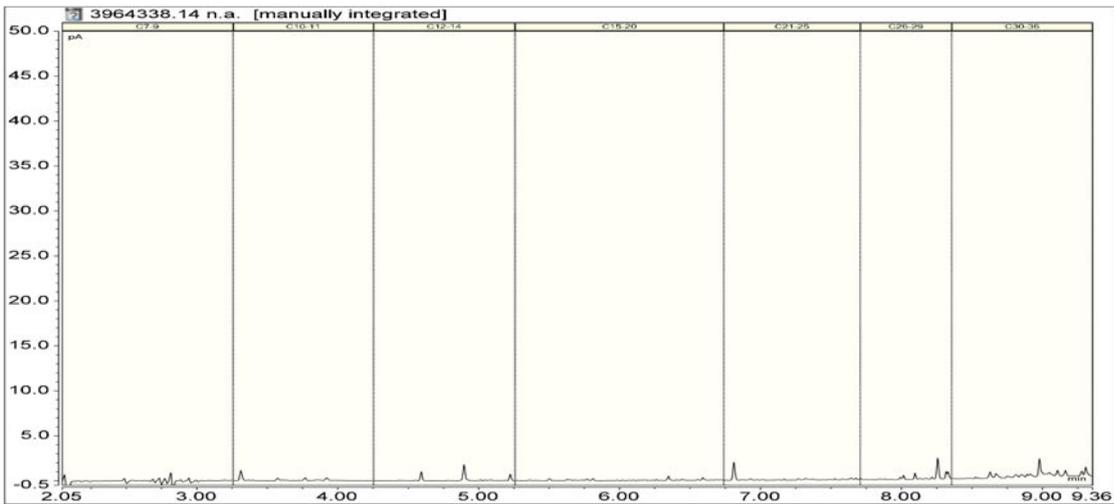
Client Chromatogram for TPH by FID



3964338.14

TR01_0.3

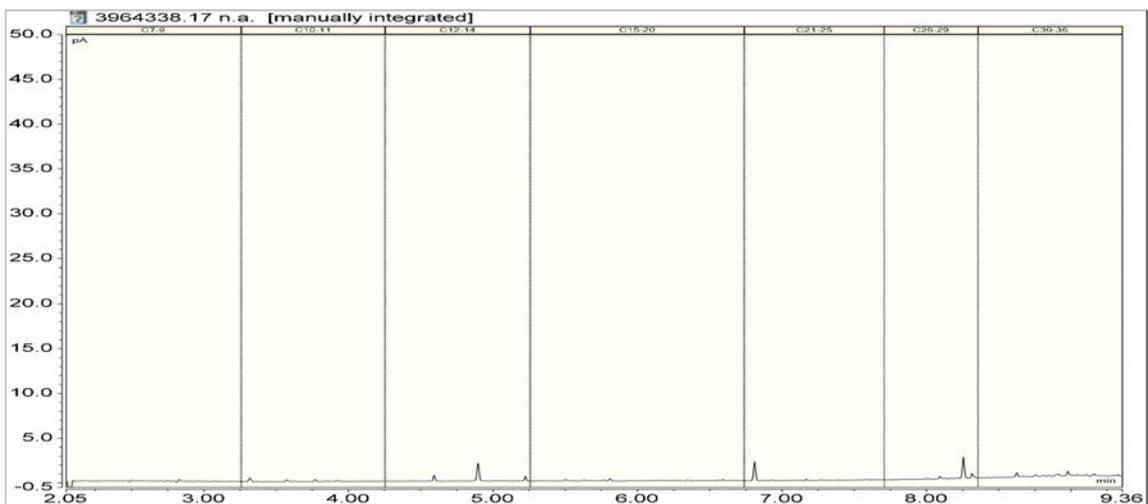
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3964338.17

TP88_0.35

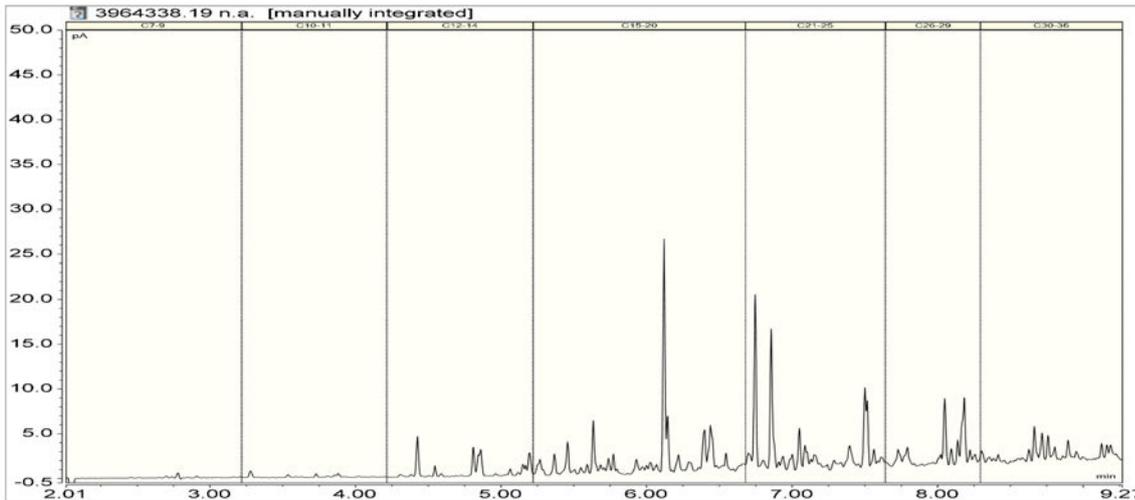
Client Chromatogram for TPH by FID



3964338.19

TP88_3.2

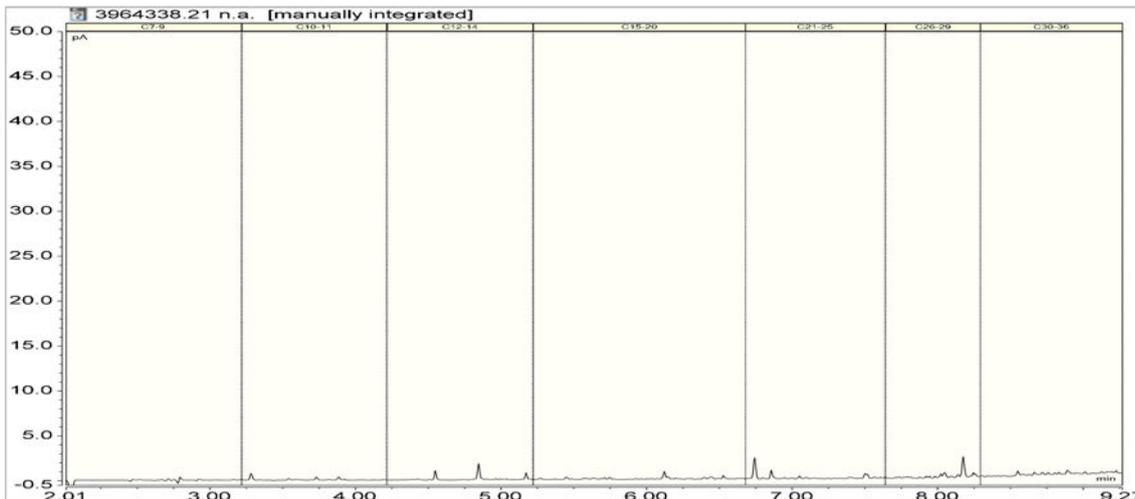
Client Chromatogram for TPH by FID



3964338.21

TP88_4.2

Client Chromatogram for TPH by FID



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
Individual Tests			
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, 3, 5, 7, 10-12, 14-15, 17-19, 21, 23, 25, 28, 30-31, 33
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	5, 10, 16-17, 21-22, 25, 27, 33
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1, 3-5, 7, 10-12, 14-19, 21-22, 25-27, 30, 33

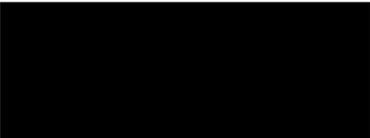
Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	5, 10, 16-17, 21-22, 25, 27, 33
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	5, 10, 16-17, 21-22, 25, 27, 33
TPH Oil Industry Profile + PAHscreen	Sonication extraction, GC-FID and GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8015 and US EPA 8270.	0.010 - 70 mg/kg dry wt	17, 21
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1, 3, 5, 7, 10-12, 14-15, 17-19, 21, 23, 25, 28, 30-31, 33
Organochlorine/nitro&phosphorus Pests Screen in Soils, GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.010 - 0.2 mg/kg dry wt	3-4, 7, 10, 12, 15, 18, 21, 26, 30, 33
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	5, 10, 16, 22, 25, 27, 33
Total Petroleum Hydrocarbons in Soil			
Client Chromatogram for TPH by FID	Small peaks associated with QC compounds may be visible in chromatograms with low TPH concentrations. QC peaks are as follows: one peak in the C12 - 14 band, the C21 - 25 band and the C30 - 36 band. All QC peaks are corrected for in the reported TPH concentrations.	-	3, 14, 17, 19, 21
C7 - C9	Solvent extraction, GC-FID analysis. Tested on as received sample. In-house based on US EPA 8015.	20 mg/kg dry wt	1, 3, 11-12, 14-15, 17, 19, 21, 30
C10 - C14	Solvent extraction, GC-FID analysis. Tested on as received sample. In-house based on US EPA 8015.	20 mg/kg dry wt	1, 3, 11-12, 14-15, 17, 19, 21, 30
C15 - C36	Solvent extraction, GC-FID analysis. Tested on as received sample. In-house based on US EPA 8015.	40 mg/kg dry wt	1, 3, 11-12, 14-15, 17, 19, 21, 30
Total hydrocarbons (C7 - C36)	Calculation: Sum of carbon bands from C7 to C36. In-house based on US EPA 8015.	70 mg/kg dry wt	1, 3, 11-12, 14-15, 17, 19, 21, 30

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

Testing was completed between 21-Aug-2025 and 26-Aug-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.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 4

Client: Tonkin & Taylor	Lab No: 3964339	A2Pv1
Contact: Genevieve Palmer	Date Received: 19-Aug-2025	
C/- Tonkin & Taylor	Date Reported: 26-Aug-2025	
PO Box 9544	Quote No: 80842	
Hamilton 3240	Order No: 1095459.0000-0012-060	
	Client Reference: 1095459.0000-0012-060	
	Submitted By: Alan Spooner	

Sample Type: Soil

Sample Name:	TR3_0.1-1.0 19-Aug-2025	TR3_1.2-2.2 19-Aug-2025	TP91_0.1-1.0 19-Aug-2025	TP91_1.7 19-Aug-2025	TP91_3.5 19-Aug-2025
Lab Number:	3964339.1	3964339.2	3964339.3	3964339.4	3964339.5
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	-	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
As Received Weight	g 734.5	g 689.9	g 624.3	g 744.4	g 850.7
Dry Weight	g 644.3	g 598.0	g 446.0	g 622.0	g 764.1
Moisture*	% 12	% 13	% 29	% 16	% 10
Sample Fraction >10mm	g dry wt 73.6	g dry wt 27.0	g dry wt 40.7	g dry wt 106.3	g dry wt 156.8
Sample Fraction <10mm to >2mm	g dry wt 195.2	g dry wt 172.2	g dry wt 178.2	g dry wt 148.4	g dry wt 335.1
Sample Fraction <2mm	g dry wt 373.7	g dry wt 396.1	g dry wt 225.9	g dry wt 366.2	g dry wt 270.6
<2mm Subsample Weight	g dry wt 52.7	g dry wt 58.5	g dry wt 53.6	g dry wt 59.2	g dry wt 55.4
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001

Sample Name:	TR02_0.1-1.0	TR01_0.3	TP88_0.5	TP88_2.0	TP90_0.5
Lab Number:	3964339.6	3964339.7	3964339.8	3964339.9	3964339.11
Asbestos Presence / Absence	Asbestos NOT detected.				
Description of Asbestos Form	-	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001				
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001				
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001				
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001				
As Received Weight	g 792.0	g 762.1	g 712.8	g 657.6	g 719.3
Dry Weight	g 721.3	g 643.4	g 580.6	g 482.8	g 610.0
Moisture*	% 9	% 16	% 19	% 27	% 15



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil						
Sample Name:	TR02_0.1-1.0	TR01_0.3	TP88_0.5	TP88_2.0	TP90_0.5	
Lab Number:	3964339.6	3964339.7	3964339.8	3964339.9	3964339.11	
Sample Fraction >10mm	g dry wt	36.8	72.0	47.2	73.3	125.1
Sample Fraction <10mm to >2mm	g dry wt	118.5	201.5	255.2	137.2	136.4
Sample Fraction <2mm	g dry wt	564.7	368.5	276.0	271.2	344.0
<2mm Subsample Weight	g dry wt	53.8	53.5	54.2	56.6	58.8
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:	TP89_0.5 (B - sandier sample)	TP89_1.5	TP89_2.4	TP89_3.0	TP89_3.6	
Lab Number:	3964339.15	3964339.17	3964339.18	3964339.19	3964339.20	
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	
Description of Asbestos Form	-	-	-	Loose fibres	-	
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	835.7	831.9	858.2	823.4	744.0
Dry Weight	g	699.0	718.5	772.9	715.5	649.2
Moisture*	%	16	14	10	13	13
Sample Fraction >10mm	g dry wt	44.4	43.8	140.0	70.7	36.9
Sample Fraction <10mm to >2mm	g dry wt	169.3	93.6	151.6	187.6	100.2
Sample Fraction <2mm	g dry wt	483.5	578.9	479.7	454.7	511.1
<2mm Subsample Weight	g dry wt	53.6	54.6	59.7	56.1	56.8
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	0.00005	< 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
 - Trace - Trace levels of asbestos, as defined by AS4964-2004.
- For further details, please contact the Asbestos Team.

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.**
<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

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.

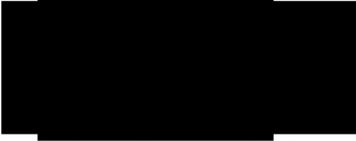
Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-9, 11, 15, 17-20
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-9, 11, 15, 17-20
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-9, 11, 15, 17-20
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-9, 11, 15, 17-20
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-9, 11, 15, 17-20
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-9, 11, 15, 17-20
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-9, 11, 15, 17-20
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-9, 11, 15, 17-20
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-9, 11, 15, 17-20
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-9, 11, 15, 17-20
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-9, 11, 15, 17-20
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-9, 11, 15, 17-20
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-9, 11, 15, 17-20
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-9, 11, 15, 17-20
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-9, 11, 15, 17-20

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

Testing was completed on 25-Aug-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.

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Dexter Paguirigan Dip Chem Engineering Tech
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 2

Client: Tonkin & Taylor	Lab No: 3964340 A2Pv1
Contact: Genevieve Palmer	Date Received: 19-Aug-2025
C/- Tonkin & Taylor	Date Reported: 22-Aug-2025
PO Box 9544	Quote No: 80842
Hamilton 3240	Order No: 1095459.0000-0012-060
	Client Reference: 1095459.0000-0012-060
	Submitted By: Alan Spooner

Sample Type: Building Material

Sample Name	Lab Number	Sample Category	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
TR02_ACM	3964340.1	Debris	12.79	Asbestos NOT detected. Organic fibres detected.	N/A
TP89_3.0_ACM	3964340.2	Fibre Cement	271.18	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected. Organic fibres detected.	N/A

Glossary of Terms

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- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

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: Building Material

Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1-2
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.01 g	1-2
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-2
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1-2



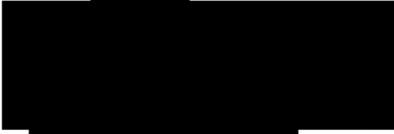
This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

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

Testing was completed between 21-Aug-2025 and 22-Aug-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.

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Dexter Paguirigan Dip Chem Engineering Tech
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 3

Client: Tonkin & Taylor	Lab No: 3969193	SPV1
Contact: Genevieve Palmer	Date Received: 25-Aug-2025	
C/- Tonkin & Taylor	Date Reported: 29-Aug-2025	
PO Box 9544	Quote No: 80842	
Hamilton 3240	Order No: 1095459.0000	
	Client Reference: 1095459.0000	
	Submitted By: Jeremy Brokenshire	

Sample Type: Soil						
Sample Name:	BH_41_5.2-5.4	BH_41_8.15-8.4	BH_39_2.2-2.4	BH_38_4.95-5.2	BH_38_5.4-5.7	
	21-Aug-2025 12:00 pm	21-Aug-2025 12:00 pm	22-Aug-2025 10:00 am	22-Aug-2025 5:00 pm	22-Aug-2025 5:00 pm	
Lab Number:	3969193.4	3969193.5	3969193.6	3969193.8	3969193.9	
Individual Tests						
Dry Matter	g/100g as rcvd	85	-	-	-	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	4	< 2	6	< 2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	1.89	0.17
Total Recoverable Chromium	mg/kg dry wt	15	21	14	15	15
Total Recoverable Copper	mg/kg dry wt	13	10	7	19	6
Total Recoverable Lead	mg/kg dry wt	41	20	8.6	90	13.9
Total Recoverable Nickel	mg/kg dry wt	13	14	11	16	13
Total Recoverable Zinc	mg/kg dry wt	65	72	35	1,590	230
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.3	-	-	-	-
1-Methylnaphthalene	mg/kg dry wt	< 0.012	-	-	-	-
2-Methylnaphthalene	mg/kg dry wt	< 0.012	-	-	-	-
Acenaphthylene	mg/kg dry wt	< 0.012	-	-	-	-
Acenaphthene	mg/kg dry wt	< 0.012	-	-	-	-
Anthracene	mg/kg dry wt	< 0.012	-	-	-	-
Benzo[a]anthracene	mg/kg dry wt	< 0.012	-	-	-	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.012	-	-	-	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.028	-	-	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.028	-	-	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.012	-	-	-	-
Benzo[e]pyrene	mg/kg dry wt	< 0.012	-	-	-	-
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.012	-	-	-	-
Benzo[k]fluoranthene	mg/kg dry wt	< 0.012	-	-	-	-
Chrysene	mg/kg dry wt	< 0.012	-	-	-	-
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.012	-	-	-	-
Fluoranthene	mg/kg dry wt	< 0.012	-	-	-	-
Fluorene	mg/kg dry wt	< 0.012	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.012	-	-	-	-
Naphthalene	mg/kg dry wt	< 0.06	-	-	-	-
Perylene	mg/kg dry wt	< 0.012	-	-	-	-
Phenanthrene	mg/kg dry wt	< 0.012	-	-	-	-
Pyrene	mg/kg dry wt	< 0.012	-	-	-	-

Sample Type: Soil					
Sample Name:	BH_40_5.8-6.2 25-Aug-2025 11:30 am	BH_40_8.4-8.7 25-Aug-2025 12:00 pm	Stockpile01_Surface 21-Aug-2025 10:45 am	Stockpile04_Surface 21-Aug-2025 9:20 am	
Lab Number:	3969193.12	3969193.13	3969193.14	3969193.17	
Individual Tests					
Dry Matter	g/100g as rcvd	91	79	75	74
Heavy Metals, Screen Level					
Total Recoverable Arsenic	mg/kg dry wt	2	< 2	65	4
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	0.22	0.11
Total Recoverable Chromium	mg/kg dry wt	13	9	43	16
Total Recoverable Copper	mg/kg dry wt	7	3	62	14
Total Recoverable Lead	mg/kg dry wt	10.1	5.9	88	15.2
Total Recoverable Nickel	mg/kg dry wt	11	7	13	10
Total Recoverable Zinc	mg/kg dry wt	40	26	240	210
Polycyclic Aromatic Hydrocarbons Screening in Soil*					
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.4
1-Methylnaphthalene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
2-Methylnaphthalene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Acenaphthylene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Acenaphthene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Anthracene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Benzo[a]anthracene	mg/kg dry wt	0.013	< 0.013	< 0.013	< 0.014
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.015	< 0.013	< 0.013	0.017
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.026	< 0.031	< 0.032	< 0.033
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.026	< 0.031	< 0.031	< 0.032
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	0.015	< 0.013	< 0.013	0.025
Benzo[e]pyrene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	0.018
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	0.025
Benzo[k]fluoranthene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Chrysene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Fluoranthene	mg/kg dry wt	0.027	< 0.013	< 0.013	0.027
Fluorene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	< 0.014
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.011	< 0.013	< 0.013	0.016
Naphthalene	mg/kg dry wt	< 0.06	< 0.07	< 0.07	< 0.07
Perylene	mg/kg dry wt	< 0.011	0.020	< 0.013	< 0.014
Phenanthrene	mg/kg dry wt	0.030	< 0.013	< 0.013	0.016
Pyrene	mg/kg dry wt	0.025	< 0.013	< 0.013	0.032

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).	-	4-6, 8-9, 12-14, 17
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	4, 12-14, 17
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	4-6, 8-9, 12-14, 17
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	4, 12-14, 17

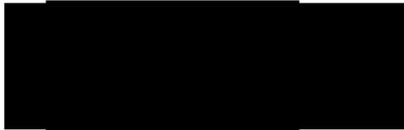
Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	4, 12-14, 17
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	4, 12-14, 17
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	4, 12-14, 17

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

Testing was completed between 27-Aug-2025 and 29-Aug-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.

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Ara Heron BSc (Tech)
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 3

Client: Tonkin & Taylor	Lab No: 3969194	A2Pv1
Contact: Genevieve Palmer	Date Received: 25-Aug-2025	
C/- Tonkin & Taylor	Date Reported: 29-Aug-2025	
PO Box 9544	Quote No: 80842	
Hamilton 3240	Order No: 1095459.0000	
	Client Reference: 1095459.0000	
	Submitted By: Genevieve Palmer	

Sample Type: Soil						
Sample Name:	BH_41_4.3-4.5m	BH_41_5.2-5.4m	BH_38_3.9-4.1m	BH_38_4.95-5.2m	BH_40_4.0-4.2m	
	21-Aug-2025 12:00 pm					
Lab Number:	3969194.2	3969194.4	3969194.6	3969194.7	3969194.11	
Asbestos Presence / Absence	Asbestos NOT detected.					
Description of Asbestos Form	-	-	-	-	-	
Asbestos in ACM as % of Total Sample*	% w/w < 0.001					
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001					
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001					
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001					
As Received Weight	g 681.4	g 822.3	g 796.7	g 1,008.6	g 850.5	
Dry Weight	g 528.0	g 733.2	g 694.5	g 819.7	g 787.8	
Moisture*	% 23	% 11	% 13	% 19	% 7	
Sample Fraction >10mm	g dry wt 38.6	g dry wt 364.1	g dry wt 11.9	g dry wt 232.0	g dry wt 322.3	
Sample Fraction <10mm to >2mm	g dry wt 174.3	g dry wt 216.7	g dry wt 62.7	g dry wt 196.2	g dry wt 244.4	
Sample Fraction <2mm	g dry wt 313.0	g dry wt 149.4	g dry wt 619.4	g dry wt 388.9	g dry wt 220.1	
<2mm Subsample Weight	g dry wt 55.2	g dry wt 53.6	g dry wt 56.0	g dry wt 52.4	g dry wt 59.7	
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001					
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001					
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt < 0.00001					

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.**

<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

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
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	2, 4, 6-7, 11
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	2, 4, 6-7, 11
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	2, 4, 6-7, 11
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	2, 4, 6-7, 11
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	2, 4, 6-7, 11
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	2, 4, 6-7, 11
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	2, 4, 6-7, 11
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	2, 4, 6-7, 11
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	2, 4, 6-7, 11
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	2, 4, 6-7, 11
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	2, 4, 6-7, 11
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	2, 4, 6-7, 11
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	2, 4, 6-7, 11

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	2, 4, 6-7, 11
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	2, 4, 6-7, 11

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

Testing was completed on 29-Aug-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.

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John Keneth Paglingayen BAPSc
Laboratory Technician - Asbestos

**Appendix H Provisional sampling and analysis
plans (for areas to be investigated)**

Introduction

These areas, activities will be investigated when they are accessible to the Project:

- Moto-cross track, 167 Gladstone Road, Woodend - fill materials of unknown origin.
- 788 Main North Road buildings.
- 1 Fuller Road dwellings and associated buildings.
- 130b Main north Road – historic homestead.
- 138 Main North Road dwellings, associated buildings and miscellaneous disposal.
- Diesel AST, 160 Gladstone Road, Woodend – storage, use of fuel, associated buildings.
- Woodlands stockpiles, c/o 70 Parsonage Road, Woodend - potential waste disposal to land.

H1 Sampling and analysis plan

A sampling and analysis plan for each area is tabulated below/overleaf.

167 Gladstone Road, moto-cross track



Figure B2.1: Moto-cross track (only showing designation) (not to scale).

- Activity – potential use of fill (to make positive relief features for corners, jumps) of unknown origin.
- Area – approximately 6,500 m² (noting the features only small portion of this).

- Rationale – general coverage across area.
- Methodology – up to 15 No. test pits (hand dug) into the features.
- CoCs (per Section 5.3) – (soil) heavy metals, asbestos in soil. TPH and BTEX, PAHs, pesticide screen (fewer, or other parameters may be needed based on site observations during sampling).

788 Main North Road - buildings



Figure B2.3: 788 Main North Road Building (only showing designation) (not to scale).

- Activity – buildings in dilapidated condition.
- Area – approximately 400 m².
- Rationale – targeted sampling of near surface soils in building footprint and curtilage.
- Sampling using hand tools from surface and shallow subsurface soils in approximately 10-15 locations.
- CoCs heavy metals, asbestos in soil.

160 Gladstone Road - Diesel AST and buildings



Figure B2.4: Diesel AST and buildings (only showing designation) (not to scale).

- Activity – storage and use of fuel, existing buildings.
- Area – approx. 800 m².
- Rationale – targeted to tank's footprint and to footprint/curtilage of buildings.
- Methodology – 2 No. hand dug test pits near AST location to sample surficial and subsurface soils (nominal 0.3 mbgl). Analysis of subsurface materials only if CoCs recorded above background levels in surface sample. Additional shallow sampling from ~15 locations in building footprints.
- CoCs– Metals, TPH, BTEX, PAH.

Woodlands stockpiles

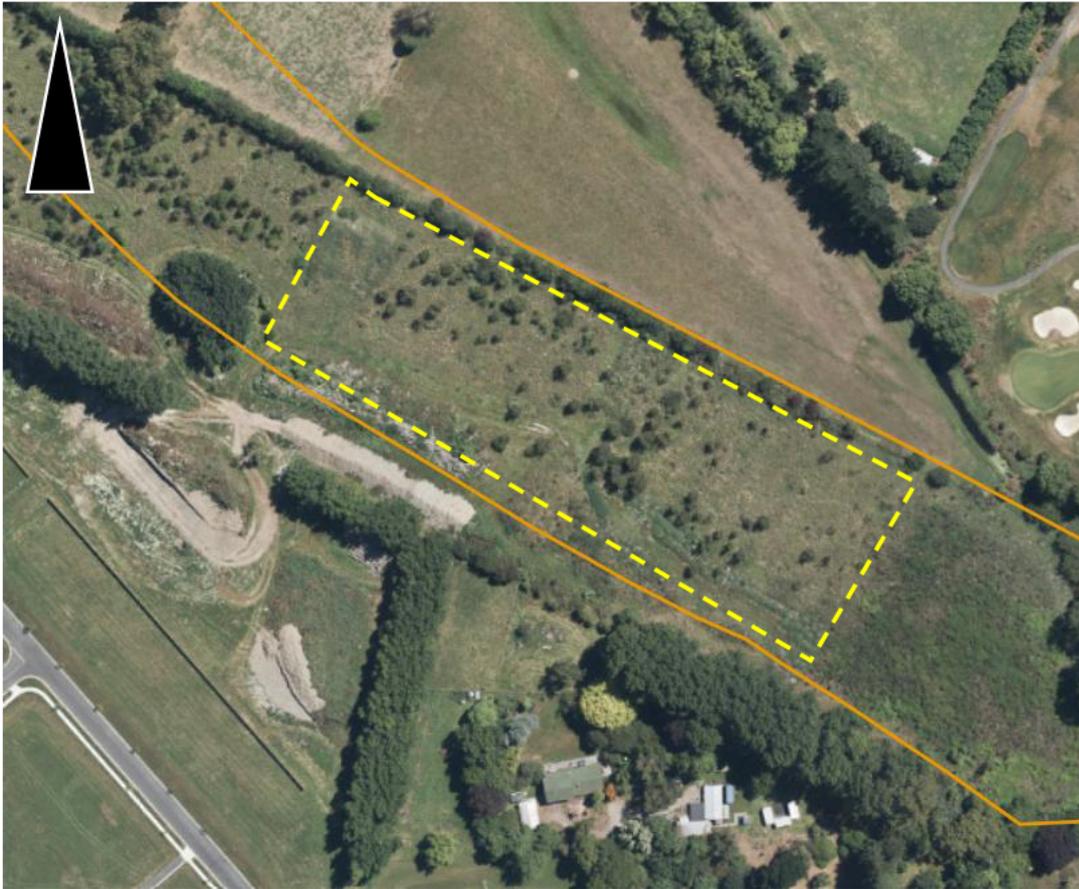


Figure B2.5: Woodlands stockpiles (only showing designation) (not to scale).

- Activity – potential waste disposal to land.
- Area – approximately 20,000 m² (2 Ha).
- Previous investigation – stockpiled material sourced from the Woodlands Subdivision where previous land uses include horticultural activities and burning of a dwelling.
- Rationale – general coverage.
- Methodology – up to 20 No. mechanically excavated test pits into stockpiles.
- CoCs (per Section 5.3) – heavy metals, OCPs and PAH (other parameters may be needed based on site observations during sampling).

1 Fuller Road dwellings and associated buildings



Figure B2.6: 1 Fullers Road buildings (only showing designation) (not to scale).

- Activity – buildings in dilapidated condition.
- Area – approximately 1200 m².
- Rationale – targeted sampling of near surface soils in building footprint and curtilage.
- Sampling using hand tools from surface and shallow subsurface soils in approximately 10-20 locations.
- CoCs heavy metals, asbestos in soil.

130b Main North Road – historic homestead



Figure B2.7: 130b Main North Road historic homestead (only showing designation) (not to scale).

- Activity – buildings in dilapidated condition.
- Area – approximately 150 m².
- Rationale – targeted sampling of near surface soils in building footprint and curtilage.
- Sampling using hand tools from surface and shallow subsurface soils in approximately 5-10 locations.
- CoCs heavy metals, asbestos in soil.

138 Main North Road – building and miscellaneous disposal

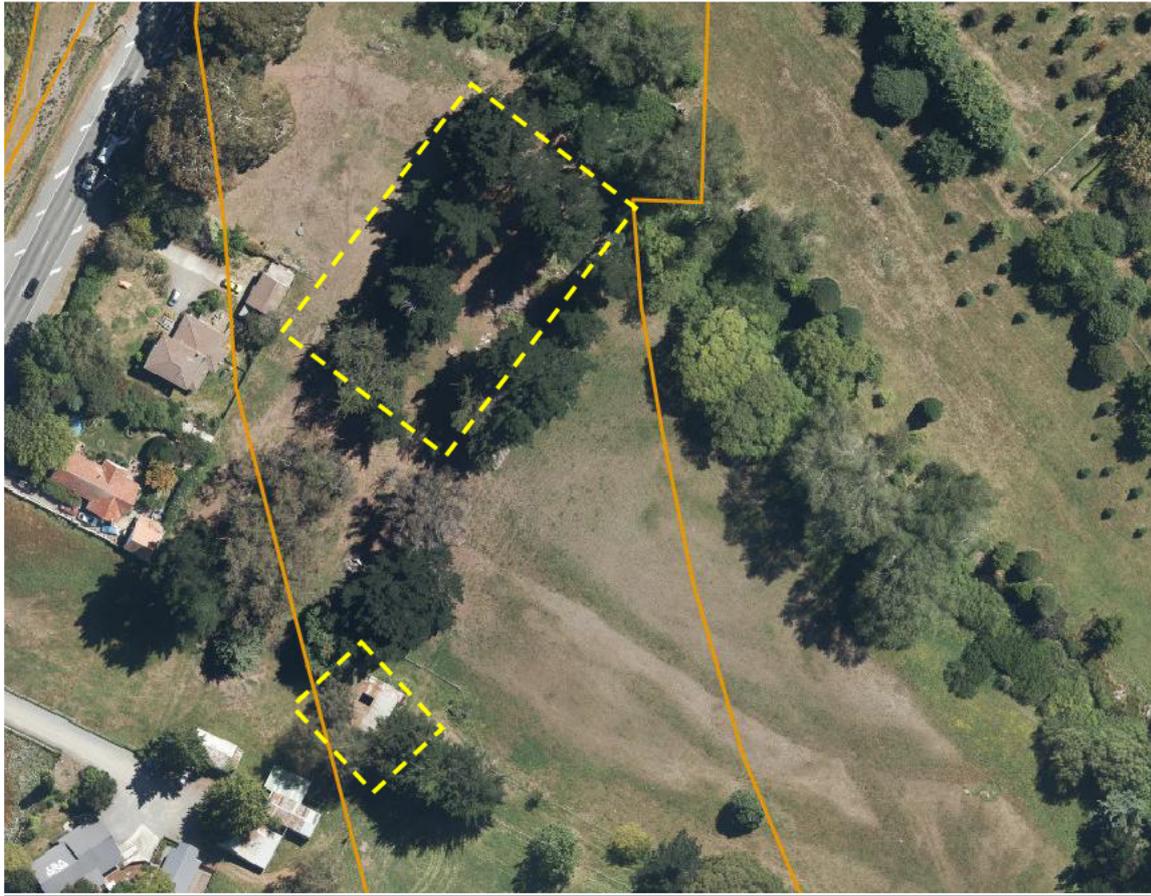


Figure B2.8: 138 Main North Road buildings and miscellaneous disposal (only showing designation) (not to scale).

- Activity – buildings in dilapidated condition, miscellaneous disposal.
- Area – approximately 3000 m².
- Rationale – targeted sampling of near surface soils in building footprint and curtilage and areas of disposal.
- Sampling using hand tools from surface and shallow subsurface soils in approximately 20 locations.
- CoCs; heavy metals, hydrocarbons, asbestos in soil.

