



## Interim Validation Letter (LTR01) – Proposed Lot 1, Lot 3 and Part Roads

Westlink Stage 1 – Aldington Road and Abbots Road, Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.005\_VAL\_LTR01\_ESR\_Westlink Stage 1\_v2 | 27 May 2024



ESR Australia  
Level 24, 88 Phillip Street  
Sydney NSW 2000  
Via email: [Jacob.Dickson@esr.com](mailto:Jacob.Dickson@esr.com)

Attention: Jacob Dickson

## Interim Validation Letter (LTR01) – Proposed Lot 1, Lot 3 and Part Roads Westlink Stage 1 Aldington Road and Abbots Road, Kemps Creek, NSW, 2178

### INTRODUCTION

ESR Australia (ESR) engaged EP Risk Management Pty Ltd (EP Risk) to prepare an Interim Validation Letter following the completion and validation of remedial works within the proposed Lot 1, Lot 3, Abbots Road Extension (west portion) and Private Access Road (the Validation Extent) at Westlink Stage 1, located at Aldington Road and Abbots Road, Kemps Creek, NSW, 2178 (the Site) (**Attachment 1 - Figure 1 and 2**). The boundary of the Validation Extent has been defined in **Attachment 1 - Figure 3**.

This letter covers remediation and validation works undertaken within the Validation Extent, completed in Phase 1 of the Remediation Project – which was undertaken between 10 July 2023 and 25 September 2023 in accordance with Table 10.1 and Table 10.2 of the Remediation Action Plan (RAP) (Alliance 2023)<sup>1</sup> and the requirements of the Addendum (EP Risk 2023)<sup>2</sup> by Class A Licensed Asbestos Remediation Contractor (LARC), TCE Contracting Pty Ltd (TCE) as engaged by JK Williams Pty Ltd (JKW) with asbestos hygiene and validation works undertaken by EP Risk. EP Risk was engaged by ESR from 10 July 2023 to 04 September 2023, and later engaged by TCE from 19 September 2023 to 25 September 2023. Validation assessments and sampling was undertaken by EP Risk in accordance with Tables 12.7.1 and 12.7.7 of the RAP (Alliance 2023) and the requirements of the Addendum (EP Risk 2023).

Phase 2 of the Remediation Project, which was between 28 September 2023 and 03 November 2023 by Class A LARC Omega Hazmat Pty Ltd (Omega) and Penny Green Pty Ltd (PG) as engaged by Ground King Civil Pty Ltd (GKC) with asbestos hygiene works undertaken by Foundation Earth Sciences Pty Ltd (FES) will be reported within the Site Remediation and Validation Report (SRVR).

<sup>1</sup> Alliance (2023), Remediation Action Plan, Proposed Commercial / Industrial Subdivision, 290-308 Aldington Road and 59-63 Abbots Road Kemps Creek NSW, ref:13546-ER-2-2\_Rev2, dated 21 June 2023.

<sup>2</sup> EP Risk (2023) Addendum (01) – Alliance Remediation Acton Plan, Westlink Stage 1 – 290-308 Aldington Road and 59-63 Abbots Road Kemps Creek, NSW, 2178 NSW, ref: EP3244.004\_v1, dated 12 September 2023.



**Melbourne**  
22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
**T** 03 8540 7300

**Sydney**  
Suite 13.01 80 Mount St  
North Sydney, NSW, 2060  
**T** 02 9922 5021

**Newcastle**  
3/19 Bolton Street  
Newcastle, NSW, 2300  
**T** 02 4048 2845



## OBJECTIVE

The objective of this Letter is to comment on the suitability of the Validation Extent (**Attachment 1 - Figure 3**) for proposed industrial land use following completion of remedial and validation works in line with the RAP (Alliance 2023), Addendum (EP Risk 2023) and regulatory guidelines.

## BACKGROUND

According to the RAP (Alliance 2023), the Site comprised of twenty (20) Areas of Environmental Concern (AECs) (AEC01a, AEC09b, AEC13, AEC14, AEC15, AEC16, AEC18, AEC19a, AEC21, AEC22, AEC23, AEC23a, AEC23b, AEC24a, AEC32, AEC32a, AEC33, AEC38, AEC39 and AEC40) and sixteen (16) concrete stockpiles with the major Contaminants of Potential Concern (CoPCs) described as asbestos, aesthetics, petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAH), metals and pathogens.

A remediation hierarchy was developed for on-site material categorisation and tracking within the Addendum (EP Risk 2023). The remediation hierarchy has been summarised in **Table 1** below.

Table 1 - Remediation Hierarchy <sup>3</sup>			
Category	B	F	O
	Bonded (Non-Friable) Asbestos	Friable Asbestos (Asbestos Fines (AF) / Fibrous Asbestos (FA))	Other Impacted
1	B1: Suitable (No asbestos detected)	F1: Suitable (No asbestos detected)	O1: Suitable
2	B2: <0.05% HSL (Bonded (non-friable) asbestos detected below HSL)	F2: <0.001% HSL (Friable asbestos detected below HSL)	O2: Suitable, subject to additional management.
3	Suitable to remain on-site subject to placement >0.1 m below finished ground level and in areas where no services will be installed.  Location of this material must be tracked, and a survey must be undertaken to confirm placement at depth.	Suitable to remain on-site subject to placement >0.1 m below finished ground level and in areas where no services will be installed.  Location of this material must be tracked, and a survey must be undertaken to confirm placement at depth.	Suitable to remain on-site, subject to placement > 2 m below finished ground level and in areas where no services will be installed.  Location of this material must be tracked, and a survey must be undertaken to confirm placement at depth.

As per the RAP (Alliance 2023), the Validation Extent (**Attachment 1 - Figure 3**) comprised of:

- Eight (8) asbestos AECs (**Attachment 1 – Figure 4**): AEC01a, AEC09b, part of AEC14, part of AEC15, AEC32, AEC32a, AEC33 and AEC38.
- Five (5) concrete stockpiles (**Attachment 1 – Figure 5**): SP5, SP11, SP12, SP13 and SP14.

<sup>3</sup> Subject to appropriate WHS controls. To be read in conjunction with requirements within RAP.

- Three (3) septic tanks/pits (**Attachment 1 – Figure 6**): AEC16, AEC39 and AEC40.

During remedial works, thirteen (113) unexpected finds (UFs) relating to were encountered within the Validation Extent (UF001, UF003, UF004, UF015, UF019, UF020, UF021, UF022, UF023, UF024, UF025, UF026 and UF027) (**Attachment 1 - Figure 7**). These UFs were managed by TCE and EP Risk in accordance with Section 11.6 of the RAP (Alliance 2023) and the requirements of the Addendum (EP Risk 2023).

## REMEDIATION SCOPE – ASBESTOS AECs, CONCRETE STOCKPILES AND SEPTIC TANKS/PITS

The AECs and CoPCs relevant to the Validation Extent have been summarised in **Table 2** below and are displayed on **Attachment 1 – Figures 4 – 6**.

Table 2 – AECs and CoPCs within the Validation Extent		
AEC	CoPC	Remediation Hierarchy
AEC01a	Bonded (non-friable) asbestos in surface soils $\leq 0.1$ m below surface (mBS)	Treated in-situ as B3 material to B2 material.
AEC09b	Bonded (non-friable) asbestos in surface soils $\leq 0.1$ mBS	Treated in-situ as B3 material to B2 material.
Part of AEC14	Friable asbestos as AF or FA in surface and/or fill soils	Excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.
	Aesthetics (tyres and bricks)	Excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.
Part of AEC15	Visible asbestos in surface soils	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.
AEC16 (& UF004)	Septic tank systems (petroleum, hydrocarbons, PAH, metals, pathogens)	Excavated as O1 material for stockpiling at the eastern stockpiling pad.
AEC32	Visible asbestos in surface soils	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.
	Bonded (non-friable) asbestos in surface soils $\leq 0.1$ mBS	Treated in-situ as B3 material to B2 material.
AEC32a	Visible asbestos in surface soils	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.
	Bonded (non-friable) asbestos in surface soils $\leq 0.1$ mBS	Treated in-situ as B3 material to B2 material.
	Bonded (non-friable) asbestos in fill soils $> 0.1$ mBS	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.
AEC33	Visible asbestos in surface soils	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.
AEC38	Visible asbestos in surface soils	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.



AEC39	Septic tank system (petroleum, hydrocarbons, PAH, metals, pathogens)	Excavated as O1 material for stockpiling at the eastern stockpiling pad.
AEC40	Septic tank system (petroleum, hydrocarbons, PAH, metals, pathogens)	Excavated as O1 and O2 material for stockpiling at the eastern stockpiling pad.
Concrete stockpile SP5, SP11, SP12, SP13 and SP14	Aesthetics (concrete stockpile)	Removed and disposed off-site to a licensed landfill facility able to accept concrete waste.

## REMEDIATION SCOPE - UFs

A summary of the UFs identified within the Validation Extent to date have been provided in **Table 3** below and are displayed on **Attachment 1 - Figure 7**.

Table 3 – UFs within Validation Extent		
UF	CoPC	Remediation Hierarchy
UF001	<p>Stockpile (3 m x 1 m to a depth of 0.3 mBGS) consisting of bonded (non-friable) ACM fragments in poor condition adjacent to northern entry gate off Abbots Road, south of AEC01.</p> <p>Due to the poor condition of the fragments, soil and fragments have been deemed by EP Risk as friable asbestos (F3 material).</p>	Excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.
UF003	<p>AC conduit identified within the western portion of AEC01a, adjacent to a tree during in-situ treatment works. A portion of the AC conduit was broken by tooth bucket of the excavator. The length and direction of AC conduit was unknown.</p> <p>Soil within the conduit break zone (approximately 1 m x 1 m to a depth of 0.3 mBGS) was deemed by EP Risk as friable asbestos (F3 material). The remainder of the AC conduit, if removed in good condition was deemed by EP Risk as Special Waste.</p>	<p>Excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.</p> <p>AC conduit removed and disposed off-site to a licensed landfill facility able to accept Special Waste (Asbestos).</p>
UF004	A second septic tank system identified within AEC15 (located south of AEC15; labelled as AEC16).	Excavated as O1 material for stockpiling at the eastern stockpiling pad.
UF015	AC conduit identified within AEC01a during in-situ mechanical rake. A portion of the AC conduit was broken by tooth bucket. Soil within the break zone (approximately 1 m x 1 m to a depth of 0.3 mBGS) was deemed by EP Risk as friable asbestos (F3 material). The remainder of the AC conduit, was deemed by EP Risk as bonded (non-friable) asbestos.	<p>Excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.</p> <p>AC conduit removed and disposed off-site to a licensed landfill facility able to accept Special Waste (Asbestos).</p>

Table 3 – UFs within Validation Extent		
UF	CoPC	Remediation Hierarchy
UF019	Concrete stockpile contaminated with bonded (non-friable) AC fragments, located north of AEC01a.	Excavated as Special Waste (Asbestos) for stockpiling at the central (southern) treatment and stockpiling pad.
UF021	Bonded (non-friable) AC sheeting identified within AEC33 prior to the vegetation scrape.	AC conduit removed and disposed off-site to a licensed landfill facility able to accept Special Waste (Asbestos).
UF022	ACM fragments identified during vegetation scrape of AEC38, considered too small / impracticable for emu picking.  Based on the small size of the fragments, soil and fragments have been deemed by EP Risk as friable asbestos (F3 material).	Excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.
UF023	Concrete stockpile suspected to be contaminated with bonded (non-friable) AC fragments identified to the east of AEC38 (upper).  EP Risk collected a sample of a fragment for analytical testing. The sample did not contain asbestos. As such, the concrete stockpile was removed from Site by JKW.	N/A
UF024	3x AC conduits identified within central batter of AEC38, east of UF015 during JKW earthworks. The 2 westernmost conduits were damaged by the JKW scrapers, with broken conduit fragments spread across the surface of the UF area. The easternmost conduit was undamaged. The length and direction of AC conduit was unknown but suspected to be similar to UF015.  The 2 westernmost conduits, soil within 1 m either side of the conduits were to a depth of 0.3 mBGS, soil across the UF extent up to a depth of 0.1 mBGS were deemed by EP Risk as friable asbestos (F3 material). The easternmost AC conduit, if removed in good condition was deemed by EP Risk as Special Waste.	Soil and 2x western most conduits excavated as F3 material for stockpiling at the central (southern) treatment and stockpiling pad.  Easternmost AC conduit removed and disposed off-site to a licensed landfill facility able to accept Special Waste (Asbestos).
UF025	ACM fragments identified south of AEC38 Upper during JKW earthworks.  Based on the fair condition of the fragments, soil and fragments have been deemed by EP Risk as bonded (non-friable) asbestos (B3 material).	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.
UF026	ACM fragments identified northeast of AEC38 Lower during JKW earthworks.	Excavated as B3 material for stockpiling at the central (southern) treatment and stockpiling pad.



Table 3 – UFs within Validation Extent		
UF	CoPC	Remediation Hierarchy
	Based on the fair condition of the fragments, soil and fragments have been deemed by EP Risk as bonded (non-friable) asbestos (B3 material).	
UF027	ACM fragments identified on the surface east of AEC14.  Due to small quantities and observations of ACM localised to surficial soils, ACM fragments were deemed by EP Risk as Special Waste.	Removed and disposed off-site to a licensed landfill facility able to accept Special Waste (Asbestos).
UF021	Bonded (non-friable) AC sheeting identified within AEC33 prior to the vegetation scrape.	AC conduit removed and disposed off-site to a licensed landfill facility able to accept Special Waste (Asbestos).

## REMEDIATION METHODOLOGY

The remediation methodology for each AEC and UF within the Validation Extent has been summarised in **Table 4** below.

It should be noted where ABSINS were excavated from an AEC or UF within the Validation Extent, these materials were transported to the on-site treatment and stockpiling pads (**Attachment 1 - Figure 8**) which are located outside of the Validation Extent. These materials were treated/managed as part of Phase 2 Remediation and Validation works which will be presented in the SRVR.

Table 4 – Remediation Methodology for the Validation Extent		
AEC / UF	CoPC	Remediation Methodology
AEC01a, AEC09b, Part of AEC15, AEC32, AEC32a	Bonded (non-friable) asbestos in surface soils $\leq 0.1$ mBS	<ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the ACM by the process.</li> <li>Systematic inspection of surface and hand picking of visible ACM fragments.</li> <li>Rake surface soils in one direction, to a depth of 0.1m below ground level, using an excavator fitted with a tooth bucket.</li> <li>Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>Rake surface soils in a direction 90° perpendicular to the first raking direction, to a depth of 0.1m below ground level, using an excavator fitted with a tooth bucket.</li> <li>Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>ACM fragments will be disposed to a suitably licensed waste receiving facility, with a waste classification.</li> <li>This method (as opposed to hand raking) is proposed, to accommodate the physical properties of surface soils and likely presence of anthropogenic materials in the surface soils.</li> </ul>

**Table 4 – Remediation Methodology for the Validation Extent**

AEC / UF	CoPC	Remediation Methodology
AEC32a	Bonded (non-friable) asbestos in fill soils >0.1 mBS	<ul style="list-style-type: none"> <li>Staged excavation of fill soils to and transportation of the material to the central (southern) treatment and stockpiling pad.</li> <li>Approximately 10 m<sup>3</sup> of material was spread across the treatment pad, ideally in a 10 x 10 grid, at no greater than 100 mm thickness using an excavator with a tooth bucket.</li> <li>Surface soils were raked in one direction using an excavator fitted with a tooth bucket.</li> <li>A systematic inspection of the raked surface was undertaken. Visible ACM fragments were handpicked.</li> <li>Surface soils were raked in a direction 90° perpendicular to the first raking direction using an excavator fitted with a tooth bucket.</li> <li>A final systematic inspection of the raked surface was undertaken. Visible ACM fragments were handpicked.</li> <li>ACM fragments were disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul>
Part of AEC14	Friable asbestos as AF or FA in surface and/or fill soils	<ul style="list-style-type: none"> <li>Staged excavation of fill soils to and transportation of the material to the central (southern) stockpiling pad.</li> </ul>
Part of AEC15, AEC32, AEC32a, AEC33, AEC38	Visible asbestos in surface soils	<ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the ACM by the process.</li> <li>Removal of vegetation (stripped, tilled or grubbed) to facilitate clear and unobstructed visual assessment of surface soils. Vegetation was removed as B3 material to the central (southern) treatment and stockpiling pad.</li> <li>A grid-based walkover undertaken on transects spaced 5 m apart, with at least one (1) pass in a north - south direction and one (1) in an east/west direction.</li> </ul>
AEC16 (& UF004), AEC39, AEC40	Septic tank system (petroleum, hydrocarbons, PAH, metals, pathogens)	<ul style="list-style-type: none"> <li>Remove content of septic tank by suitably licensed contractor and dispose content offsite with appropriate waste classification.</li> <li>Demolish and excavate the tank and absorption trench (if any) and dispose offsite with appropriate waste classification.</li> <li>Flush irrigation lines, spray head, sprinklers and drippers with potable water for 5 minutes.</li> <li>Material from the septic tanks was stockpiled at the eastern stockpiling pad.</li> </ul>
Part of AEC14	Aesthetics (tyre and brick stockpile)	<ul style="list-style-type: none"> <li>Due to observations of weathered bonded (non-friable) ACM in the form of asbestos super six-sheeting fragments on the surface of AEC14, within close proximity to the tyre and brick stockpile, the tyres and bricks were removed by TCE as asbestos waste and stockpiled separately to contaminated soils within AEC14 within the central (southern) stockpiling pad.</li> </ul>
Concrete stockpile SP5,	Aesthetics (concrete stockpiles)	<ul style="list-style-type: none"> <li>Concrete stockpiles were removed and disposed off-site to a suitable licenced waste receiving facility.</li> </ul>



**Table 4 – Remediation Methodology for the Validation Extent**

AEC / UF	CoPC	Remediation Methodology
SP11, SP12, SP13 and SP14		
UF001, UF003, UF015, UF019, UF020, UF021, UF022, UF023, UF024, UF025, UF026 and UF027	Various CoPCs	<ul style="list-style-type: none"> <li>As per Table 3.</li> </ul>

## VALIDATION METHODOLOGY

The validation methodology for each AEC / UF within the Validation Extent has been summarised in **Table 5** below.

**Table 5 – Validation Methodology for the Validation Extent**

AEC	CoPC	Validation Strategy	Sampling Requirements
AEC01a, AEC09b, Part of AEC15, AEC32, AEC32a	Bonded (non-friable) asbestos in surface soils $\leq 0.1$ mBS	Residual footprint: <ul style="list-style-type: none"> <li>A visual clearance inspection of the residual in-situ rake footprint.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	On-site field screening for bonded (non-friable) ACM (>7mm)
AEC32a	Bonded (non-friable) asbestos in fill soils >0.1 mBS	Residual footprint: <ul style="list-style-type: none"> <li>A visual clearance inspection of the residual remediation excavation footprint.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	On-site field screening for bonded (non-friable) ACM (>7mm)
		Treated B3 stockpiles: <ul style="list-style-type: none"> <li>A visual clearance inspection of the residual in-situ rake footprint.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	On-site field screening for bonded (non-friable) ACM (>7mm)  Asbestos gravimetric analysis (non-NATA test)
Part of AEC14	Friable asbestos as AF or FA in surface and/or fill soils	Residual footprint: <ul style="list-style-type: none"> <li>A visual clearance inspection of the residual remediation excavation footprint.</li> <li>Clearance certificate from a LAA.</li> </ul>	On-site field screening for bonded (non-friable) ACM (>7mm)  Asbestos gravimetric analysis (non-NATA test)
Part of AEC15, AEC32, AEC32a, AEC33, AEC38	Visible asbestos in surface soils	AEC extent: <ul style="list-style-type: none"> <li>A visual clearance inspection of the AEC extent following vegetation trip.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	N/A

AEC16 (& UF004), AEC39, AEC40	Septic tank system (petroleum, hydrocarbons, PAH, metals, pathogens)	AEC extent & stockpiled materials: <ul style="list-style-type: none"> <li>A visual inspection of the residual excavation footprint and stockpiled materials.</li> <li>Analytical summary tables attached within <b>Appendix B</b>.</li> </ul>	Petroleum hydrocarbons, PAH, metals, E. Coli and thermotolerant coliforms
Part of AEC14	Aesthetics (tyres and bricks)	AEC extent: <ul style="list-style-type: none"> <li>A visual clearance inspection of the residual remediation excavation footprint (part of AEC14)</li> <li>Clearance certificate from a LAA.</li> </ul>	On-site field screening for bonded (non-friable) ACM (>7mm)  Asbestos gravimetric analysis (non-NATA test)
Concrete stockpile SP5, SP11, SP12, SP13 and SP14	Aesthetics (concrete stockpiles)	Stockpile footprint: <ul style="list-style-type: none"> <li>A visual inspection of the stockpile footprint.</li> <li>Photographic record attached within <b>Appendix A</b>.</li> </ul>	N/A
UF001, UF003, UF015, UF022, UF024	F3 material	UF extent: <ul style="list-style-type: none"> <li>A visual assessment of the surface soils of the UF extent for visible asbestos.</li> <li>Clearance certificate from a LAA.</li> </ul>	Asbestos gravimetric analysis (non-NATA test)
UF022	F3 material (ACM fragments too small / impractical for emu picking)	UF extent: <ul style="list-style-type: none"> <li>A visual assessment of the surface soils of the UF extent for visible asbestos.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	On-site field screening for bonded (non-friable) ACM (>7mm)
UF025, UF026	B3 material	UF extent: <ul style="list-style-type: none"> <li>A visual assessment of the surface soils of the UF extent for visible asbestos.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	N/A
UF015, UF021, UF024, UF027	AC conduits / ACM sheeting / ACM fragments	UF extent: <ul style="list-style-type: none"> <li>A visual assessment of the surface soils of the UF extent for visible asbestos.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	N/A
UF019	Aesthetics (concrete stockpiles) and bonded (non-friable) ACM	UF extent: <ul style="list-style-type: none"> <li>A visual assessment of the surface soils of the UF extent for visible asbestos.</li> <li>Clearance certificate from a LAA or competent person.</li> </ul>	N/A



## VALIDATION RESULTS – ASBESTOS

An Asbestos Clearance Certificate (ACC), certifying each area as validated in accordance with the RAP, inclusive of a photographic log and sampling results (where applicable) was prepared for each AEC and UF following completion of asbestos remedial works by TCE.

- **AEC01a:** EP Risk (2023a), Asbestos Clearance Certificate – AEC01a, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC002\_v1, dated 02 August 2023.
- **AEC09b:** EP Risk (2023b), Asbestos Clearance Certificate – AEC09b, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC010\_v1, dated 14 August 2023.
- **Part of AEC14:** EP Risk (2023c), *Asbestos Clearance Certificate – AEC14*, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC014\_v1, dated 11 April 2024.
- **Part of AEC15:** EP Risk (2023d), *Asbestos Clearance Certificate – AEC15*, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC015\_v1, dated 24 August 2023.
- **AEC32 and AEC32a:** EP Risk (2023e), Asbestos Clearance Certificate – AEC32 & AEC32a, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC005\_v1, dated 07 August 2023.
- **AEC33, UF020 and UF021:** EP Risk (2023f), Asbestos Clearance Certificate – AEC33, UF020 and UF021, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC023\_v2, dated 08 August 2023.
- **AEC38 and UF022:** EP Risk (2023g), Asbestos Clearance Certificate – AEC38 and UF022, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC007\_v1, dated 08 August 2023.
- **UF001:** EP Risk (2023h), Asbestos Clearance Certificate – UF001, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC011\_v1, dated 07 August 2023.
- **UF003 and UF015:** EP Risk (2023i), Asbestos Clearance Certificate – UF003, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC003\_v1, dated 02 August 2023.
- **UF019:** EP Risk (2023k), Asbestos Clearance Certificate – UF019, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC006\_v1, dated 07 August 2023.
- **UF024:** EP Risk (2023l), Asbestos Clearance Certificate – UF024, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC016\_v1, dated 12 September 2023.
- **UF025:** EP Risk (2023m), Asbestos Clearance Certificate – UF025, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC012\_v1, dated 05 September 2023.
- **UF026:** EP Risk (2023n), Asbestos Clearance Certificate – UF026, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC019\_v1, dated 05 September 2023.
- **UF027:** EP Risk (2023o), Asbestos Clearance Certificate – UF027, *Westlink Stage 1 – Aldington Road and Abbotts Road, Kemps Creek, NSW*, ref: EP3244.003\_ACC022\_v1, dated 08 September 2023.

A copy of the Asbestos Clearance Certificates issued for the Validation Extent have been attached as **Attachment 5 – Asbestos Clearance Certificates**.

## VALIDATION RESULTS – CONCRETE STOCKPILES

A photographic log was prepared by EP Risk to document the removal of concrete stockpiles SP5, SP11, SP12, SP13 and SP14 by TCE and JKW for aesthetic purposes and has been attached within **Attachment 2– Photographic Log**.

## VALIDATION RESULTS – SEPTIC TANKS & SYSTEMS

Material inside and surrounding each septic tank in AEC16, AEC39 and AEC40 was excavated and stockpiled by TCE in the eastern stockpiling pad (**Attachment 1 - Figure 8**) and assessed for site suitability by EP Risk. The walls and base of the residual excavation footprint were also validated by EP Risk. The results of the validation sampling have been summarised below in **Table 6** and in **Attachment 3– Analytical Summary Tables**.

Table 6 – Validation Results for Septic Tank & Systems in the Validation Extent			
AEC	Stockpile ID	Description	Classification
AEC16	16SEP01	Material within septic tank 1	O1 - Suitable
	16SEP02	Material within septic tank 2	O1 - Suitable
	16VAL01	Material surrounding septic tank 1	O1 - Suitable
	16VAL02	Material surrounding septic tank 2	O1 - Suitable
	AEC16_VAL_01	Excavation footprint of septic tank 1	O1 - Suitable
	AEC16_VAL_02	Excavation footprint of septic tank 2	O1 - Suitable
AEC39	39VAL01	Material surrounding septic tank	O1 - Suitable
	N/A	Excavation footprint	O1 - Suitable
AEC40	40SEP01	Material within septic tank 1	O2 – Suitable subject to management
	40SEP02	Material within septic tank 2	O2 – Suitable subject to management
	40VAL01	Material surrounding septic tank 1 and 2	O1 - Suitable
	40VAL02	Material surrounding septic tank 1 and 2	O1 - Suitable
	40VAL04	Material surrounding septic tank 1 and 2	O1 - Suitable
	N/A	Excavation footprint	O1 - Suitable

A copy of the National Association of Testing Authorities (NATA) accredited Laboratory Reports have been included as **Attachment 4 – NATA Laboratory Reports**.

## CONCLUSION

Based on the findings of the visual clearance inspections, field observations, analytical results and subject to the limitations within this letter, EP Risk conclude the AECs and UFs within the Validation Extent (**Attachment 1 – Figures 4 – 7**) have been remediated and validated in accordance with the RAP (Alliance 2023), Addendum (EP Risk 2023) and relevant guidelines produced or approved under the *Contaminated Land Management Act 1997*.

Overall, the Validation Extent comprising proposed Lot 1, Lot 3, the western part of the Abbotts Road Extension and the private access road, as defined in **Attachment 1 - Figure 3**, are considered suitable for the proposed industrial land use.

The remaining AECs and UFs requiring validation and the Phase 2 Remediation Project will be reported and documented in the SRVR.

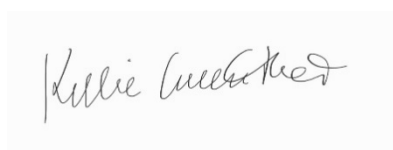
## CLOSURE

Please feel free to contact the undersigned on 0433 006 111 or 0408 811 549 should you have any queries.

Yours sincerely,



Jenny Shao  
Occupational Hygiene Consultant  
Licenced Asbestos Assessor LAA001462  
EP Risk Management Pty Ltd  
ABN: 81 147 147 591



Kellie Guenther  
Principal Environmental Scientist  
Certified Environmental Practitioner No. 1083 (Site Contamination No. SC41067)  
EP Risk Management Pty Ltd  
ABN: 81 147 147 591



#### Attachments:

- Attachment 1** – Figures
- Attachment 2** – Photographic Log
- Attachment 3** – Analytical Summary Tables
- Attachment 4** – NATA Laboratory Reports
- Attachment 5** – Asbestos Clearance Certificates

#### QUALITY CONTROL

Version	Author	Date	Reviewer / Approver	Date	Quality Review	Date
v1	J. Shao	08.08.2023	K. Guenther	08.08.2023	K. Guenther	08.08.2023
v2	J. Shao	27.05.2024	K. Guenther	27.05.2024	K. Guenther	08.08.2024

#### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	08.08.2023	EP3244.005_VAL_LTR01_ESR_Westlink Stage 1_Lot 1_v1	ESR
v2	27.05.2024	EP3244.005_VAL_LTR01_ESR_Westlink Stage 1_v2	ESR

## LIMITATIONS

This Interim Validation Letter (LTR01) – Proposed Lot 1, Lot 3 and Part Roads was conducted on the behalf of ESR Australia for the purpose/s stated in the **Objective** section.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Interim Validation Letter (LTR01) – Proposed Lot 1, Lot 3 and Part Roads to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Inaccessible areas are omitted from the assessment including beneath concrete slabs, beneath the subsurface, within the soil or fill, beneath floorboards, in the crawlspace of the building inside the walls of the structures and inside the roof cavity not in immediate.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted and reports produced by EP Risk are based on a specific scope and have been prepared for ESR Australia and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.

## *Attachment 1 – Figures*





**Figure 1 - Site Location and Layout**

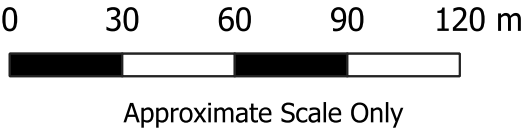
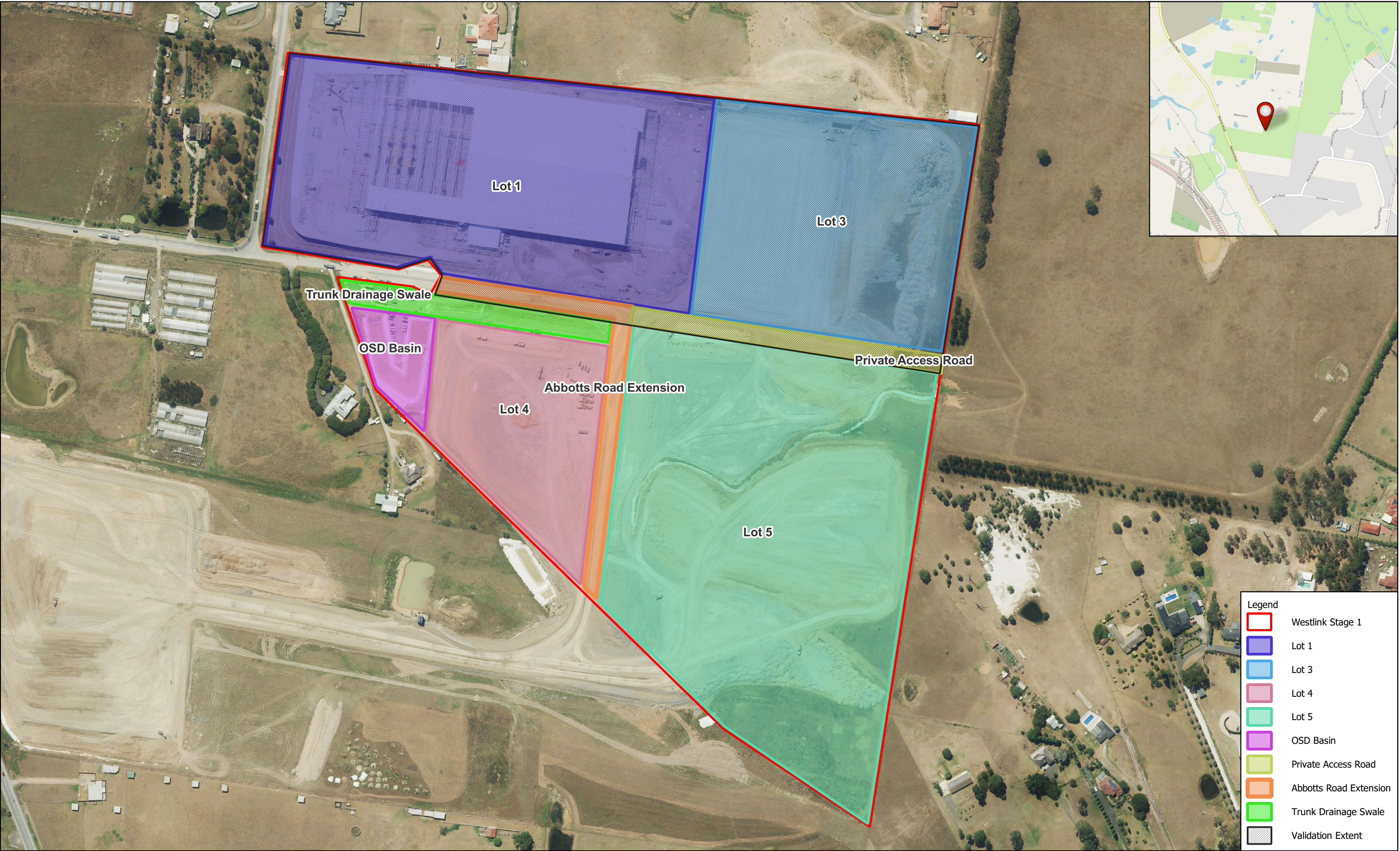






**Figure 2 - Existing Lot Boundaries**





**Figure 3 - Development Plan**







**Legend**

- Westlink Stage 1
- Lot 1
- Lot 3
- Lot 4
- Lot 5
- OSD Basin
- Private Access Road
- Abbots Road Extension
- Trunk Drainage Swale
- Validation Extent
- Asbestos AEC
- Vegetation Scrape



**Figure 4 - Development Plan & Asbestos AECs**







**Figure 5 - Development Plan & Concrete Stockpiles**

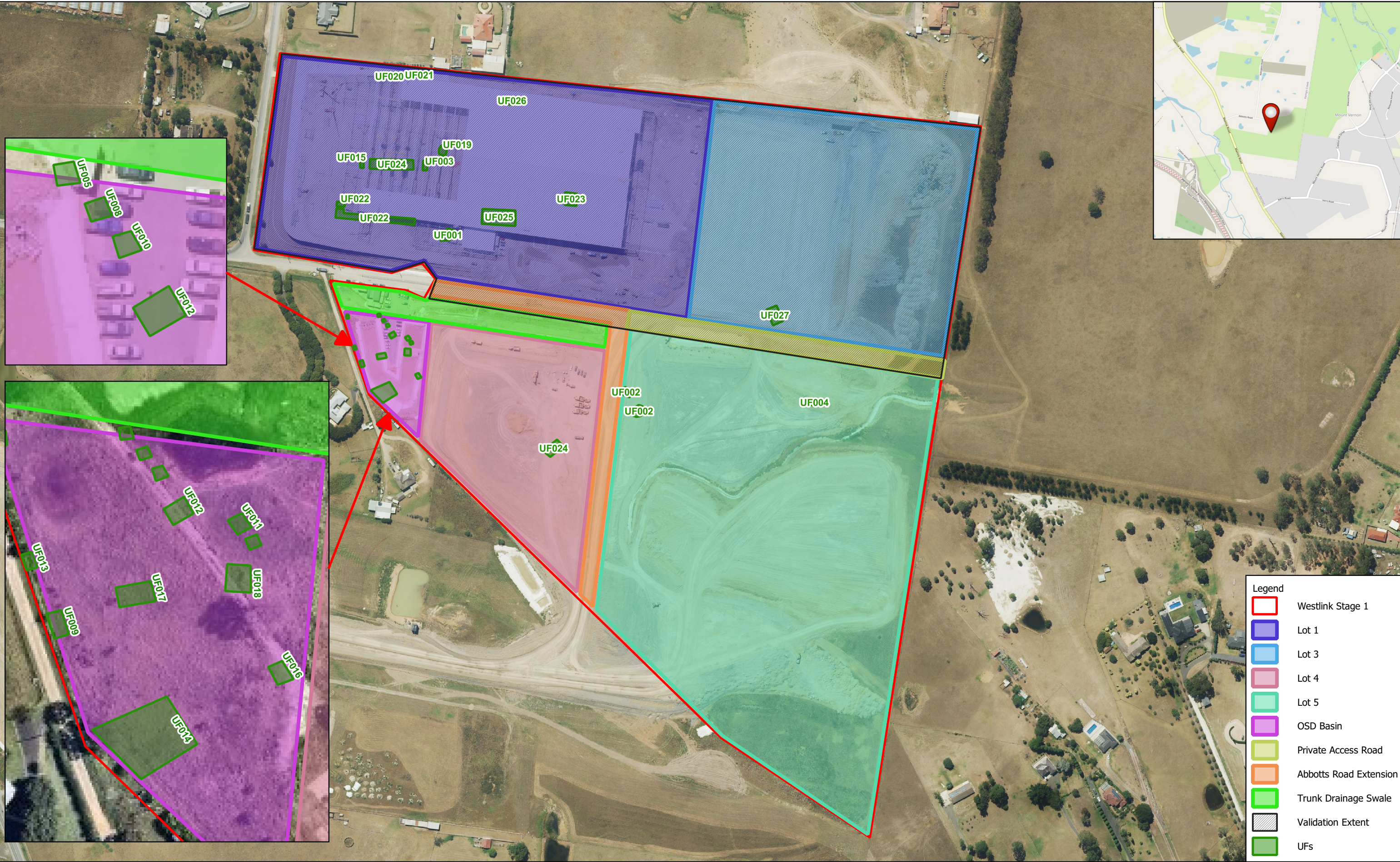






**Figure 6 - Development Plan & Septic Tanks/Pits**

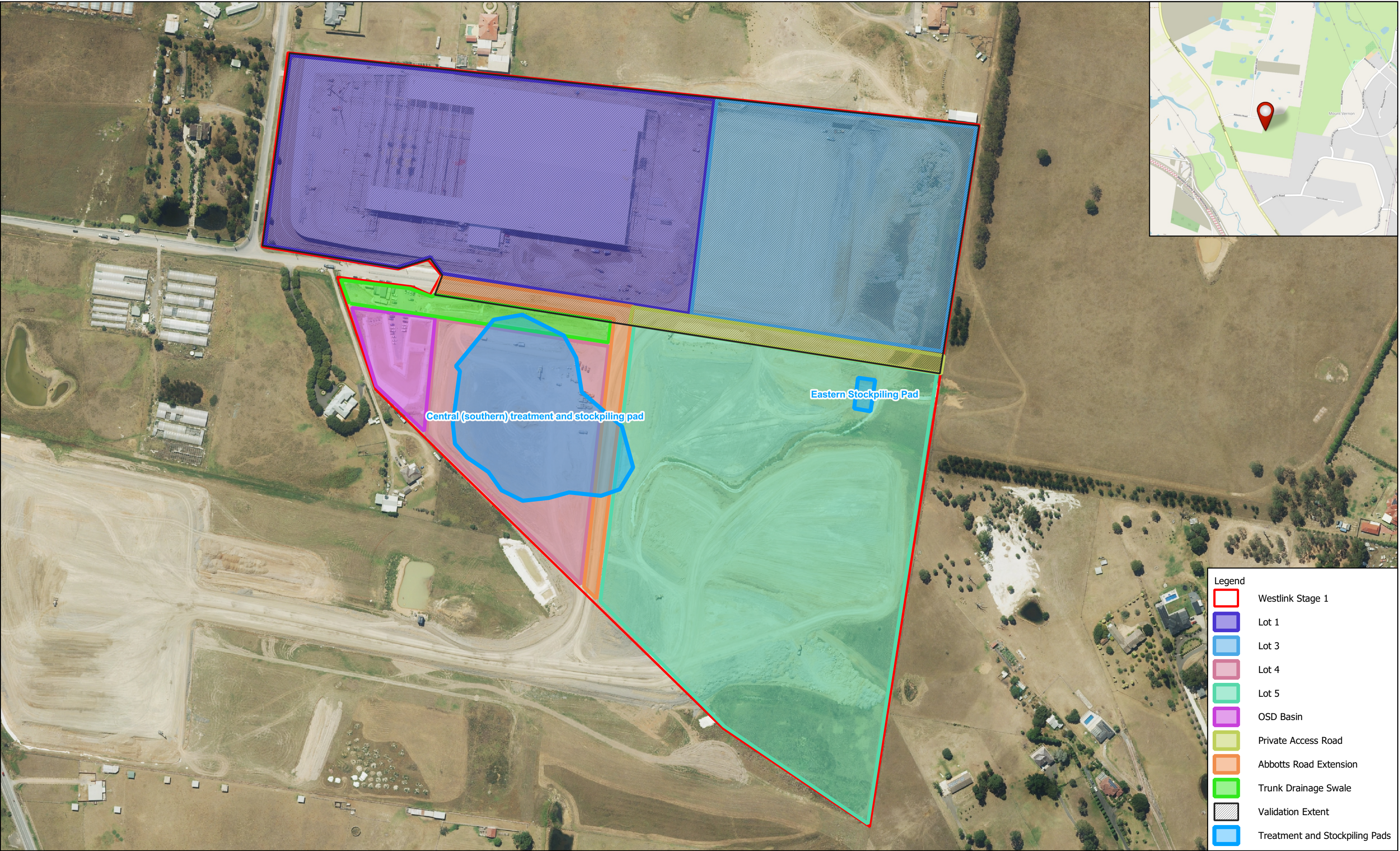




**Figure 7 - Development Plan & UFs**









## *Attachment 2 – Photographic Log*





**Plate 1 – 09/08/2023**

SP05 prior to removal off-site. No photo sourced of the ground surface following the removal of SP05.



**Plate 2 – 01/08/2023**

Ground surface following removal of SP11, facing northwest.





**Plate 3 – 01/08/2023**

Ground surface following removal of SP11, facing northwest.



**Plate 4 – 01/08/2023**

Ground surface following removal of SP12, facing north.





**Plate 5** – 01/08/2023

Ground surface following removal of SP13 and SP14, facing north.



**Plate 6** – 01/08/2023

Ground surface following removal of SP13 and SP14, facing north.



## *Attachment 3 – Analytical Summary Tables*

		Asbestos ID (AS4964-2004)	BTEX								TRH							Biological	
			Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	G5-C10 Fraction (F1)	G5-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	Faecal Coliforms	E. Coli
			g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MPN/g
EQL		0.1	1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	2	2
Direct Contact HSL D Commercial/ Industrial			11,000	430		27,000				81,000		26,000		20,000		27,000	38,000		
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil											700		1,000		3,500	10,000			
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand >=0m, <1m				3	NL	NL				230		260		NL					
>=1m, <2m				3	NL	NL				NL		370		NL					
>=2m, <4m				3	NL	NL				NL		630		NL					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																			
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind			370																
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil				75	135	165				180		215	170	170	1,700	3,300			
EPA 2000 Use and Disposal Of Biosolids																		1000	2

Stockpile ID	Field ID	Matrix	Date	Classification																	
Material Within Septic Tank																					
16SEP01	16SEP01_01	Soil	09 Aug 2023	O1 - Suitable	NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16SEP01_02				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16SEP01_03				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
16SEP02	16SEP02_01	Soil	09 Aug 2023	O1 - Suitable	NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16SEP02_02				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16SEP02_03				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
Material Surrounding Septic Tank																					
16VAL01	16VAL01_01	Soil	09 Aug 2023	O1 - Suitable	NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16VAL01_02				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16VAL01_03				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
16VAL02	16VAL02_01	Soil	09 Aug 2023	O1 - Suitable	NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16VAL02_02				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	16VAL03_01				NAD	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
Excavation Footprint																					
AEC16_VAL_01	AEC16_VAL_01_B1	Soil	09 Aug 2023	O1 - Suitable	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_01_E1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_01_N1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_01_S1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_01_W1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
AEC16_VAL_02	AEC16_VAL_02_B1	Soil	09 Aug 2023	O1 - Suitable	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_02_E1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_02_N1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_02_S1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2
	AEC16_VAL_02_W1				-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<2	<2

NAD = No Asbestos Detected

AD = Asbestos Detected

NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

	Halogenated Benzenes	Metals								Organochlorine Pesticides											
	Heachlorobenzene	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	4,4-DDE	4-BHC	Aldrin	Aldrin + Dieldrin	4-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	4-BHC	DDD	DDT	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	0.05	5	1	2	5	5	0.1	2	5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	
Direct Contact HSL D Commercial/ Industrial																					
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand >=0m, <1m																					
>=1m, <2m																					
>=2m, <4m																					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	80	3,000	900	3,000	240,000	1,500	730	6,000	400,000				45		530						
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind		160		770																640	
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																					
EPA 2000 Use and Disposal Of Biosolids																					

Stockpile ID	Field ID	Matrix	Date																			
Material Within Septic Tank																						
16SEP01	16SEP01_01	Soil	09 Aug 2023	<0.05	7	<1	14	32	11	<0.1	13	54	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	16SEP01_02			<0.05	8	<1	16	29	15	<0.1	17	61	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16SEP01_03			<0.05	7	<1	17	37	14	<0.1	19	70	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
16SEP02	16SEP02_01	Soil	09 Aug 2023	<0.05	11	<1	18	36	12	<0.1	20	73	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16SEP02_02			<0.05	9	<1	20	31	13	<0.1	20	74	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16SEP02_03			<0.05	<5	<1	11	12	<5	<0.1	9	33	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Material Surrounding Septic Tank																						
16VAL01	16VAL01_01	Soil	09 Aug 2023	<0.05	8	<1	17	31	16	<0.1	21	68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16VAL01_02			<0.05	8	<1	19	36	23	<0.1	19	65	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16VAL01_03			<0.05	<5	<1	14	47	13	<0.1	16	83	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
16VAL02	16VAL02_01	Soil	09 Aug 2023	<0.05	9	<1	17	39	14	<0.1	19	73	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16VAL02_02			<0.05	8	<1	18	36	12	<0.1	20	84	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	16VAL02_03			<0.05	10	<1	18	34	16	<0.1	21	68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Excavation Footprint																						
AEC16_VAL_01	AEC16_VAL_01_B1	Soil	09 Aug 2023	-	<5	<1	15	45	20	0.1	24	92	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_E1			-	6	<1	18	46	16	<0.1	25	80	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_N1			-	<5	<1	19	37	14	<0.1	19	71	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_S1			-	26	<1	14	32	15	<0.1	17	62	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_W1			-	15	<1	15	39	14	<0.1	20	55	-	-	-	-	-	-	-	-	-	-
AEC16_VAL_02	AEC16_VAL_02_B1	Soil	09 Aug 2023	-	10	<1	18	35	14	<0.1	22	70	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_E1			-	7	<1	18	45	11	<0.1	19	73	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_N1			-	11	<1	17	34	13	<0.1	22	76	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_S1			-	8	<1	20	34	11	<0.1	22	67	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_W1			-	6	<1	18	28	10	<0.1	19	59	-	-	-	-	-	-	-	-	-	-

NAD = No Asbestos Detected

AD = Asbestos Detected

NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

	Organochlorine Pesticides													Organophosphorous Pesticides							
	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Indrin	Indrin aldehyde	Indrin ketone	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Malathion	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos
EQI	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Direct Contact HSL D Commercial/ Industrial																					
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand >=0m, <1m																					
>=1m, <2m																					
>=2m, <4m																					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3,600		2,000				100				50		2,500					2,000			
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																					
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																					
EPA 2000 Use and Disposal OF Biosolids																					

Stockpile ID	Field ID	Matrix	Date																				
Material Within Septic Tank																							
16SEP01	16SEP01_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16SEP01_02			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16SEP01_03			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
16SEP02	16SEP02_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16SEP02_02			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16SEP02_03			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Material Surrounding Septic Tank																							
16VAL01	16VAL01_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16VAL01_02			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16VAL01_03			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
16VAL02	16VAL02_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16VAL02_02			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	16VAL03_01			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Excavation Footprint																							
AEC16_VAL_01	AEC16_VAL_01_B1	Soil	09 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_E1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_N1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_S1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_01_W1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AEC16_VAL_02	AEC16_VAL_02_B1	Soil	09 Aug 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_E1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_N1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_S1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AEC16_VAL_02_W1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NAD = No Asbestos Detected

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#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

	Organophosphorous Pesticides							PAH													
	Dimethoate	Ethion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Prothiofos	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene
EQI	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact HSL D Commercial/ Industrial	0.05	0.05	0.05	0.05	0.2	0.2	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																					11,000
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand >=0m, <1m																					
>=1m, <2m																					
>=2m, <4m																					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																					
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																					370
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil												1.4									
EPA 2000 Use and Disposal Of Biosolids																					

Stockpile ID	Field ID	Matrix	Date																				
Material Within Septic Tank																							
16SEP01	16SEP01_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16SEP01_02			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16SEP01_03			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
16SEP02	16SEP02_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16SEP02_02			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16SEP02_03			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Material Surrounding Septic Tank																							
16VAL01	16VAL01_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16VAL01_02			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16VAL01_03			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
16VAL02	16VAL02_01	Soil	09 Aug 2023	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16VAL02_02			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	16VAL02_03			<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Excavation Footprint																							
AEC16_VAL_01	AEC16_VAL_01_B1	Soil	09 Aug 2023	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_01_E1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_01_N1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_01_S1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_01_W1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_02_B1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AEC16_VAL_02	AEC16_VAL_02_E1	Soil	09 Aug 2023	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_02_N1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_02_S1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_02_W1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_02_B1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC16_VAL_02_E1			-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

NAD = No Asbestos Detected

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#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2020, EPA 2000 Table 3.5 Use and Disposal of Biosolids



	PAH			PCBs	Pesticides				TPH				
	Phenanthrene	Pyrene	PAHs (Sum of total)		Detenon-5-methyl	Penamiphos	Parathion	Prinphos-ethyl	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EOL	0.5	0.5	0.5	0.1	0.05	0.05	0.2	0.05	10	50	100	100	50
Direct Contact HSL D Commercial/ Industrial													
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil													
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand >=0m, <1m													
>=1m, <2m													
>=2m, <4m													
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil			4,000	7									
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind													
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil													
EPA 2000 Use and Disposal Of Biosolids												1,000	100

Stockpile ID	Field ID	Matrix	Date													
Material Within Septic Tank																
16SEP01	16SEP01_01	Soil	09 Aug 2023	<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16SEP01_02			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16SEP01_03			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
16SEP02	16SEP02_01	Soil	09 Aug 2023	<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16SEP02_02			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16SEP02_03			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
Material Surrounding Septic Tank																
16VAL01	16VAL01_01	Soil	09 Aug 2023	<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16VAL01_02			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16VAL01_03			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
16VAL02	16VAL02_01	Soil	09 Aug 2023	<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16VAL02_02			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
	16VAL03_01			<0.5	<0.5	<0.5	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50
Excavation Footprint																
AEC16_VAL_01	AEC16_VAL_01_B1	Soil	09 Aug 2023	<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_01_E1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_01_N1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_01_S1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_01_W1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
AEC16_VAL_02	AEC16_VAL_02_B1	Soil	09 Aug 2023	<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_02_E1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_02_N1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_02_S1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50
	AEC16_VAL_02_W1			<0.5	<0.5	<0.5	-	-	-	-	-	<10	<50	<100	<100	<50

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#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

					Asbestos		TRH							BTEX							
					Asbestos ID (AS4964-2004)	C10-C16 (F2 minus Naphthalene)	C10-C16	C10-C40 (Sum of total)	C6-C10	C6-C10 (F1 minus BTEX)	C16-C34	C34-C40	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	
					g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL					0.1	50	50	50	10	10	100	100	1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	
Direct Contact HSL D Commercial/ Industrial							20,000		26,000		27,000	38,000	11,000	430		27,000			81,000		
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil							1,000		700		3,500	10,000									
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand										260   370   630				3   3   3   3				230			
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind													370								
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil						170	170			215	1,700	3,300		75	135	165			180		
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																					
EPA 2000 Use and Disposal Of Biosolids																					

Stockpile ID	Field ID	Matrix	Date	Classification																
Material surrounding Septic Tank																				
39VAL01	39VAL01_01	Soil	26 Jul 2023	O1 - Suitable	NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	39VAL01_02				NAD	<50	<50	610	<10	<10	330	280	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	39VAL01_03				NAD	<50	<50	440	<10	<10	240	200	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Excavation Footprint																				
N/A	AEC39_VAL_B1	Soil	26 Jul 2023	O1 - Suitable	NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC39_VAL_E1				NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC39_VAL_N1				NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC39_VAL_S1				NAD	<50	<50	170	<10	<10	170	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC39_VAL_W1				NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

NAD = No Asbestos Detected

AD = Asbestos Detected

#### Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand  
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

					Metals								PAH								
					Arsenic	Cadmium	Chromium (VI)	Copper	Lead	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					5	1	2	5	5	0.1	2	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Direct Contact HSL D Commercial/ Industrial																					
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																					
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind					160																
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil														1.4							
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil					3,000	900		240,000	1,500	730	6,000	400,000									
EPA 2000 Use and Disposal Of Biosolids																					

Stockpile ID	Field ID	Matrix	Date	Classification														
Material surrounding Septic Tank																		
39VAL01	39VAL01_01	Soil	26 Jul 2023	O1 - Suitable	9	<1	14	25	15	<0.1	13	70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	39VAL01_02				10	<1	16	50	20	<0.1	15	112	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	39VAL01_03				11	<1	15	37	18	<0.1	14	90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Excavation Footprint																		
N/A	AEC39_VAL_B1	Soil	26 Jul 2023	O1 - Suitable	6	<1	6	17	8	<0.1	3	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	AEC39_VAL_E1				7	<1	22	36	16	<0.1	26	92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	AEC39_VAL_N1				<1	<1	8	19	19	<0.1	7	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	AEC39_VAL_S1				<1	<1	7	18	12	<0.1	6	48	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	AEC39_VAL_W1				8	<1	6	22	9	<0.1	7	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

NAD = No Asbestos Detected

AD = Asbestos Detected

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand  
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

					PAH							Halogenated Benzenes	Organochlorine Pesticides								
					Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Hexachlorobenzene				Aldrin + Dieldrin	p-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Direct Contact HSL D Commercial/ Industrial									11,000												
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																					
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind									370												
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil											4,000	80				45		530			
EPA 2000 Use and Disposal Of Biosolids																					
Stockpile ID	Field ID	Matrix	Date	Classification																	
Material surrounding Septic Tank																					
39VAL01	39VAL01_01	Soil	26 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	39VAL01_02				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	39VAL01_03				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Excavation Footprint																					
N/A	AEC39_VAL_B1	Soil	26 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5									
	AEC39_VAL_E1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5								
	AEC39_VAL_N1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5								
	AEC39_VAL_S1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5								
	AEC39_VAL_W1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5								

NAD = No Asbestos Detected

AD = Asbestos Detected

#### Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand  
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

					Organochlorine Pesticides															
					γ-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2
Direct Contact HSL D Commercial/ Industrial																				
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																				
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																				
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind							640													
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																				
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil								3,600		2,000				100				50		2,500
EPA 2000 Use and Disposal Of Biosolids																				
Stockpile ID	Field ID	Matrix	Date	Classification																
Material surrounding Septic Tank																				
39VAL01	39VAL01_01	Soil	26 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	39VAL01_02				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	39VAL01_03				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Excavation Footprint																				
N/A	AEC39_VAL_B1	Soil	26 Jul 2023	O1 - Suitable																
	AEC39_VAL_E1																			
	AEC39_VAL_N1																			
	AEC39_VAL_S1																			
	AEC39_VAL_W1																			

NAD = No Asbestos Detected

AD = Asbestos Detected

## Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand  
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

					Organophosphorous Pesticides														PCBs		
					Azinophos methyl	Bromophos-ethyl	Carbo phenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Prothofofos	PCBs (Sum of total)	
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL					0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.05	0.1
Direct Contact HSL D Commercial/ Industrial																					
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																					
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																					
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																					
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																					
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil									2,000											7	
EPA 2000 Use and Disposal Of Biosolids																					
Stockpile ID	Field ID	Matrix	Date	Classification																	
Material surrounding Septic Tank																					
39VAL01	39VAL01_01	Soil	26 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.1	
	39VAL01_02				<0.05	<0.05	<0.05	<0.05	0.83	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.1		
	39VAL01_03				<0.05	<0.05	<0.05	<0.05	0.34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.1		
Excavation Footprint																					
N/A	AEC39_VAL_B1	Soil	26 Jul 2023	O1 - Suitable																	
	AEC39_VAL_E1																				
	AEC39_VAL_N1																				
	AEC39_VAL_S1																				
	AEC39_VAL_W1																				

NAD = No Asbestos Detected

AD = Asbestos Detected

## Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand  
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

					Pesticides				TPH					Biological	
					Demeton-S-methyl	Fenamiphos	Parathion	Phosphos-ethyl					C10-C36 (Sum of total)	Faecal Coliforms	E. Coll
					mg/kg	mg/kg	mg/kg	mg/kg	C6-C9	C10-C14	C15-C28	C29-C36	mg/kg	orgs/g	orgs/g
EQL					0.05	0.05	0.2	0.05	10	50	100	100	50	2	2
Direct Contact HSL D Commercial/ Industrial															
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil															
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand															
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind															
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil															
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil															
EPA 2000 Use and Disposal Of Biosolids													1000	100	

Stockpile ID	Field ID	Matrix	Date	Classification											
Material surrounding Septic Tank															
39VAL01	39VAL01_01	Soil	26 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	2	2
	39VAL01_02				<0.05	<0.05	<0.2	<0.05	<10	<50	140	340	480	11	11
	39VAL01_03				<0.05	<0.05	<0.2	<0.05	<10	<50	140	190	330	3	3
Excavation Footprint															
N/A	AEC39_VAL_B1	Soil	26 Jul 2023	O1 - Suitable					<10	<50	<100	<100	<50	<2	<2
	AEC39_VAL_E1							<10	<50	<100	<100	<50	<2	<2	
	AEC39_VAL_N1							<10	<50	<100	<100	<50	<2	<2	
	AEC39_VAL_S1							<10	<50	<100	170	170	<2	<2	
	AEC39_VAL_W1							<10	<50	<100	<100	<50	<2	<2	

NAD = No Asbestos Detected

AD = Asbestos Detected

#### Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand  
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil  
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil



	Asbestos	TRH							BTEX							
	Asbestos ID (AS4964-2004)	C10-C16 (F2 minus Naphthalene)	C10-C16	C10-C40 (Sum of total)	C6-C10	C6-C10 (F1 minus BTEX)	C16-C34	C34-C40	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX
	g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EOL	0.1	50		50	10	10		100	1	0.2	0.5		0.5	0.5	0.5	0.2
Direct Contact HSL D Commercial/ Industrial			20,000		26,000		27,000	38,000	11,000	430		27,000			81,000	
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil			1,000		700		3,500	10,000								
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand		NL				260				3	NL	NL			230	
>=1m, <2m		NL				370				3	NL	NL			NL	
>=2m, <4m		NL				630				3	NL	NL			NL	
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil									370							
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil		170	170			215	1,700	3,300		75	135	165			180	
EPA 2000 Use and Disposal Of Biosolids																

Stockpile ID	Field ID	Matrix	Date	Classification																
Material within Septic Tank																				
40SEP01	40SEP01_01	Soil	25 Jul 2023	O2 - Suitable subject to management	*NAD	<50	<50	160	<10	<10	160	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	40SEP01_02				*NAD	<50	<50	1,930	<10	<10	1,380	550	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	40SEP01_03				*NAD	<50	<50	4,860	<10	<10	3,310	1,550	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
40SEP02	40SEP02_01	Soil	28 Jul 2023	O2 - Suitable subject to management	*NAD	<50	<50	15,400	23	22	5,840	9,520	<1	<0.2	0.6	<0.5	<0.5	<0.5	<0.5	0.6
	40SEP02_02				*NAD	<50	<50	21,900	23	21	15,400	6,540	<1	<0.2	1.7	<0.5	<0.5	<0.5	<0.5	1.7
	40SEP02_03				*NAD	<50	<50	9,340	16	16	6,520	2,820	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	40SEP02_01 EXTRA				*NAD	<50	<50	15,400	23	22	5,840	9,520	<1	<0.2	0.6	<0.5	<0.5	<0.5	<0.5	0.6
	40SEP02_02 EXTRA				*NAD	<50	<50	21,900	23	21	15,400	6,540	<1	<0.2	1.7	<0.5	<0.5	<0.5	<0.5	1.7
	40SEP02_03 EXTRA				*NAD	<50	<50	9,340	16	16	6,520	2,820	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
Material surrounding Septic Tank																				
40VAL01	40VAL01_01	Soil	28 Jul 2023	O1 - Suitable	*NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	
40VAL02	40VAL02_01	Soil	28 Jul 2023	O1 - Suitable	*NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	
	40VAL02_02	Soil	28 Jul 2023	O1 - Suitable	*NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	
40VAL04	40VAL04_01	Soil	28 Jul 2023	O1 - Suitable	*NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	40VAL04_02				*NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	40VAL04_03				*NAD	<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
Excavation Footprint																				
N/A	AEC40_VAL_B1	Soil	28 Jul 2023	O1 - Suitable		<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC40_VAL_E1					<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC40_VAL_N1					<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC40_VAL_S1					<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	AEC40_VAL_W1					<50	<50	<50	<10	<10	<100	<100	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2

NAD = No Asbestos Detected

AD = Asbestos Detected

NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

					Metals								PAH							
					Arsenic	Cadmium	Chromium (VI)	Copper	Lead	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					5	1	2	5	5	0.1	2	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Direct Contact HSL D Commercial/ Industrial																				
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																				
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																				
>=1m, <2m																				
>=2m, <4m																				
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil					3,000	900		240,000	1,500	730	6,000	400,000								
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind					160															
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																	1.4			
EPA 2000 Use and Disposal Of Biosolids																				
Stockpile ID	Field ID	Matrix	Date	Classification																
Material within Septic Tank																				
40SEP01	40SEP01_01	Soil	25 Jul 2023	O2 - Suitable subject to management	7	<1	24	68	19	<0.1	16	238	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	40SEP01_02				7	1	24	137	24	0.3	17	466	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	40SEP01_03				<5	1	21	190	19	0.2	16	523	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
40SEP02	40SEP02_01	Soil	28 Jul 2023	O2 - Suitable subject to management	<5	2	30	354	28	0.3	14	687	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
	40SEP02_02				8	3	44	537	49	0.6	22	1,190	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	40SEP02_03				<5	1	26	304	25	0.3	11	570	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
	40SEP02_01 EXTRA				<5	2	30	354	28	0.3	14	687	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
	40SEP02_02 EXTRA				8	3	44	537	49	0.6	22	1190	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	40SEP02_03 EXTRA				<5	1	2	304	25	0.3	11	570	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Material surrounding Septic Tank																				
40VAL01	40VAL01_01	Soil	28 Jul 2023	O1 - Suitable	6	<1	17	37	17	<0.1	14	112	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
40VAL02	40VAL02_01	Soil	28 Jul 2023	O1 - Suitable	<5	<1	20	38	18	<0.1	15	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	40VAL02_02	Soil	28 Jul 2023	O1 - Suitable	7	<1	16	32	16	<0.1	13	58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
40VAL04	40VAL04_01	Soil	28 Jul 2023	O1 - Suitable	7	<1	17	30	19	<0.1	14	58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	40VAL04_02				41	<1	16	34	19	<0.1	17	86	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	40VAL04_03				6	<1	15	28	17	<0.1	16	66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Excavation Footprint																				
N/A	AEC40_VAL_B1	Soil	28 Jul 2023	O1 - Suitable	6	<1	12	21	14	<0.1	15	64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	AEC40_VAL_E1				6	<1	18	30	14	<0.1	10	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC40_VAL_N1				6	<1	19	38	15	<0.1	16	51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC40_VAL_S1				8	<1	15	32	12	<0.1	10	68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	AEC40_VAL_W1				24	<1	16	33	18	<0.1	15	79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

NAD = No Asbestos Detected

AD = Asbestos Detected

NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

	PAH									Halogenated Benzenes	Organochlorine Pesticides				
	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	Hexachlorobenzene	4,4'-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EOL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.05	0.05	0.05	0.05	0.05
Direct Contact HSL D Commercial/ Industrial						11,000									
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil															
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand															
>=1m, <2m															
>=2m, <4m															
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil									4,000	80				45	
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind						370									
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil															
EPA 2000 Use and Disposal Of Biosolids															

Stockpile ID	Field ID	Matrix	Date	Classification															
Material within Septic Tank																			
40SEP01	40SEP01_01	Soil	25 Jul 2023	O2 - Suitable subject to management	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP01_02				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP01_03				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
40SEP02	40SEP02_01	Soil	28 Jul 2023	O2 - Suitable subject to management	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP02_02				<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP02_03				<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP02_01 EXTRA				<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP02_02 EXTRA				<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP02_03 EXTRA				<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.05	<0.05	<0.05	<0.05	<0.05	
	40SEP02_03 EXTRA				<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.05	<0.05	<0.05	<0.05	<0.05	
Material surrounding Septic Tank																			
40VAL01	40VAL01_01	Soil	28 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05		
40VAL02	40VAL02_01	Soil	28 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
	40VAL02_02	Soil	28 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
40VAL04	40VAL04_01	Soil	28 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
	40VAL04_02				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
	40VAL04_03				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	
Excavation Footprint																			
N/A	AEC40_VAL_B1	Soil	28 Jul 2023	O1 - Suitable	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						
	AEC40_VAL_E1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						
	AEC40_VAL_N1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
	AEC40_VAL_S1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
	AEC40_VAL_W1				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					

NAD = No Asbestos Detected

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NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

Organochlorine Pesticides																			
	Chlordane	Chlordane (cis)	Chlordane (trans)	γ-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	γ-BHC (Lindane)			
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
EQL	0.05	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Direct Contact HSL D Commercial/ Industrial																			
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																			
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																			
>=1m, <2m																			
>=2m, <4m																			
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																			
	530						3,600		2,000				100						
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																			
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																			
EPA 2000 Use and Disposal Of Biosolids																			

Stockpile ID	Field ID	Matrix	Date	Classification															
Material within Septic Tank																			
40SEP01	40SEP01_01	Soil	25 Jul 2023	O2 - Suitable subject to management	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP01_02				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP01_03				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
40SEP02	40SEP02_01	Soil	28 Jul 2023	O2 - Suitable subject to management	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP02_02				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP02_03				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP02_01 EXTRA				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP02_02 EXTRA				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40SEP02_03 EXTRA				<0.5	<0.5	<0.5	<0.5	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Material surrounding Septic Tank																			
40VAL01	40VAL01_01	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
40VAL02	40VAL02_01	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40VAL02_02	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
40VAL04	40VAL04_01	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40VAL04_02				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	40VAL04_03				<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Excavation Footprint																			
N/A	AEC40_VAL_B1	Soil	28 Jul 2023	O1 - Suitable															
	AEC40_VAL_E1																		
	AEC40_VAL_N1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	AEC40_VAL_S1																		
	AEC40_VAL_W1																		

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#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

					Organochlorine Pesticides			Organophosphorous Pesticides														
					Heptachlor	Heptachlor epoxide	Methoxychlor	Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Methyl parathion		
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL					0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	
Direct Contact HSL D Commercial/ Industrial																						
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																						
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																						
>=1m, <2m																						
>=2m, <4m																						
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil					50		2,500					2,000										
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																						
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																						
EPA 2000 Use and Disposal Of Biosolids																						
Stockpile ID	Field ID	Matrix	Date	Classification																		
Material within Septic Tank																						
40SEP01	40SEP01_01	Soil	25 Jul 2023	O2 - Suitable subject to management	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40SEP01_02				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40SEP01_03				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
40SEP02	40SEP02_01	Soil	28 Jul 2023	O2 - Suitable subject to management	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40SEP02_02				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40SEP02_03				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40SEP02_01 EXTRA				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	40SEP02_02 EXTRA				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	40SEP02_03 EXTRA				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Material surrounding Septic Tank																						
40VAL01	40VAL01_01	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2		
40VAL02	40VAL02_01	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40VAL02_02	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
40VAL04	40VAL04_01	Soil	28 Jul 2023	O1 - Suitable	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40VAL04_02				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
	40VAL04_03				<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	
Excavation Footprint																						
N/A	AEC40_VAL_B1	Soil	28 Jul 2023	O1 - Suitable																		
	AEC40_VAL_E1																					
	AEC40_VAL_N1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	AEC40_VAL_S1																					
	AEC40_VAL_W1																					

NAD = No Asbestos Detected

AD = Asbestos Detected

NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

	Organophosphorous Pesticides		PCBs	Pesticides				TPH					Biological	
	Monocrotophos	Prothiofos	PCBs (Sum of total)	Demeton-S-methyl	Fenamiphos	Parathion	Phosphos-ethyl	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 (Sum of total)	Faecal Coliforms	E. Coli
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	orgs/g	orgs/g
EOL	0.2	0.05	0.1	0.05	0.05	0.2	0.05	10	50	100	100	50	2	2
Direct Contact HSL D Commercial/ Industrial														
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil														
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand														
>=1m, <2m														
>=2m, <4m														
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil			7											
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind														
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil														
EPA 2000 Use and Disposal Of Biosolids													1000	100

Stockpile ID	Field ID	Matrix	Date	Classification														
Material within Septic Tank																		
40SEP01	40SEP01_01	Soil	25 Jul 2023	O2 - Suitable subject to management	<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	140	140	3	3
	40SEP01_02				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	380	1,440	1,820	<2	<2
	40SEP01_03				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	690	3,490	4,180	>1,600	<2
40SEP02	40SEP02_01	Soil	28 Jul 2023	O2 - Suitable subject to management	<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	3,200	10,200	13,400	11	11
	40SEP02_02				<0.3	<0.06	<0.1	<0.06	<0.06	<0.3	<0.06	<10	<60	4,670	15,900	20,600	42	42
	40SEP02_03				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	1,860	6,880	8,740	20	20
	40SEP02_01 EXTRA				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	3,200	10,200	13,400	11	11
	40SEP02_02 EXTRA				<0.3	<0.06	<0.1	<0.06	<0.06	<0.3	<0.06	<10	<60	4,670	15,900	20,600	42	42
	40SEP02_03 EXTRA				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	1,860	6,880	8,740	20	20
Material surrounding Septic Tank																		
40VAL01	40VAL01_01	Soil	28 Jul 2023	O1 - Suitable	<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	<2	<2
40VAL02	40VAL02_01	Soil	28 Jul 2023	O1 - Suitable	<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	<2	<2
	40VAL02_02	Soil	28 Jul 2023	O1 - Suitable	<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	<2	<2
40VAL04	40VAL04_01	Soil	28 Jul 2023	O1 - Suitable	<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	<2	<2
	40VAL04_02				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	<2	<2
	40VAL04_03				<0.2	<0.05	<0.1	<0.05	<0.05	<0.2	<0.05	<10	<50	<100	<100	<50	<2	<2
Excavation Footprint																		
N/A	AEC40_VAL_B1	Soil	28 Jul 2023	O1 - Suitable								<10	<50	<100	<100	<50	<2	<2
	AEC40_VAL_E1										<10	<50	<100	<100	<50	<2	<2	
	AEC40_VAL_N1				-	-	-	-	-	-	<10	<50	<100	<100	<50	<2	<2	
	AEC40_VAL_S1										<10	<50	<100	<100	<50	<2	<2	
	AEC40_VAL_W1										<10	<50	<100	<100	<50	<2	<2	

NAD = No Asbestos Detected

AD = Asbestos Detected

NL = Non-limiting

#### Environmental Standards

Direct Contact HSL D Commercial/ Industrial

2013, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil

2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

2013, NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind

2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil

2000, EPA 2000 Table 3.5 Use and Disposal of Biosolids

## ***Attachment 4 – NATA Laboratory Reports***



## CERTIFICATE OF ANALYSIS

**Work Order** : **ES2326971**  
**Client** : **EP RISK MANAGEMENT**  
**Contact** : JENNY SHAO  
**Address** : LEVEL 13 Suite 1301, 80 Mount Street  
NORTH SYDNEY 2060  
**Telephone** : ----  
**Project** : EP3244  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : Hayley Erskine, Naomi Madigan, Troy Chatman  
**Site** : ----  
**Quote number** : ES23EPRISK0002 - ES PRIMARY WORK ONLY  
**No. of samples received** : 58  
**No. of samples analysed** : 50

**Page** : 1 of 32  
**Laboratory** : Environmental Division Sydney  
**Contact** : Jason Dighton  
**Address** : 277-289 Woodpark Road Smithfield NSW Australia 2164  
**Telephone** : +61-2-8784 8555  
**Date Samples Received** : 10-Aug-2023 15:50  
**Date Analysis Commenced** : 10-Aug-2023  
**Issue Date** : 14-Aug-2023 18:15



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

### Signatories

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

Signatories	Position	Accreditation Category
Alana Smylie	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Evie Sidarta	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Somlok Chai	Microbiologist	Sydney Microbiology, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW





## General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No\*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1	AEC16_VAL_01_B1
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-001	ES2326971-002	ES2326971-003	ES2326971-004	ES2326971-005
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	-----	1.0	%	12.5	7.2	10.2	8.6	8.3
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	<5	26	6	15	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	19	14	18	15	15
Copper	7440-50-8	5	mg/kg	37	32	46	39	45
Lead	7439-92-1	5	mg/kg	14	15	16	14	20
Nickel	7440-02-0	2	mg/kg	19	17	25	20	24
Zinc	7440-66-6	5	mg/kg	71	62	80	55	92
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	-----	10	mg/kg	<10	<10	<10	<10	<10





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1	AEC16_VAL_01_B1
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-001	ES2326971-002	ES2326971-003	ES2326971-004	ES2326971-005
					Result	Result	Result	Result	Result
<b>EP080/071: Total Petroleum Hydrocarbons - Continued</b>									
C10 - C14 Fraction	-----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	-----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	-----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	-----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	-----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	-----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	-----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	-----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	-----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		92.8	91.2	89.0	70.0	85.5
2-Chlorophenol-D4	93951-73-6	0.5	%		87.7	84.0	83.8	70.8	77.8
2,4,6-Tribromophenol	118-79-6	0.5	%		71.3	68.8	68.9	52.6	63.8
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		95.9	93.0	91.9	71.9	88.3
Anthracene-d10	1719-06-8	0.5	%		97.0	97.7	93.3	75.3	92.4
4-Terphenyl-d14	1718-51-0	0.5	%		90.9	89.7	85.4	68.5	84.0
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		90.5	94.0	106	105	93.9
Toluene-D8	2037-26-5	0.2	%		98.3	83.5	92.9	94.0	97.8



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1	AEC16_VAL_01_B1
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-001	ES2326971-002	ES2326971-003	ES2326971-004	ES2326971-005
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		118	108	118	122	122





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16VAL01_01	16VAL01_02	16VAL01_03	16SEP01_01	16SEP01_02
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-006	ES2326971-007	ES2326971-008	ES2326971-009	ES2326971-010
					Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	-----	1.0	%		14.4	13.7	12.1	15.7	13.0
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	-----	-	--		No	No	No	No	No
Organic Fibre	-----	-	--		No	No	No	No	No
Sample weight (dry)	-----	0.01	g		176	207	209	202	202
APPROVED IDENTIFIER:	-----	-	--		A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		8	8	<5	7	8
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		17	19	14	14	16
Copper	7440-50-8	5	mg/kg		31	36	47	32	29
Lead	7439-92-1	5	mg/kg		16	23	13	11	15
Nickel	7440-02-0	2	mg/kg		21	19	16	13	17
Zinc	7440-66-6	5	mg/kg		68	65	83	54	61
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	-----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP068A: Organochlorine Pesticides (OC)</b>									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	-----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16VAL01_01	16VAL01_02	16VAL01_03	16SEP01_01	16SEP01_02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-006	ES2326971-007	ES2326971-008	ES2326971-009	ES2326971-010
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16VAL01_01	16VAL01_02	16VAL01_03	16SEP01_01	16SEP01_02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-006	ES2326971-007	ES2326971-008	ES2326971-009	ES2326971-010
				Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	-----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16VAL01_01	16VAL01_02	16VAL01_03	16SEP01_01	16SEP01_02
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-006	ES2326971-007	ES2326971-008	ES2326971-009	ES2326971-010
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		71.0	68.2	77.7	68.3	86.6
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		84.0	77.4	86.6	77.9	96.3
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		82.7	75.6	88.6	75.7	91.4
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		93.9	93.0	98.2	92.4	95.4
2-Chlorophenol-D4	93951-73-6	0.5	%		79.7	86.5	89.9	84.5	88.2
2,4,6-Tribromophenol	118-79-6	0.5	%		77.9	69.0	76.6	68.9	72.6
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		96.0	95.5	99.1	92.7	97.4
Anthracene-d10	1719-06-8	0.5	%		103	97.7	101	94.8	98.9
4-Terphenyl-d14	1718-51-0	0.5	%		94.7	91.2	92.9	87.4	91.0
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		109	104	107	108	103
Toluene-D8	2037-26-5	0.2	%		92.6	93.8	93.5	91.2	82.8
4-Bromofluorobenzene	460-00-4	0.2	%		94.6	109	110	102	97.0



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP01_03	AEC16_VAL DUP01	AEC16_VAL TRP01	AEC16_VAL DUP02	AEC16_VAL TRP02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-011	ES2326971-012	ES2326971-013	ES2326971-014	ES2326971-015
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	-----	1.0	%	15.1	17.4	7.7	8.2	17.0
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Synthetic Mineral Fibre	-----	-	--	No	----	----	----	----
Organic Fibre	-----	-	--	No	----	----	----	----
Sample weight (dry)	-----	0.01	g	181	----	----	----	----
APPROVED IDENTIFIER:	-----	-	--	A. SMYLIE	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	7	5	9	13	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	17	20	13	17	18
Copper	7440-50-8	5	mg/kg	37	41	26	36	35
Lead	7439-92-1	5	mg/kg	14	14	9	16	13
Nickel	7440-02-0	2	mg/kg	19	20	14	20	20
Zinc	7440-66-6	5	mg/kg	70	70	55	71	61
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	-----	0.1	mg/kg	<0.1	----	----	----	----
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	-----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP01_03	AEC16_VAL DUP01	AEC16_VAL TRP01	AEC16_VAL DUP02	AEC16_VAL TRP02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-011	ES2326971-012	ES2326971-013	ES2326971-014	ES2326971-015
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP01_03	AEC16_VAL DUP01	AEC16_VAL TRP01	AEC16_VAL DUP02	AEC16_VAL TRP02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-011	ES2326971-012	ES2326971-013	ES2326971-014	ES2326971-015
				Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	-----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP01_03	AEC16_VAL DUP01	AEC16_VAL TRP01	AEC16_VAL DUP02	AEC16_VAL TRP02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-011	ES2326971-012	ES2326971-013	ES2326971-014	ES2326971-015
				Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>								
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	75.8	----	----	----	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>								
Dibromo-DDE	21655-73-2	0.05	%	86.8	----	----	----	----
<b>EP068T: Organophosphorus Pesticide Surrogate</b>								
DEF	78-48-8	0.05	%	85.5	----	----	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.5	%	94.7	94.9	90.8	95.0	85.4
2-Chlorophenol-D4	93951-73-6	0.5	%	87.4	82.0	80.8	85.4	73.1
2,4,6-Tribromophenol	118-79-6	0.5	%	74.2	78.4	68.1	76.5	71.5
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.5	%	95.4	94.0	88.1	96.1	86.3
Anthracene-d10	1719-06-8	0.5	%	98.6	102	92.4	99.8	96.3
4-Terphenyl-d14	1718-51-0	0.5	%	89.9	93.6	83.2	91.0	87.5
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	111	98.8	109	97.9	98.8
Toluene-D8	2037-26-5	0.2	%	94.1	95.4	98.8	97.2	98.3
4-Bromofluorobenzene	460-00-4	0.2	%	112	97.5	103	100.0	100





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC16_VAL_02_N1	AEC16_VAL_02_S1	AEC16_VAL_02_E1	AEC16_VAL_02_W1	AEC16_VAL_02_B1
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-020	ES2326971-021	ES2326971-022	ES2326971-023	ES2326971-024
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	-----	1.0	%	7.0	12.1	10.3	17.0	13.9
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	11	8	7	6	10
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	17	20	18	18	18
Copper	7440-50-8	5	mg/kg	34	34	45	28	35
Lead	7439-92-1	5	mg/kg	13	11	11	10	14
Nickel	7440-02-0	2	mg/kg	22	22	19	19	22
Zinc	7440-66-6	5	mg/kg	76	67	73	59	70
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	-----	10	mg/kg	<10	<10	<10	<10	<10



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC16_VAL_02_N1	AEC16_VAL_02_S1	AEC16_VAL_02_E1	AEC16_VAL_02_W1	AEC16_VAL_02_B1
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-020	ES2326971-021	ES2326971-022	ES2326971-023	ES2326971-024
				Result	Result	Result	Result	Result
<b>EP080/071: Total Petroleum Hydrocarbons - Continued</b>								
C10 - C14 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	-----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	-----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.5	%	94.9	94.8	88.3	88.3	90.6
2-Chlorophenol-D4	93951-73-6	0.5	%	87.5	84.8	74.1	79.5	82.5
2,4,6-Tribromophenol	118-79-6	0.5	%	64.7	66.7	65.4	66.3	67.7
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.5	%	95.5	96.0	89.7	91.6	93.1
Anthracene-d10	1719-06-8	0.5	%	96.2	97.0	94.9	96.0	95.5
4-Terphenyl-d14	1718-51-0	0.5	%	91.1	91.0	87.7	88.6	87.5
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	102	96.8	100	77.8	78.5
Toluene-D8	2037-26-5	0.2	%	96.8	100	106	82.7	81.3



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC16_VAL_02_N1	AEC16_VAL_02_S1	AEC16_VAL_02_E1	AEC16_VAL_02_W1	AEC16_VAL_02_B1
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-020	ES2326971-021	ES2326971-022	ES2326971-023	ES2326971-024
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		103	105	103	85.1	82.8





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16VAL02_01	16VAL02_02	16VAL03_01	16SEP02_01	16SEP02_02
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-025	ES2326971-026	ES2326971-027	ES2326971-028	ES2326971-029
					Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	-----	1.0	%		13.7	22.7	12.7	7.7	11.7
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	-----	-	--		No	No	No	No	No
Organic Fibre	-----	-	--		No	No	No	No	No
Sample weight (dry)	-----	0.01	g		202	203	179	220	247
APPROVED IDENTIFIER:	-----	-	--		A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		9	8	10	11	9
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		17	18	18	18	20
Copper	7440-50-8	5	mg/kg		39	36	34	36	31
Lead	7439-92-1	5	mg/kg		14	12	16	12	13
Nickel	7440-02-0	2	mg/kg		19	20	21	20	20
Zinc	7440-66-6	5	mg/kg		73	84	68	73	74
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	-----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP068A: Organochlorine Pesticides (OC)</b>									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	-----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16VAL02_01	16VAL02_02	16VAL03_01	16SEP02_01	16SEP02_02
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-025	ES2326971-026	ES2326971-027	ES2326971-028	ES2326971-029
					Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>									
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16VAL02_01	16VAL02_02	16VAL03_01	16SEP02_01	16SEP02_02
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-025	ES2326971-026	ES2326971-027	ES2326971-028	ES2326971-029
				Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16VAL02_01	16VAL02_02	16VAL03_01	16SEP02_01	16SEP02_02
Sampling date / time					09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00	09-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-025	ES2326971-026	ES2326971-027	ES2326971-028	ES2326971-029
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		73.4	74.2	68.8	62.0	68.9
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		72.5	85.3	76.4	66.8	80.4
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		76.4	92.8	80.6	71.7	85.7
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		86.3	84.5	86.0	96.6	98.4
2-Chlorophenol-D4	93951-73-6	0.5	%		84.5	84.9	85.5	94.8	97.1
2,4,6-Tribromophenol	118-79-6	0.5	%		60.4	50.6	73.3	65.6	76.7
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		90.0	88.1	88.4	101	100
Anthracene-d10	1719-06-8	0.5	%		86.1	85.0	88.7	98.8	99.9
4-Terphenyl-d14	1718-51-0	0.5	%		98.8	99.6	96.9	110	111
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		82.7	87.9	88.4	88.5	81.3
Toluene-D8	2037-26-5	0.2	%		85.4	91.3	92.2	93.6	88.9
4-Bromofluorobenzene	460-00-4	0.2	%		85.0	88.6	91.1	88.1	87.4



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP02_03	AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1
Sampling date / time				09-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-030	ES2326971-031	ES2326971-032	ES2326971-033	ES2326971-034
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	0.1	%	----	13.3	11.9	10.4	13.4
Moisture Content	----	1.0	%	6.4	----	----	----	----
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Synthetic Mineral Fibre	----	-	--	No	----	----	----	----
Organic Fibre	----	-	--	No	----	----	----	----
Sample weight (dry)	----	0.01	g	244	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLLIE	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	11	----	----	----	----
Copper	7440-50-8	5	mg/kg	12	----	----	----	----
Lead	7439-92-1	5	mg/kg	<5	----	----	----	----
Nickel	7440-02-0	2	mg/kg	9	----	----	----	----
Zinc	7440-66-6	5	mg/kg	33	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP02_03	AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1
Sampling date / time				09-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-030	ES2326971-031	ES2326971-032	ES2326971-033	ES2326971-034
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				16SEP02_03	AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1
Sampling date / time				09-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-030	ES2326971-031	ES2326971-032	ES2326971-033	ES2326971-034
				Result	Result	Result	Result	Result

### EP068B: Organophosphorus Pesticides (OP) - Continued

### EP075(SIM)B: Polynuclear Aromatic Hydrocarbons

Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	----	----	----

### EP080/071: Total Petroleum Hydrocarbons

C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----

### EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16SEP02_03	AEC16_VAL_01_N1	AEC16_VAL_01_S1	AEC16_VAL_01_E1	AEC16_VAL_01_W1
Sampling date / time					09-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-030	ES2326971-031	ES2326971-032	ES2326971-033	ES2326971-034
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>									
Faecal Coliforms	----	2	MPN/g		----	<2	<2	<2	<2
Escherichia coli	----	2	MPN/g		----	<2	<2	<2	<2
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		82.6	----	----	----	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		92.0	----	----	----	----
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		103	----	----	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		105	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		104	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		87.4	----	----	----	----
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		106	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		105	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		117	----	----	----	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		87.5	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		89.4	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		86.8	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC16_VAL_01_B1	16VAL01_01	16VAL01_02	16VAL01_03	16SEP01_01
				Sampling date / time	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit	ES2326971-035	ES2326971-036	ES2326971-037	ES2326971-038	ES2326971-039	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	11.9	12.0	10.6	11.3	10.1	
MM804: Faecal Coliforms & E.coli by MPN									
Faecal Coliforms	----	2	MPN/g	<2	<2	<2	<2	<2	
Escherichia coli	----	2	MPN/g	<2	<2	<2	<2	<2	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16SEP01_02	16SEP01_03	AEC16_VAL_02_N1	AEC16_VAL_02_S1	AEC16_VAL_02_E1
Sampling date / time					10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-040	ES2326971-041	ES2326971-042	ES2326971-043	ES2326971-044
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		8.4	6.7	5.8	10.8	9.4
MM804: Faecal Coliforms & E.coli by MPN									
Faecal Coliforms	----	2	MPN/g		<2	<2	<2	<2	<2
Escherichia coli	----	2	MPN/g		<2	<2	<2	<2	<2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC16_VAL_02_W1	AEC16_VAL_02_B1	16VAL02_01	16VAL02_02	16VAL03_01
Sampling date / time					10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00
Compound	CAS Number	LOR	Unit		ES2326971-045	ES2326971-046	ES2326971-047	ES2326971-048	ES2326971-049
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		8.0	11.1	5.7	4.8	9.7
MM804: Faecal Coliforms & E.coli by MPN									
Faecal Coliforms	----	2	MPN/g		<2	<2	<2	<2	<2
Escherichia coli	----	2	MPN/g		<2	<2	<2	<2	<2





Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	16SEP02_01	16SEP02_02	16SEP02_03	----	----
Sampling date / time					10-Aug-2023 00:00	10-Aug-2023 00:00	10-Aug-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2326971-050	ES2326971-051	ES2326971-052	-----	-----
				Result	Result	Result		----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		7.6	6.3	10.3	----	----
MM804: Faecal Coliforms & E.coli by MPN									
Faecal Coliforms	----	2	MPN/g		<2	<2	<2	----	----
Escherichia coli	----	2	MPN/g		<2	<2	<2	----	----



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Sample ID

				AEC16_RS01	AEC16_RS02	----	----	----
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2326971-016	ES2326971-017	-----	-----	-----
				Result	Result	----	----	----
<b>EG020T: Total Metals by ICP-MS</b>								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	µg/L	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	µg/L	<0.5	<0.5	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	-----	20	µg/L	<20	<20	----	----	----
C10 - C14 Fraction	-----	50	µg/L	<50	<50	----	----	----
C15 - C28 Fraction	-----	100	µg/L	<100	<100	----	----	----
C29 - C36 Fraction	-----	50	µg/L	<50	<50	----	----	----
^ C10 - C36 Fraction (sum)	-----	50	µg/L	<50	<50	----	----	----





## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Sample ID

				AEC16_RS01	AEC16_RS02	----	----	----
Sampling date / time				09-Aug-2023 00:00	09-Aug-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2326971-016	ES2326971-017	-----	-----	-----
				Result	Result	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	----	----	----
<b>EP080: BTEXN</b>								
Benzene	71-43-2	1	µg/L	<1	<1	----	----	----
Toluene	108-88-3	2	µg/L	<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	----	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	1.0	%	24.9	27.6	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	45.5	58.4	----	----	----
2,4,6-Tribromophenol	118-79-6	1.0	%	35.1	52.6	----	----	----
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	1.0	%	55.4	68.4	----	----	----
Anthracene-d10	1719-06-8	1.0	%	65.0	65.4	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	81.0	80.1	----	----	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	2	%	88.1	119	----	----	----
Toluene-D8	2037-26-5	2	%	93.7	112	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	87.4	109	----	----	----



## Analytical Results

### Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>		
EA200: Description	16VAL01_01 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16VAL01_02 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16VAL01_03 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16SEP01_01 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16SEP01_02 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16SEP01_03 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16VAL02_01 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16VAL02_02 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16VAL03_01 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16SEP02_01 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16SEP02_02 - 09-Aug-2023 00:00	Soil sample.
EA200: Description	16SEP02_03 - 09-Aug-2023 00:00	Soil sample.





## Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	39	149
<b>EP068S: Organochlorine Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	49	147
<b>EP068T: Organophosphorus Pesticide Surrogate</b>			
DEF	78-48-8	35	143
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137

## Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils



## CERTIFICATE OF ANALYSIS

**Work Order** : **ES2324984**  
**Client** : **EP RISK MANAGEMENT**  
**Contact** : **EMMA STRONG**  
**Address** : **UNIT 22/1 RICKETTS ROAD**  
**MOUNT WAVERLEY VIC 3149**  
**Telephone** : **----**  
**Project** : **EP3244**  
**Order number** : **----**  
**C-O-C number** : **----**  
**Sampler** : **SALLY KENNEDY**  
**Site** : **----**  
**Quote number** : **EM23EPRISK0002**  
**No. of samples received** : **16**  
**No. of samples analysed** : **13**

**Page** : 1 of 15  
**Laboratory** : Environmental Division Sydney  
**Contact** : Jason Dighton  
**Address** : 277-289 Woodpark Road Smithfield NSW Australia 2164  
**Telephone** : +61-2-8784 8555  
**Date Samples Received** : 26-Jul-2023 17:30  
**Date Analysis Commenced** : 27-Jul-2023  
**Issue Date** : 31-Jul-2023 18:40



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

### Signatories

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

Signatories	Position	Accreditation Category
Alana Smylie	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Evie Sidarta	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Somlok Chai	Microbiologist	Sydney Microbiology, Smithfield, NSW





## General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No\*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC39_VAL_N1	AEC39_VAL_DUP01	AEC39_VAL_TRP01	AEC39_VAL_S1	AEC39_VAL_E1
Sampling date / time				26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2324984-001	ES2324984-002	ES2324984-003	ES2324984-004	ES2324984-005
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	11.7	8.0	7.9	10.1	11.8
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	No	No
Asbestos (Trace)	1332-21-4	-	-	No	----	----	No	No
Asbestos Type	1332-21-4	-	--	-	----	----	-	-
Synthetic Mineral Fibre	----	-	--	No	----	----	No	No
Organic Fibre	----	-	--	No	----	----	No	No
Sample weight (dry)	----	0.01	g	294	----	----	104	199
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	A. SMYLIE	A. SMYLIE
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	<5	10	9	<5	7
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	11	16	7	22
Copper	7440-50-8	5	mg/kg	19	19	28	18	36
Lead	7439-92-1	5	mg/kg	19	11	13	12	16
Nickel	7440-02-0	2	mg/kg	7	8	11	6	26
Zinc	7440-66-6	5	mg/kg	41	34	40	48	92
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC39_VAL_N1	AEC39_VAL_DUP01	AEC39_VAL_TRP01	AEC39_VAL_S1	AEC39_VAL_E1
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit		ES2324984-001	ES2324984-002	ES2324984-003	ES2324984-004	ES2324984-005
					Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<b>170</b>	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<b>170</b>	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<b>170</b>	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<b>170</b>	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>									
Faecal Coliforms	----	2	MPN/g		<2	----	----	<2	<2
Escherichia coli	----	2	MPN/g		<2	----	----	<2	<2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC39_VAL_N1	AEC39_VAL_DUP01	AEC39_VAL_TRP01	AEC39_VAL_S1	AEC39_VAL_E1
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit		ES2324984-001	ES2324984-002	ES2324984-003	ES2324984-004	ES2324984-005
					Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		87.5	83.1	83.9	82.1	81.3
2-Chlorophenol-D4	93951-73-6	0.5	%		88.8	86.9	87.2	85.3	85.0
2,4,6-Tribromophenol	118-79-6	0.5	%		94.3	89.4	90.0	92.0	89.4
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		97.1	95.4	96.2	94.3	93.7
Anthracene-d10	1719-06-8	0.5	%		106	111	110	103	104
4-Terphenyl-d14	1718-51-0	0.5	%		100	97.8	97.8	96.8	95.2
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		90.4	97.6	93.4	95.1	92.3
Toluene-D8	2037-26-5	0.2	%		103	107	107	106	102
4-Bromofluorobenzene	460-00-4	0.2	%		103	111	112	112	107





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC39_VAL_W1	AEC39_VAL_B1	TRIP SPIKE	TRIP BLANK	39VAL01_01
Sampling date / time				26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2324984-006	ES2324984-007	ES2324984-011	ES2324984-012	ES2324984-013
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	-----	1.0	%	13.0	4.4	----	----	15.2
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	----	----	No
Asbestos (Trace)	1332-21-4	-	-	No	No	----	----	No
Asbestos Type	1332-21-4	-	--	-	-	----	----	-
Synthetic Mineral Fibre	-----	-	--	No	No	----	----	No
Organic Fibre	-----	-	--	No	No	----	----	No
Sample weight (dry)	-----	0.01	g	82.1	120	----	----	252
APPROVED IDENTIFIER:	-----	-	--	A. SMYLLIE	A. SMYLLIE	----	----	A. SMYLLIE
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	8	6	----	----	9
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	<1
Chromium	7440-47-3	2	mg/kg	6	6	----	----	14
Copper	7440-50-8	5	mg/kg	22	17	----	----	25
Lead	7439-92-1	5	mg/kg	9	8	----	----	15
Nickel	7440-02-0	2	mg/kg	7	3	----	----	13
Zinc	7440-66-6	5	mg/kg	17	20	----	----	70
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	-----	0.1	mg/kg	----	----	----	----	<0.1
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	----	<0.05
^ Total Chlordane (sum)	-----	0.05	mg/kg	----	----	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	----	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC39_VAL_W1	AEC39_VAL_B1	TRIP SPIKE	TRIP BLANK	39VAL01_01
Sampling date / time				26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2324984-006	ES2324984-007	ES2324984-011	ES2324984-012	ES2324984-013
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	----	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	----	----	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	----	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	----	----	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	----	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	----	----	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	----	----	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	----	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	----	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	----	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	----	<b>0.06</b>
Parathion	56-38-2	0.2	mg/kg	----	----	----	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	----	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	----	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC39_VAL_W1	AEC39_VAL_B1	TRIP SPIKE	TRIP BLANK	39VAL01_01
Sampling date / time				26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2324984-006	ES2324984-007	ES2324984-011	ES2324984-012	ES2324984-013
				Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	<b>0.6</b>	<b>0.6</b>	----	----	<b>0.6</b>
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	<b>1.2</b>	<b>1.2</b>	----	----	<b>1.2</b>
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	<50





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC39_VAL_W1	AEC39_VAL_B1	TRIP SPIKE	TRIP BLANK	39VAL01_01
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00
Compound	CAS Number	LOR	Unit		ES2324984-006	ES2324984-007	ES2324984-011	ES2324984-012	ES2324984-013
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	----	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	4.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	5.2	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	5.6	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	2.3	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	17.6	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	7.9	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>									
Faecal Coliforms	----	2	MPN/g		<2	<2	----	----	2
Escherichia coli	----	2	MPN/g		<2	<2	----	----	2
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	104
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	----	86.2
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		----	----	----	----	119
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		83.1	84.4	----	----	84.0
2-Chlorophenol-D4	93951-73-6	0.5	%		84.7	86.6	----	----	85.6
2,4,6-Tribromophenol	118-79-6	0.5	%		86.8	83.5	----	----	87.4
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		94.8	95.8	----	----	95.8
Anthracene-d10	1719-06-8	0.5	%		111	114	----	----	106
4-Terphenyl-d14	1718-51-0	0.5	%		95.7	95.2	----	----	96.7
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		81.4	92.5	92.1	87.4	92.4
Toluene-D8	2037-26-5	0.2	%		89.0	101	98.7	92.6	104
4-Bromofluorobenzene	460-00-4	0.2	%		95.0	107	104	99.6	108



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	39VAL01_02	39VAL01_03	TRIP SPIKE CONTROL	----	----
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324984-014	ES2324984-015	ES2324984-016	-----	-----
					Result	Result	Result	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	-----	1.0	%		25.5	24.8	----	----	----
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	----	----	----
Asbestos (Trace)	1332-21-4	-	-		No	No	----	----	----
Asbestos Type	1332-21-4	-	--		-	-	----	----	----
Synthetic Mineral Fibre	-----	-	--		No	No	----	----	----
Organic Fibre	-----	-	--		No	No	----	----	----
Sample weight (dry)	-----	0.01	g		200	314	----	----	----
APPROVED IDENTIFIER:	-----	-	--		A. SMYLIE	A. SMYLIE	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		10	11	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg		16	15	----	----	----
Copper	7440-50-8	5	mg/kg		50	37	----	----	----
Lead	7439-92-1	5	mg/kg		20	18	----	----	----
Nickel	7440-02-0	2	mg/kg		15	14	----	----	----
Zinc	7440-66-6	5	mg/kg		112	90	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	-----	0.1	mg/kg		<0.1	<0.1	----	----	----
<b>EP068A: Organochlorine Pesticides (OC)</b>									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Total Chlordane (sum)	-----	0.05	mg/kg		<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	39VAL01_02	39VAL01_03	TRIP SPIKE CONTROL	----	----
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324984-014	ES2324984-015	ES2324984-016	-----	-----
					Result	Result	Result	----	----
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>									
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	----	----	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<b>0.83</b>	<b>0.34</b>	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	----	----	----





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	39VAL01_02	39VAL01_03	TRIP SPIKE CONTROL	----	----
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324984-014	ES2324984-015	ES2324984-016	-----	-----
					Result	Result	Result	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg		<b>0.6</b>	<b>0.6</b>	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg		<b>1.2</b>	<b>1.2</b>	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	-----	10	mg/kg		<10	<10	----	----	----
C10 - C14 Fraction	-----	50	mg/kg		<50	<50	----	----	----
C15 - C28 Fraction	-----	100	mg/kg		<b>140</b>	<b>140</b>	----	----	----
C29 - C36 Fraction	-----	100	mg/kg		<b>340</b>	<b>190</b>	----	----	----
^ C10 - C36 Fraction (sum)	-----	50	mg/kg		<b>480</b>	<b>330</b>	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	----	----
>C10 - C16 Fraction	-----	50	mg/kg		<50	<50	----	----	----
>C16 - C34 Fraction	-----	100	mg/kg		<b>330</b>	<b>240</b>	----	----	----
>C34 - C40 Fraction	-----	100	mg/kg		<b>280</b>	<b>200</b>	----	----	----
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg		<b>610</b>	<b>440</b>	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	39VAL01_02	39VAL01_03	TRIP SPIKE CONTROL	----	----
Sampling date / time					26-Jul-2023 00:00	26-Jul-2023 00:00	26-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324984-014	ES2324984-015	ES2324984-016	-----	-----
				Result	Result	Result		----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)		----	50	mg/kg	<50	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	4.8	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	5.4	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	6.0	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	2.5	----	----
^ Sum of BTEX		----	0.2	mg/kg	<0.2	<0.2	18.7	----	----
^ Total Xylenes		----	0.5	mg/kg	<0.5	<0.5	8.5	----	----
Naphthalene		91-20-3	1	mg/kg	<1	<1	<1	----	----
MM804: Faecal Coliforms & E.coli by MPN									
Faecal Coliforms		----	2	MPN/g	11	3	----	----	----
Escherichia coli		----	2	MPN/g	11	3	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl		2051-24-3	0.1	%	98.9	104	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE		21655-73-2	0.05	%	94.1	96.6	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF		78-48-8	0.05	%	115	124	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6		13127-88-3	0.5	%	83.7	84.0	----	----	----
2-Chlorophenol-D4		93951-73-6	0.5	%	83.6	84.6	----	----	----
2,4,6-Tribromophenol		118-79-6	0.5	%	92.2	91.2	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl		321-60-8	0.5	%	94.2	92.1	----	----	----
Anthracene-d10		1719-06-8	0.5	%	102	102	----	----	----
4-Terphenyl-d14		1718-51-0	0.5	%	95.1	95.5	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4		17060-07-0	0.2	%	90.6	87.2	91.8	----	----
Toluene-D8		2037-26-5	0.2	%	107	99.1	100	----	----
4-Bromofluorobenzene		460-00-4	0.2	%	112	107	106	----	----



Analytical Results

Descriptive Results

Sub-Matrix: SOIL

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	AEC39_VAL_N1 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	AEC39_VAL_S1 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	AEC39_VAL_E1 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	AEC39_VAL_W1 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	AEC39_VAL_B1 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	39VAL01_01 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	39VAL01_02 - 26-Jul-2023 00:00	Soil sample.
EA200: Description	39VAL01_03 - 26-Jul-2023 00:00	Soil sample.





## Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	39	149
<b>EP068S: Organochlorine Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	49	147
<b>EP068T: Organophosphorus Pesticide Surrogate</b>			
DEF	78-48-8	35	143
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

## Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils



## CERTIFICATE OF ANALYSIS

Work Order	: ES2324759	Page	: 1 of 8
Amendment	: 1		
Client	: EP RISK MANAGEMENT	Laboratory	: Environmental Division Sydney
Contact	: JENNY SHAO	Contact	: Jason Dighton
Address	: LEVEL 13 Suite 1301, 80 Mount Street NORTH SYDNEY 2060	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: EP3244	Date Samples Received	: 25-Jul-2023 15:57
Order number	: ----	Date Analysis Commenced	: 25-Jul-2023
C-O-C number	: ----	Issue Date	: 01-Aug-2023 13:32
Sampler	: SALLY KENNEDY		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 7		
No. of samples analysed	: 3		



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

### Signatories

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

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Evie Sidarta	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Somlok Chai	Microbiologist	Sydney Microbiology, Smithfield, NSW



## General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- Amendment (01/08/2023): This report has been amended as a result of a request to change sample identification numbers (IDs) received from Jenny Shao on 01/08/2023, for samples 001-003. All analysis results are as per the previous report.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No\*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40SEP01_01	40SEP01_02	40SEP01_03	----	----
Sampling date / time					25-Jul-2023 00:00	25-Jul-2023 00:00	25-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324759-001	ES2324759-002	ES2324759-003	-----	-----
					Result	Result	Result	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	-----	1.0	%		26.7	30.0	48.0	----	----
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	----	----
Asbestos (Trace)	1332-21-4	-	-		No	No	No	----	----
Asbestos Type	1332-21-4	-	--		-	-	-	----	----
Synthetic Mineral Fibre	-----	-	--		No	No	No	----	----
Organic Fibre	-----	-	--		Yes	Yes	Yes	----	----
Sample weight (dry)	-----	0.01	g		566	407	415	----	----
APPROVED IDENTIFIER:	-----	-	--		B.SCHRADER	B.SCHRADER	B.SCHRADER	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		7	7	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	1	1	----	----
Chromium	7440-47-3	2	mg/kg		24	24	21	----	----
Copper	7440-50-8	5	mg/kg		68	137	190	----	----
Lead	7439-92-1	5	mg/kg		19	24	19	----	----
Nickel	7440-02-0	2	mg/kg		16	17	16	----	----
Zinc	7440-66-6	5	mg/kg		238	466	523	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	0.3	0.2	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	-----	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
<b>EP068A: Organochlorine Pesticides (OC)</b>									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	-----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				40SEP01_01	40SEP01_02	40SEP01_03	----	----
Sampling date / time				25-Jul-2023 00:00	25-Jul-2023 00:00	25-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2324759-001	ES2324759-002	ES2324759-003	-----	-----
				Result	Result	Result	----	----
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40SEP01_01	40SEP01_02	40SEP01_03	----	----
Sampling date / time					25-Jul-2023 00:00	25-Jul-2023 00:00	25-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324759-001	ES2324759-002	ES2324759-003	-----	-----
				Result	Result	Result		----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg		<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	----	----
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg		<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	-----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	-----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	-----	100	mg/kg		<100	<b>380</b>	<b>690</b>	----	----
C29 - C36 Fraction	-----	100	mg/kg		<b>140</b>	<b>1440</b>	<b>3490</b>	----	----
^ C10 - C36 Fraction (sum)	-----	50	mg/kg		<b>140</b>	<b>1820</b>	<b>4180</b>	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	----	----
>C10 - C16 Fraction	-----	50	mg/kg		<50	<50	<50	----	----
>C16 - C34 Fraction	-----	100	mg/kg		<b>160</b>	<b>1380</b>	<b>3310</b>	----	----
>C34 - C40 Fraction	-----	100	mg/kg		<100	<b>550</b>	<b>1550</b>	----	----
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg		<b>160</b>	<b>1930</b>	<b>4860</b>	----	----





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40SEP01_01	40SEP01_02	40SEP01_03	----	----
Sampling date / time					25-Jul-2023 00:00	25-Jul-2023 00:00	25-Jul-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2324759-001	ES2324759-002	ES2324759-003	-----	-----
				Result	Result	Result		----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	----	----
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>									
Faecal Coliforms	----	2	MPN/g		3	<2	>1600	----	----
Escherichia coli	----	2	MPN/g		3	<2	<2	----	----
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		98.1	84.2	63.3	----	----
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		80.2	70.6	62.6	----	----
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		96.1	100	106	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		85.4	82.7	78.3	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		85.8	81.5	85.6	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		81.6	82.1	87.5	----	----
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		92.4	90.0	94.2	----	----
Anthracene-d10	1719-06-8	0.5	%		95.7	92.2	96.3	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		92.8	88.3	91.4	----	----
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		83.3	93.8	90.2	----	----
Toluene-D8	2037-26-5	0.2	%		84.0	93.8	91.8	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		98.7	107	106	----	----



**Analytical Results**

**Descriptive Results**

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	40SEP01_01 - 25-Jul-2023 00:00	A soil sample.
EA200: Description	40SEP01_02 - 25-Jul-2023 00:00	A soil sample.
EA200: Description	40SEP01_03 - 25-Jul-2023 00:00	A soil sample.



## Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	39	149
<b>EP068S: Organochlorine Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	49	147
<b>EP068T: Organophosphorus Pesticide Surrogate</b>			
DEF	78-48-8	35	143
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

## Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils





## CERTIFICATE OF ANALYSIS

**Work Order** : **ES2325381**  
**Client** : **EP RISK MANAGEMENT**  
**Contact** : **EMMA STRONG**  
**Address** : **UNIT 22/1 RICKETTS ROAD**  
**MOUNT WAVERLEY VIC 3149**  
**Telephone** : **----**  
**Project** : **EP3244**  
**Order number** : **----**  
**C-O-C number** : **----**  
**Sampler** : **SALLY KENNEDY**  
**Site** : **----**  
**Quote number** : **EM23EPRISK0002**  
**No. of samples received** : **21**  
**No. of samples analysed** : **21**

**Page** : 1 of 24  
**Laboratory** : Environmental Division Sydney  
**Contact** : Jason Dighton  
**Address** : 277-289 Woodpark Road Smithfield NSW Australia 2164  
**Telephone** : +61-2-8784 8555  
**Date Samples Received** : 28-Jul-2023 16:30  
**Date Analysis Commenced** : 29-Jul-2023  
**Issue Date** : 04-Aug-2023 10:11



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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

### Signatories

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

Signatories	Position	Accreditation Category
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Somlok Chai	Microbiologist	Sydney Microbiology, Smithfield, NSW



## General Comments

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

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

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

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

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

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

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

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EG005T: Poor precision was obtained for Zinc on sample EW2303350 # 001. Confirmed by re-digestion and reanalysis.
- EP075(SIM): LOR for samples raised due to high amount of moisture contents.
- EP071: LOR of sample raised due to the high amount of moisture content present.
- EP068: LOR for sample raised due to the high amount of moisture present.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- Microbiological comment: The samples 17, 18 and 19 were out of holding time. It may be informative to record this fact. At the time of the client informing ALS to perform the microbiological analysis, the sample was completely out of holding time.
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres



- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
  - EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
  - EA200: 'No\*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
  - EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
  - EA200: N/A - Not Applicable
-



Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC40_VAL_N1	AEC40_VAL_DUP01	AEC40_VAL_TRIP01	AEC40_VAL_S1	AEC40_VAL_E1
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	
Compound	CAS Number	LOR	Unit	ES2325381-001	ES2325381-002	ES2325381-003	ES2325381-004	ES2325381-005	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	----	----	----	17.1	19.6	
Moisture Content	----	1.0	%	19.7	19.2	19.7	----	----	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	6	5	6	8	6	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	19	19	19	15	18	
Copper	7440-50-8	5	mg/kg	38	37	38	32	30	
Lead	7439-92-1	5	mg/kg	15	15	17	12	14	
Nickel	7440-02-0	2	mg/kg	16	16	16	10	10	
Zinc	7440-66-6	5	mg/kg	51	49	50	68	46	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2	
EP080/071: Total Petroleum Hydrocarbons									



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC40_VAL_N1	AEC40_VAL_DUP01	AEC40_VAL_TRIP01	AEC40_VAL_S1	AEC40_VAL_E1
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-001	ES2325381-002	ES2325381-003	ES2325381-004	ES2325381-005
				Result	Result	Result	Result	Result
<b>EP080/071: Total Petroleum Hydrocarbons - Continued</b>								
C6 - C9 Fraction	-----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	-----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	-----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	-----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	-----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	-----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>								
Faecal Coliforms	-----	2	MPN/g	<2	----	----	<2	<2
Escherichia coli	-----	2	MPN/g	<2	----	----	<2	<2
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.5	%	78.9	79.3	79.7	77.9	77.5
2-Chlorophenol-D4	93951-73-6	0.5	%	78.7	79.3	79.7	78.7	78.3
2,4,6-Tribromophenol	118-79-6	0.5	%	62.6	65.4	61.3	61.1	61.4
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.5	%	95.1	94.7	96.5	92.4	94.9
Anthracene-d10	1719-06-8	0.5	%	93.8	92.4	93.0	93.2	93.7



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC40_VAL_N1	AEC40_VAL_DUP01	AEC40_VAL_TRIP01	AEC40_VAL_S1	AEC40_VAL_E1
Sampling date / time					28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit		ES2325381-001	ES2325381-002	ES2325381-003	ES2325381-004	ES2325381-005
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		97.1	97.6	96.1	96.3	95.4
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		113	111	113	108	125
Toluene-D8	2037-26-5	0.2	%		93.4	114	91.2	107	103
4-Bromofluorobenzene	460-00-4	0.2	%		106	129	111	120	119





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC40_VAL_W1	AEC40_VAL_B1	40VAL01_01	40VAL02_01	40VAL02_02
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-006	ES2325381-007	ES2325381-010	ES2325381-011	ES2325381-012
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	0.1	%	17.5	5.8	----	22.2	20.0
Moisture Content	----	1.0	%	----	----	17.4	----	----
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	No	No	No
Asbestos (Trace)	1332-21-4	-	-	----	----	No	No	No
Asbestos Type	1332-21-4	-	--	----	----	-	-	-
Sample weight (dry)	----	0.01	g	----	----	71.7	88.5	80.8
APPROVED IDENTIFIER:	----	-	--	----	----	B.SCHRADER	B.SCHRADER	B.SCHRADER
Synthetic Mineral Fibre	----	-	--	----	----	No	No	No
Organic Fibre	----	-	--	----	----	No	No	No
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	24	6	6	<5	7
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	16	12	17	20	16
Copper	7440-50-8	5	mg/kg	33	21	37	38	32
Lead	7439-92-1	5	mg/kg	18	14	17	18	16
Nickel	7440-02-0	2	mg/kg	15	15	14	15	13
Zinc	7440-66-6	5	mg/kg	79	64	112	51	58
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	<0.1	<0.1
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC40_VAL_W1	AEC40_VAL_B1	40VAL01_01	40VAL02_01	40VAL02_02
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-006	ES2325381-007	ES2325381-010	ES2325381-011	ES2325381-012
				Result	Result	Result	Result	Result
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	<0.05	<0.05



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				AEC40_VAL_W1	AEC40_VAL_B1	40VAL01_01	40VAL02_01	40VAL02_02
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-006	ES2325381-007	ES2325381-010	ES2325381-011	ES2325381-012
				Result	Result	Result	Result	Result

### EP068B: Organophosphorus Pesticides (OP) - Continued

### EP075(SIM)B: Polynuclear Aromatic Hydrocarbons

Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2

### EP080/071: Total Petroleum Hydrocarbons

C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50

### EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	AEC40_VAL_W1	AEC40_VAL_B1	40VAL01_01	40VAL02_01	40VAL02_02
Sampling date / time					28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit		ES2325381-006	ES2325381-007	ES2325381-010	ES2325381-011	ES2325381-012
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>									
Faecal Coliforms	----	2	MPN/g		<2	<2	<2	<2	<2
Escherichia coli	----	2	MPN/g		<2	<2	<2	<2	<2
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	83.5	76.4	77.9
<b>EP068S: Organochlorine Pesticide Surrogate</b>									
Dibromo-DDE	21655-73-2	0.05	%		----	----	80.4	84.0	79.3
<b>EP068T: Organophosphorus Pesticide Surrogate</b>									
DEF	78-48-8	0.05	%		----	----	70.4	73.2	63.3
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		77.2	77.2	78.2	75.8	79.2
2-Chlorophenol-D4	93951-73-6	0.5	%		76.7	79.0	79.1	76.1	81.6
2,4,6-Tribromophenol	118-79-6	0.5	%		58.1	56.2	59.0	64.1	59.7
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		92.3	95.6	95.4	95.7	93.4
Anthracene-d10	1719-06-8	0.5	%		90.9	92.0	90.0	91.6	90.0
4-Terphenyl-d14	1718-51-0	0.5	%		93.5	97.8	96.7	98.1	94.1
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		106	108	109	108	116
Toluene-D8	2037-26-5	0.2	%		87.4	108	86.9	100.0	95.8
4-Bromofluorobenzene	460-00-4	0.2	%		101	118	102	112	107



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				40VAL04_01	40VAL04_02	40VAL04_03	40SEP02_01 EXTRA	40SEP02_02 EXTRA
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-013	ES2325381-014	ES2325381-015	ES2325381-017	ES2325381-018
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	0.1	%	18.8	17.5	17.3	----	----
Moisture Content	----	1.0	%	----	----	----	64.5	76.2
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Sample weight (dry)	----	0.01	g	72.4	94.1	75.5	21.8	17.4
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	Yes	Yes
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	7	41	6	<5	8
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	2	3
Chromium	7440-47-3	2	mg/kg	17	16	15	30	44
Copper	7440-50-8	5	mg/kg	30	34	28	354	537
Lead	7439-92-1	5	mg/kg	19	19	17	28	49
Nickel	7440-02-0	2	mg/kg	14	17	16	14	22
Zinc	7440-66-6	5	mg/kg	58	86	66	687	1190
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	0.3	0.6
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40VAL04_01	40VAL04_02	40VAL04_03	40SEP02_01 EXTRA	40SEP02_02 EXTRA
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	
Compound	CAS Number	LOR	Unit	ES2325381-013	ES2325381-014	ES2325381-015	ES2325381-017	ES2325381-018	
				Result	Result	Result	Result	Result	
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.3	
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.3	
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.3	
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.3	
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.3	
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40VAL04_01	40VAL04_02	40VAL04_03	40SEP02_01 EXTRA	40SEP02_02 EXTRA
Sampling date / time					28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-013	ES2325381-014	ES2325381-015	ES2325381-017	ES2325381-018	
				Result	Result	Result	Result	Result	
EP068B: Organophosphorus Pesticides (OP) - Continued									
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.06	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.8	<1.0	
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	1.0	1.2	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.9	2.4	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10	
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<60	
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	3200	4670	
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	10200	15900	
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	13400	20600	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	23	23	
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	22	21	
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<60	



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				40VAL04_01	40VAL04_02	40VAL04_03	40SEP02_01 EXTRA	40SEP02_02 EXTRA
Sampling date / time				28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-013	ES2325381-014	ES2325381-015	ES2325381-017	ES2325381-018
				Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>								
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	5840	15400
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	9520	6540
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	15400	21900
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<60
<b>EP080: BTEXN</b>								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	1.7
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	0.6	1.7
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>MM804: Faecal Coliforms &amp; E.coli by MPN</b>								
Faecal Coliforms	----	2	MPN/g	<2	<2	<2	11	42
Escherichia coli	----	2	MPN/g	<2	<2	<2	11	42
<b>EP066S: PCB Surrogate</b>								
Decachlorobiphenyl	2051-24-3	0.1	%	86.7	92.4	72.5	92.3	87.2
<b>EP068S: Organochlorine Pesticide Surrogate</b>								
Dibromo-DDE	21655-73-2	0.05	%	90.2	100	78.9	77.4	89.3
<b>EP068T: Organophosphorus Pesticide Surrogate</b>								
DEF	78-48-8	0.05	%	70.8	81.5	64.7	87.8	95.1
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.5	%	75.6	74.8	80.1	101	101
2-Chlorophenol-D4	93951-73-6	0.5	%	75.2	76.3	80.9	90.4	90.7
2,4,6-Tribromophenol	118-79-6	0.5	%	56.0	57.6	59.8	99.1	101
<b>EP075(SIM)T: PAH Surrogates</b>								
2-Fluorobiphenyl	321-60-8	0.5	%	93.3	92.0	95.2	97.6	96.7
Anthracene-d10	1719-06-8	0.5	%	89.9	88.9	92.1	97.0	97.0
4-Terphenyl-d14	1718-51-0	0.5	%	94.2	93.9	97.2	97.3	95.4
<b>EP080S: TPH(V)/BTEX Surrogates</b>								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	118	117	121	68.6	74.6



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40VAL04_01	40VAL04_02	40VAL04_03	40SEP02_01 EXTRA	40SEP02_02 EXTRA
Sampling date / time					28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00	28-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2325381-013	ES2325381-014	ES2325381-015	ES2325381-017	ES2325381-018	
				Result	Result	Result	Result	Result	
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.2	%	91.4	94.3	99.4	87.8	92.6	
4-Bromofluorobenzene	460-00-4	0.2	%	109	107	116	105	110	





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				40SEP02_03 EXTRA	TRIP SPIKE	TRIP BLANK	TSC	----
Sampling date / time				28-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	----
Compound	CAS Number	LOR	Unit	ES2325381-019	ES2325381-020	ES2325381-021	ES2325381-023	-----
				Result	Result	Result	Result	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	59.1	----	----	----	----
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Sample weight (dry)	----	0.01	g	16.4	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	----	----	----	----
Synthetic Mineral Fibre	----	-	--	No	----	----	----	----
Organic Fibre	----	-	--	Yes	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	26	----	----	----	----
Copper	7440-50-8	5	mg/kg	304	----	----	----	----
Lead	7439-92-1	5	mg/kg	25	----	----	----	----
Nickel	7440-02-0	2	mg/kg	11	----	----	----	----
Zinc	7440-66-6	5	mg/kg	570	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	0.3	----	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
<b>EP068A: Organochlorine Pesticides (OC)</b>								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				40SEP02_03 EXTRA	TRIP SPIKE	TRIP BLANK	TSC	----
Sampling date / time				28-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	----
Compound	CAS Number	LOR	Unit	ES2325381-019	ES2325381-020	ES2325381-021	ES2325381-023	-----
				Result	Result	Result	Result	----
<b>EP068A: Organochlorine Pesticides (OC) - Continued</b>								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	----	----	----	----
<b>EP068B: Organophosphorus Pesticides (OP)</b>								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				40SEP02_03 EXTRA	TRIP SPIKE	TRIP BLANK	TSC	----
Sampling date / time				28-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	----
Compound	CAS Number	LOR	Unit	ES2325381-019	ES2325381-020	ES2325381-021	ES2325381-023	-----
				Result	Result	Result	Result	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.8	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.8	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.8	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.8	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.8	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.8	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.8	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.8	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.8	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.8	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.8	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.8	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.8	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.8	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.8	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.8	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	1.0	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.9	----	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	1860	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	6880	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	8740	----	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	16	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	16	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	6520	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	2820	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	9340	----	----	----	----





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	40SEP02_03 EXTRA	TRIP SPIKE	TRIP BLANK	TSC	----
Sampling date / time					28-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	24-Jul-2023 00:00	----
Compound	CAS Number	LOR	Unit		ES2325381-019	ES2325381-020	ES2325381-021	ES2325381-023	-----
				Result	Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)		----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	6.3	<0.5	7.1	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	6.5	<0.5	7.1	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	6.9	<0.5	7.6	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	2.7	<0.5	3.0	----
^ Sum of BTEX		----	0.2	mg/kg	<0.2	22.6	<0.2	24.8	----
^ Total Xylenes		----	0.5	mg/kg	<0.5	9.6	<0.5	10.6	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	----
MM804: Faecal Coliforms & E.coli by MPN									
Faecal Coliforms		----	2	MPN/g	20	----	----	----	----
Escherichia coli		----	2	MPN/g	20	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl		2051-24-3	0.1	%	106	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE		21655-73-2	0.05	%	97.1	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF		78-48-8	0.05	%	105	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6		13127-88-3	0.5	%	97.2	----	----	----	----
2-Chlorophenol-D4		93951-73-6	0.5	%	92.6	----	----	----	----
2,4,6-Tribromophenol		118-79-6	0.5	%	104	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl		321-60-8	0.5	%	98.4	----	----	----	----
Anthracene-d10		1719-06-8	0.5	%	99.0	----	----	----	----
4-Terphenyl-d14		1718-51-0	0.5	%	98.0	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4		17060-07-0	0.2	%	77.9	107	107	119	----
Toluene-D8		2037-26-5	0.2	%	96.9	92.8	87.8	99.1	----
4-Bromofluorobenzene		460-00-4	0.2	%	114	92.4	85.5	101	----



Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)				Sample ID	AEC38_MS02	----	----	----	----
				Sampling date / time	31-Jul-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2325381-024	-----	-----	-----	-----	
				Result	----	----	----	----	
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg	No	---	---	---	---	
Asbestos Type	1332-21-4	-	--	-	----	----	----	----	
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	----	
Sample weight (dry)	----	0.01	g	14.1	----	----	----	----	
Synthetic Mineral Fibre	----	-	-	No	----	----	----	----	
Organic Fibre	----	-	-	Yes	----	----	----	----	
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	----	----	----	----	



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Sample ID

				AEC40_RS	----	----	----	----
Sampling date / time				28-Jul-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2325381-022	-----	-----	-----	-----
				Result	----	----	----	----
<b>EG020T: Total Metals by ICP-MS</b>								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	µg/L	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	µg/L	<0.5	----	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
C6 - C9 Fraction	-----	20	µg/L	<20	----	----	----	----
C10 - C14 Fraction	-----	50	µg/L	<50	----	----	----	----
C15 - C28 Fraction	-----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	-----	50	µg/L	<50	----	----	----	----
^ C10 - C36 Fraction (sum)	-----	50	µg/L	<50	----	----	----	----





## Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	AEC40_RS	----	----	----	----
Sampling date / time					28-Jul-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2325381-022	-----	-----	-----	-----
					Result	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ Total Xylenes	----	2	µg/L		<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		26.3	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		50.1	----	----	----	----
2,4,6-Tribromophenol	118-79-6	1.0	%		40.6	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		61.9	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		72.9	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		81.6	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		101	----	----	----	----
Toluene-D8	2037-26-5	2	%		78.3	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		87.1	----	----	----	----



## Analytical Results

### Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
<b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b>		
EA200: Description	40VAL01_01 - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40VAL02_01 - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40VAL02_02 - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40VAL04_01 - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40VAL04_02 - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40VAL04_03 - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40SEP02_01EXTRA - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40SEP02_02EXTRA - 28-Jul-2023 00:00	A soil sample.
EA200: Description	40SEP02_03EXTRA - 28-Jul-2023 00:00	A soil sample.

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
<b>EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples</b>		
EA200: Description	AEC38_MS02 - 31-Jul-2023 00:00	One piece of cement sheeting.



## Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	39	149
<b>EP068S: Organochlorine Pesticide Surrogate</b>			
Dibromo-DDE	21655-73-2	49	147
<b>EP068T: Organophosphorus Pesticide Surrogate</b>			
DEF	78-48-8	35	143
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137

## Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

(SOLID) EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples



***Attachment 5 – Asbestos Clearance Certificates***



## Asbestos Clearance Certificate (ACC002)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC002\_ESR\_Westlink Stage 1\_AEC01a\_v1 | 2 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services



# Asbestos Clearance Certificate – ACC002

## Westlink Stage 1 – AEC01a

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Sean Kelly – Senior Occupational Hygienist (LAA001369) Sally Kennedy – Environmental Scientist Zak Bursey – Graduate Environmental Scientist



## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	11.07.2023 - 12.07.2023 & 24.07.2023 - 25.07.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to AEC01a within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>AEC01a covers an approximate surface area of 80 m<sup>2</sup> and includes soils up to a depth of 0.1 m below ground level (mBGL).</p>
Scope of work (as advised by client/contractor):	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC01a was: Bonded asbestos in surface soils &lt;0.1m below surface.</p> <p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Systematic inspection of surface and hand picking of visible ACM fragments.</li> <li>• Rake surface soils in one direction, to a depth of 0.1m below ground level, using an excavator fitted with a tooth bucket.</li> <li>• Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>• Rake surface soils in a direction 90° perpendicular to the first raking direction, to a depth of 0.1 mBGL using an excavator fitted with a tooth bucket.</li> <li>• Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>• ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul> <p>During remediation works, an unexpected find (UF) in the form of an asbestos cement (AC) conduit was identified within the western portion of AEC01a. This UF was raised by TCE as UF003, subsequently removed and a separate Asbestos Clearance Certificate has been issued pertaining to the removal of the conduit (EP Risk 2023)<sup>2</sup>.</p>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), *Remedial Action Plan (RAP)*, 290-308 Aldington Road and 59-63 Abbots Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).

<sup>2</sup> EP Risk Management (EP Risk), *Asbestos Clearance Certificate (ACC003)*, 290-308 Aldington Road and 59-63 Abbots Road, Kemps Creek NSW, ref: EP3244.003\_ACC003\_v1, dated 02 August 2023 (EP Risk 2023).

	<p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual in-situ rake footprint for visible asbestos.</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm).</li> </ul>
Type of asbestos containing material (ACM) removed:	<p> <input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.  <input type="checkbox"/> Asbestos containing dust/debris.  <input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).  <input type="checkbox"/> Other: N/A         </p>
Asbestos controls adopted during removal works:	<p> <input checked="" type="checkbox"/> Exclusion zone.  <input checked="" type="checkbox"/> Personal Protective Equipment (PPE).  <input type="checkbox"/> Wet decontamination unit.  <input checked="" type="checkbox"/> Dry decontamination unit or area.  <input checked="" type="checkbox"/> Dust suppression water.  <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum.  <input type="checkbox"/> Wet wiping.  <input checked="" type="checkbox"/> Air Monitoring.  <input type="checkbox"/> N/A.         </p>
Post removal work encapsulation:	<p> <input type="checkbox"/> Geotextile marker layer.      <input type="checkbox"/> N/A.  <input type="checkbox"/> PVA / Adhesive.      <input type="checkbox"/> Other.  <input checked="" type="checkbox"/> Imported 'clean' soils.         </p>

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	11.07.2023 - 12.07.2023 & 24.07.2023 - 25.07.2023		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the 'base' the in-situ rake footprint and along the northern, southern, eastern and western perimeter in-situ rake footprint 'walls'.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. Where bonded (non-friable) ACM was detected within the sieve, the area was retreated as per the approved RAP methodology and a visual and field screening undertaken again. No bonded (non-friable) ACM was detected during the final sieve tests. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
AEC01a-VAL-001	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-002	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-003	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-004	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-005	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-006	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-007	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-008	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-009	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-010	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-011	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-012	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-013	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-014	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-015	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-016	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected



Sample ID	Location	Sample Depth	Result
AEC01a-VAL-017	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-018	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-019	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-020	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-021	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-022	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-023	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-024	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-025	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-026	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-027	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-028	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-029	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-030	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-031	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-032	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-033	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-034	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-035	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-036	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-037	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC01a-VAL-038	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected

## 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. The visual inspection was limited to surficial soils only and does not include soil beneath trees remaining in the Clearance Area. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i></p>

	<p>(2022) as approved under s.274 of the NSW <i>Work Health and Safety Act 2011</i>.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>
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## 6. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.

## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and sieve tests. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	Z. Bursey	02.08.2023	K. Guenther	02.08.2023	J. Shao	02.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	02.08.2023	EP3244.003_ACC002_ESR_Westlink Stage 1_AEC01a_v1	ESR Australia Pty Ltd



## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

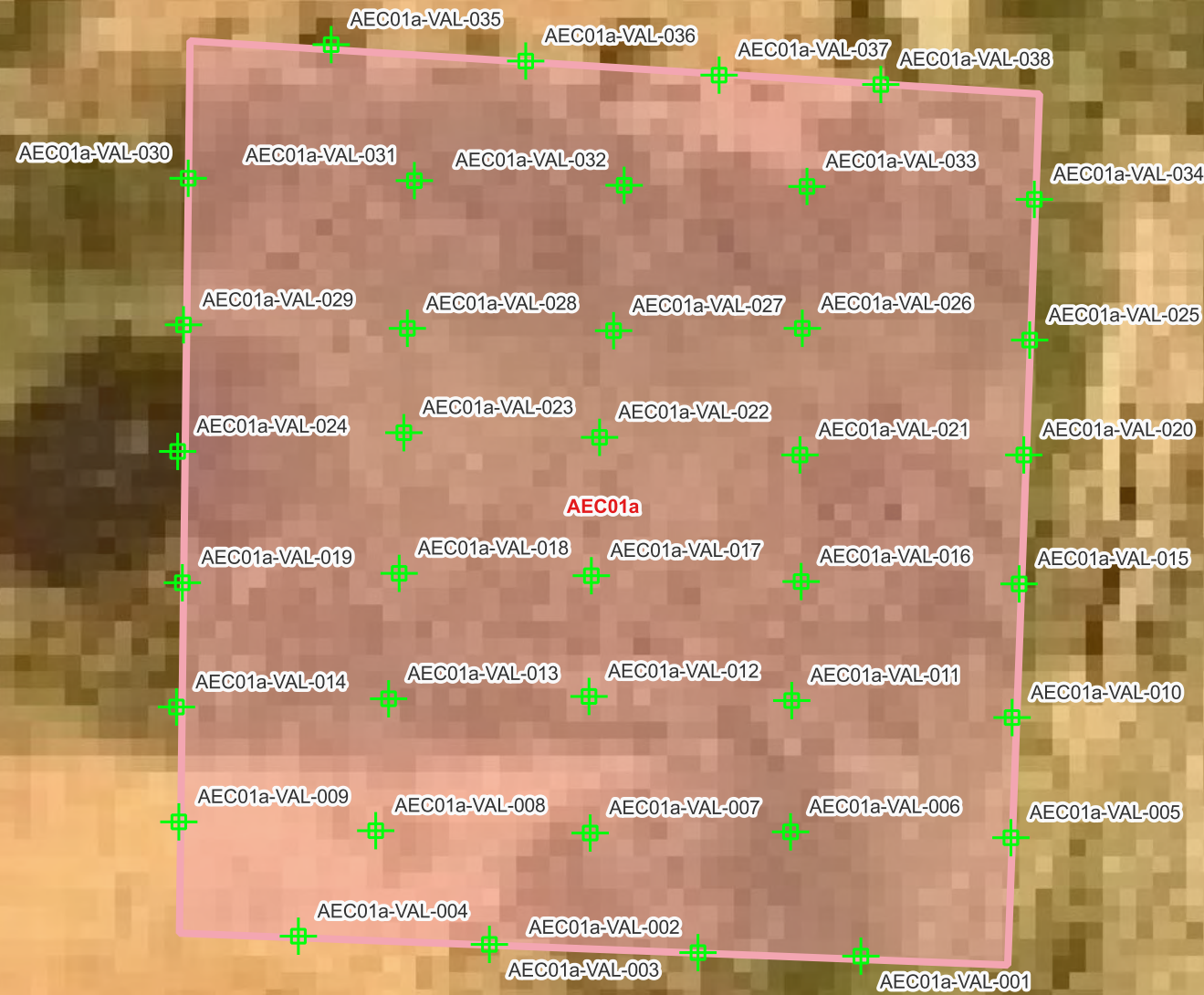
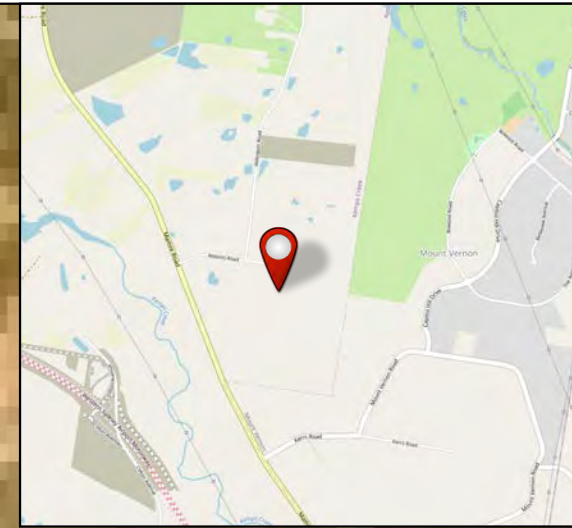
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## ***Attachment 1 – Figure***





Legend

- Asbestos AEC
- Validation Samples
- Validation Samples

**Figure 1 - Clearance Area and Sampling Locations**



## ***Attachment 2 – Photolog***



**Plate 1 – 24/07/2023**

Surficial soils within AEC01a subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.



**Plate 2 – 24/07/2023**

Surficial soils within AEC01a subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.





**Plate 3 – 24/07/2023**

Surficial soils within AEC01a subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.

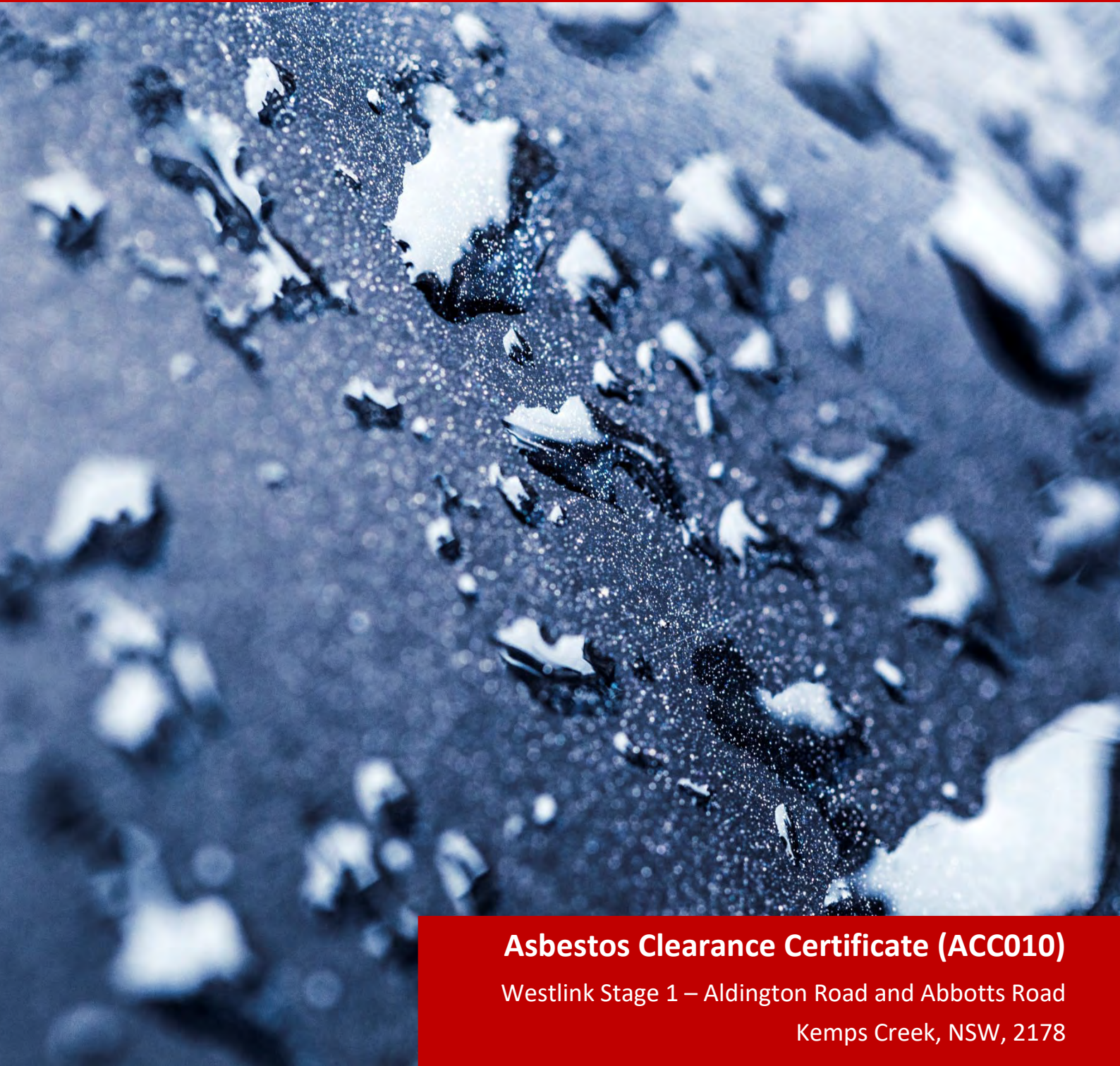


**Plate 4 – 24/07/2023**

Validation sieving within AEC01a subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.







## Asbestos Clearance Certificate (ACC010)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC010\_ESR\_Westlink Stage 1\_AEC09b\_v1 | 14 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services



## Asbestos Clearance Certificate – ACC010

### Westlink Stage 1 – AEC09b

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Hayley Erskine – Graduate Environmental Scientist



#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845



## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	08.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to AEC09b within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>AEC09b covers an approximate surface area of 60 m<sup>2</sup> and includes soils up to a depth of 0.1 m below ground level (mBGL).</p>
Scope of work (as advised by client/contractor):	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC09b was: Bonded asbestos in surface soils &lt;0.1m below surface.</p> <p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Systematic inspection of surface and hand picking of visible ACM fragments.</li> <li>• Rake surface soils in one direction, to a depth of 0.1m below ground level, using an excavator fitted with a tooth bucket.</li> <li>• Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>• Rake surface soils in a direction 90° perpendicular to the first raking direction, to a depth of 0.1 mBGL using an excavator fitted with a tooth bucket.</li> <li>• Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>• ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm).</li> </ul>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), Remedial Action Plan (RAP), 290-308 Aldington Road and 59-63 Abbots Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).



Type of asbestos containing material (ACM) removed:	<input type="checkbox"/> Friable. <input checked="" type="checkbox"/> Non-Friable. <input type="checkbox"/> Asbestos containing dust/debris. <input checked="" type="checkbox"/> Asbestos in Soil (ASBINS). <input type="checkbox"/> Other: N/A
Asbestos controls adopted during removal works:	<input checked="" type="checkbox"/> Exclusion zone. <input checked="" type="checkbox"/> Personal Protective Equipment (PPE). <input type="checkbox"/> Wet decontamination unit. <input checked="" type="checkbox"/> Dry decontamination unit or area. <input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input checked="" type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	08.08.2023		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

#### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base the in-situ rake footprint and along the northern, southern, eastern and western perimeter excavation walls.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. No bonded (non-friable) ACM was detected during the sieve tests. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
AEC09b-VAL-001	Base of in-situ rake footprint	0.1 mBGL	No Asbestos Detected
AEC09b-VAL-002	Base of in-situ rake footprint	0.1 mBGL	No Asbestos Detected
AEC09b-VAL-003	Northern wall of in-situ rake footprint	0.1 mBGL	No Asbestos Detected
AEC09b-VAL-004	Southern wall of in-situ rake footprint	0.1 mBGL	No Asbestos Detected
AEC09b-VAL-005	Eastern wall of in-situ rake footprint	0.1 mBGL	No Asbestos Detected
AEC09b-VAL-006	Western wall of in-situ rake footprint	0.1 mBGL	No Asbestos Detected

#### 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. The visual inspection was limited to surficial soils only and does not include soil beneath trees remaining in the Clearance Area. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p>

	<p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>
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## 6. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<p><input type="checkbox"/> Continue works under Class A asbestos conditions.</p> <p><input type="checkbox"/> Continue works under Class B asbestos conditions.</p> <p><input type="checkbox"/> Provide a final clearance at the conclusion of the removal works.</p> <p><input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol.</p> <p><input type="checkbox"/> N/A.</p>
Management:	<p><input type="checkbox"/> Prepare Asbestos Management Plan (AMP).</p> <p><input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP).</p> <p><input type="checkbox"/> Update Asbestos Register.</p> <p><input type="checkbox"/> Update ASBINS Management Plan.</p> <p><input type="checkbox"/> Provide routine inspections of capping.</p> <p><input checked="" type="checkbox"/> N/A.</p>



## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and sieve tests. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Hayley Erskine	Signature:	
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## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	H. Erskine	14.08.2023	K. Guenther	14.08.2023	J. Shao	14.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	14.08.2023	EP3244.003_ACC010_ESR_Westlink Stage 1_AEC09b_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.

## ***Attachment 1 – Figure***

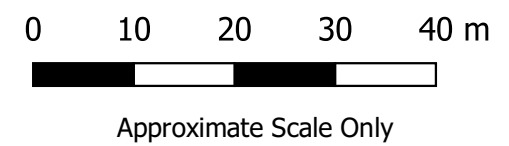




AEC13

**Asbestos Clearance Certificate (ACC010)**  
**Westlink Stage 1 - Aldington Road, Abbotts Road & Mamre Road, Kemps Creek, NSW, 2178**

Job No: EP3244  
Date: 14/08/2023  
Drawing Ref: EP3244.003 Fig. 1  
Version No: v1



Coordinate System: WGS 84  
Drawn by: HE Checked by: JS  
Scale of regional map and inset map not shown  
Source: Nearmap

**Figure 1 - Clearance Area**





## ***Attachment 2 – Photolog***





**Plate 1 – 08/08/2023**

AEC09b following in-situ mechanical rake and emu pick of surficial soils.



**Plate 2 – 08/08/2023**

AEC09b following in-situ mechanical rake and emu pick of surficial soils.



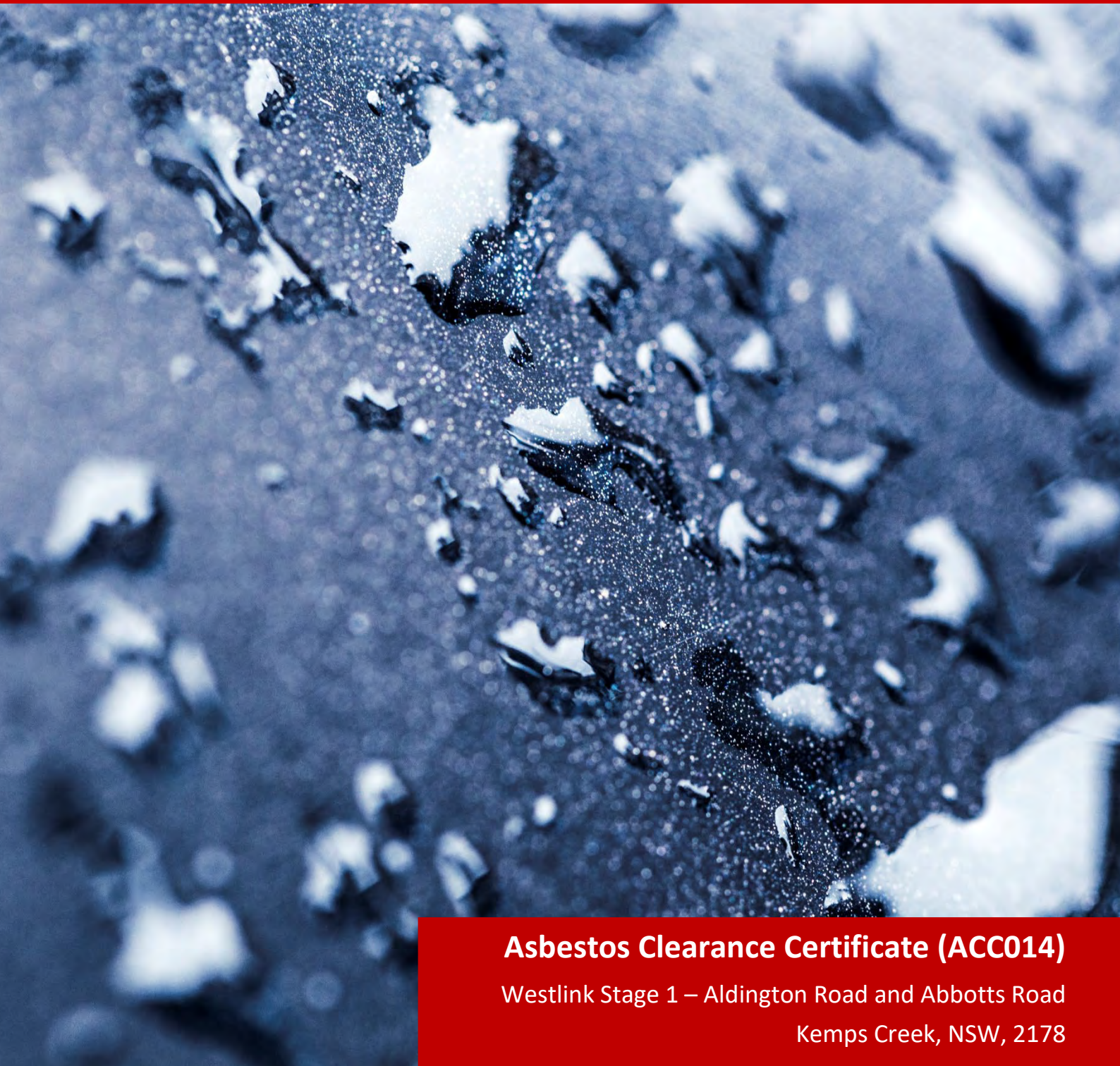


**Plate 3** – 08/08/2023

AEC09b following in-situ mechanical rake and emu pick of surficial soils.







## Asbestos Clearance Certificate (ACC014)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC014\_ESR\_Westlink Stage 1\_AEC14\_v1 | 11 April 2024



QMS Certification Services



QMS Certification Services



QMS Certification Services





## Asbestos Clearance Certificate – ACC014

### Westlink Stage 1 – AEC14

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Zak Bursey – Graduate Environmental Scientist (Competent Person) Hayley Erskine – Graduate Environmental Scientist (Competent Person)



#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	09.08.2023 – 04.09.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to the friable (F3) hotspot of AEC14 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'. AEC14 covers an approximate surface area of 950 m<sup>2</sup> and includes soils up to a depth of 2.2 m below ground level (mBGL). The friable hotspot comprises of the several test pits (TP61, TP150, TP159, TP166, ASB11, ASB12), the delineation trench to the east and the brick stockpile to the west, halfway to the next clean sample.</p>
Scope of work (as advised by client/contractor)	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC14 was: Asbestos fines (AF) in surface and/or fill soils.</p> <p>Based on the Alliance (2023) RAP, soils within AEC14 are to be excavated and disposed to a suitable licensed waste receiving facility, with a waste classification certificate.</p> <p>At the request of ESR, EP Risk conducted a high-level review of the Alliance (2023) RAP and previous environmental investigations to determine if volumes of material impacted by friable asbestos in soils (ASBINS) (AF and fibrous asbestos (FA)) and set for off-site disposal could be reduced through a delineation assessment.</p> <p>Following a review of previous sampling data, EP Risk concluded the remediation extent within AEC14 could be reduced to a friable (F3) hotspot at the central of AEC14, comprising of the following test pits, halfway to the next clean sample:</p> <ul style="list-style-type: none"> <li>• TP61</li> <li>• TP159</li> <li>• TP166</li> <li>• ASB12</li> <li>• Delineation Trench</li> </ul> <p>However, during a site walkover of the area conducted by EP Risk and TCE, an abundance of super six sheeting ACM fragments in poor condition were identified to the west of the friable (F3) hotspot, in line with the western edge of the brick stockpile. As such, the western extent of the friable (F3) hotspot was extended westwards to include TP150, ASB11 and the entirety of the brick stockpile. Should excavation works be required to be undertaken in areas</p>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), *Remedial Action Plan (RAP)*, 290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).

	<p>outside of the friable (F3) hotspot but within the AEC14 boundary defined by Alliance, EP Risk recommends this is undertaken under supervision in case of unexpected finds.</p> <p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following within the friable (F3) hotspot:</p> <ul style="list-style-type: none"> <li>• Excavation of soils until natural was intercepted (approximately 2.0 - 3.8mBGL) and transport to the friable stockpile pad (F3) and;</li> <li>• Movement of the brick stockpile to the friable stockpile pad (F3).</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023) and Addendum<sup>2</sup> (EP Risk 2023)<sup>2</sup>, encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos;</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm;</li> <li>• Gravimetric asbestos samples for friable asbestos (AF/FA);</li> <li>• and</li> <li>• Clearance certificate from a licenced asbestos assessor (LAA).</li> </ul>
Type of asbestos containing material (ACM) removed:	<input checked="" type="checkbox"/> Friable. <input type="checkbox"/> Non-Friable. <input type="checkbox"/> Asbestos containing dust/debris. <input checked="" type="checkbox"/> Asbestos in Soil (ASBINS). <input checked="" type="checkbox"/> Other: Asbestos contaminated brick stockpile
Asbestos controls adopted during removal works:	<input checked="" type="checkbox"/> Exclusion zone. <input checked="" type="checkbox"/> Personal Protective Equipment (PPE). <input checked="" type="checkbox"/> Wet decontamination unit. <input type="checkbox"/> Dry decontamination unit or area. <input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input checked="" type="checkbox"/> Wet wiping.

<sup>2</sup> EP Risk (2023), *Remediation Action Plan Addendum*, Westlink Stage 1 – Aldington Road and Abbots Road, Kemps Creek, NSW, dated 12 September 2023 (ref: EP3244.004\_v1).



	<input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input checked="" type="checkbox"/> Imported 'clean' fill.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works	
Date of clearance inspection:	04.09.2023
Asbestos Work Area	
Evidence of PVA/sealant application:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base the excavation footprint and along the northern, southern, eastern and western perimeter excavation walls.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. No bonded (non-friable) ACM was detected during the sieve tests. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
AEC14_VAL_001	Northern end of excavation footprint – wall of first bench from north	0.0 - 1.3 mBGL	No Asbestos Detected
AEC14_VAL_002	Northern end of excavation footprint – wall of second bench from north	1.3 - 2.8 mBGL	No Asbestos Detected
AEC14_VAL_003	Western end of excavation footprint – wall of third bench from north	2.8 - 3.8 mBGL	No Asbestos Detected
AEC14_VAL_004	Northern end of excavation footprint – wall of first bench from north	0.0 - 1.3 mBGL	No Asbestos Detected
AEC14_VAL_005	Northern end of excavation footprint – wall of second bench from north	1.3 - 2.8 mBGL	No Asbestos Detected

AEC14_VAL_006	Northern end of excavation footprint – wall of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_007	Southern end of excavation footprint – wall of fifth bench from north	0.0 – 1.9 mBGL	No Asbestos Detected
AEC14_VAL_008	Southern end of excavation footprint – wall of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_009	Southern end of excavation footprint – wall of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_010	Southern end of excavation footprint – wall of fifth bench from north	1.9 – 2.7 mBGL	No Asbestos Detected
AEC14_VAL_011	Southern end of excavation footprint – base of fifth bench from north	1.9 – 2.7 mBGL	No Asbestos Detected
AEC14_VAL_012	Southern end of excavation footprint – wall of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_013	Western end of excavation footprint – wall of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_014	Western end of excavation footprint – wall of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_015	Western end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_016	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_017	Western end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_018	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_019	Eastern end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_020	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_021	Eastern end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_022	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_023	Eastern end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_024	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_025	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_026	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_027	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected

AEC14_VAL_028	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_029	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_030	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_031	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_032	Western end of excavation footprint – base of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_033	Western end of excavation footprint – base of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_034	Southern end of excavation footprint – base of fourth bench from north	2.7 – 3.7 mBGL	No Asbestos Detected
AEC14_VAL_035	Southern end of excavation footprint – base of fifth bench from north	1.9 – 2.7 mBGL	No Asbestos Detected
AEC14_VAL_036	Southern end of excavation footprint – base of fourth bench from north	2.7 – 3.7 mBGL	No Asbestos Detected
AEC14_VAL_037	Southern end of excavation footprint – base of fifth bench from north	0.0 – 1.9 mBGL	No Asbestos Detected
AEC14_VAL_038	Southern end of excavation footprint – base of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_039	Southern end of excavation footprint – base of fifth bench from north	0.0 – 1.9 mBGL	No Asbestos Detected
AEC14_VAL_040	Southern end of excavation footprint – base of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_041	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_042	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_043	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_044	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_045	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_046	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_047	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_048	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected



## 5. ASBESTOS GRAVIMETRIC (AF/FA) RESULTS

Following the visual clearance inspection of the Clearance Area on 28 August 2023, EP Risk collected forty-eight (48) 500 mL samples of the residual in-situ material at the base of the excavation footprint and along the northern, southern, eastern and western perimeter excavation walls. The samples were submitted to a National Association of Testing Authorities (NATA) accredited laboratory for Asbestos Gravimetric Analysis (non-NATA) for the detection of AF/FA.

No asbestos was detected above the reporting limit of 0.1 g/kg, with the exception of one (1) sample (AEC14\_VAL\_010). AEC14\_VAL\_010 contained matted fibre bundles containing Chrysotile (white asbestos) in the > 2mm fraction at concentrations of 0.0002 w/w%, which is below the 0.05 %w/w HSL for commercial / industrial sites. No trace (respirable) asbestos fibres were detected in all collected validation samples.

Further excavation works within this location was subsequently recommended for conservative reasons. Further excavation works were undertaken on 04 September 2023, and comprised a 1 m x 1 m box out with the material transported to the stockpile pad as F3 material due to small volume and known F3 material within AEC14.

Following a visual clearance inspection of the area, EP Risk collected an additional 500 mL sample of the residual in-situ material for Asbestos Gravimetric Analysis (non-NATA) for the detection of AF/FA, labelled as AEC14\_VAL\_049. No asbestos was detected above the reporting limit of 0.1 g/kg. Moreover, no trace (respirable) asbestos fibres were detected.

Results have been summarised below.

Sample ID	Location	Sample Depth	Result
AEC14_VAL_001	Northern end of excavation footprint – wall of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_002	Northern end of excavation footprint – wall of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_003	Western end of excavation footprint – wall of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_004	Northern end of excavation footprint – wall of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_005	Northern end of excavation footprint – wall of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_006	Northern end of excavation footprint – wall of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_007	Southern end of excavation footprint – wall of fifth bench from north	0.0 – 1.9 mBGL	No Asbestos Detected
AEC14_VAL_008	Southern end of excavation footprint – wall of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_009	Southern end of excavation footprint – wall of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected

AEC14_VAL_010	Southern end of excavation footprint – wall of fifth bench from north	1.9 – 2.7 mBGL	Matted Fibre Bundles Containing Chrysotile (white asbestos) > 2mm fraction 0.0002 %w/w
AEC14_VAL_011	Southern end of excavation footprint – base of fifth bench from north	1.9 – 2.7 mBGL	No Asbestos Detected
AEC14_VAL_012	Southern end of excavation footprint – wall of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_013	Western end of excavation footprint – wall of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_014	Western end of excavation footprint – wall of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_015	Western end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_016	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_017	Western end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_018	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_019	Eastern end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_020	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_021	Eastern end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_022	Northern end of excavation footprint – base of first bench from north	0.0 – 1.3 mBGL	No Asbestos Detected
AEC14_VAL_023	Eastern end of excavation footprint – base of second bench from north	1.3 – 2.8 mBGL	No Asbestos Detected
AEC14_VAL_024	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_025	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_026	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_027	Eastern end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_028	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_029	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected

AEC14_VAL_030	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_031	Western end of excavation footprint – base of third bench from north	2.8 – 3.8 mBGL	No Asbestos Detected
AEC14_VAL_032	Western end of excavation footprint – base of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_033	Western end of excavation footprint – base of fourth bench from north	0.0 – 2.2 mBGL	No Asbestos Detected
AEC14_VAL_034	Southern end of excavation footprint – base of fourth bench from north	2.7 – 3.7 mBGL	No Asbestos Detected
AEC14_VAL_035	Southern end of excavation footprint – base of fifth bench from north	1.9 – 2.7 mBGL	No Asbestos Detected
AEC14_VAL_036	Southern end of excavation footprint – base of fourth bench from north	2.7 – 3.7 mBGL	No Asbestos Detected
AEC14_VAL_037	Southern end of excavation footprint – base of fifth bench from north	0.0 – 1.9 mBGL	No Asbestos Detected
AEC14_VAL_038	Southern end of excavation footprint – base of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_039	Southern end of excavation footprint – base of fifth bench from north	0.0 – 1.9 mBGL	No Asbestos Detected
AEC14_VAL_040	Southern end of excavation footprint – base of sixth bench from north	0.0 – 1.1 mBGL	No Asbestos Detected
AEC14_VAL_041	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_042	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_043	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_044	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_045	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_046	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_047	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_048	East of excavation footprint, within plant movement area – surficial soils	0.1 mBGL	No Asbestos Detected
AEC14_VAL_049	Resample following further excavation works to AEC14_VAL_010	1.9 – 2.7 mBGL	No Asbestos Detected



## 6. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate and soil validation results pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>Soil validation samples and a visual inspection of the accessible surface of the Clearance Area only was undertaken. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 7. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 8. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.

## 9. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection, sieve tests and within the asbestos gravimetric samples. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 10. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	J. Shao	11.04.2024	K. Guenther	11.04.2024	T. Chatman	11.04.2024

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	11.04.2024	EP3244.003_ACC014_ESR_Westlink Stage 1_AEC14_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Inaccessible areas are omitted from the assessment including beneath concrete slabs, beneath the subsurface, within the soil or fill, beneath floorboards, in the crawlspace of the building inside the walls of the structures and inside the roof cavity not in immediate.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.



## *Attachment 1 – Figure*







## ***Attachment 2 – Photolog***





**Plate 1** – 07/08/2023

AEC14 prior to remediation works.



**Plate 2** – 07/08/2023

AEC14 prior to remediation works.





**Plate 3** – 23/08/2023

Residual soils within AEC14 subsequent to excavation of friable ACM impacted soils to natural.



**Plate 4** – 23/08/2023

Residual soils within AEC14 subsequent to excavation of friable ACM impacted soils to natural.





**Plate 5** – 23/08/2023

Residual soils within AEC14 subsequent to excavation of friable ACM impacted soils to natural.



**Plate 6** – 23/08/2023

Residual soils within AEC14 subsequent to excavation of friable ACM impacted soils to natural.





**Plate 7** – 23/08/2023

Residual soils within AEC14 subsequent to excavation of friable ACM impacted soils to natural.



**Plate 8** – 23/08/2023

Residual soils within AEC14 subsequent to excavation of friable ACM impacted soils to natural.

## ***Attachment 3 – Certificate of Analysis***



## Bulk Identification Report

**Job No:** 754-SYDEN234000 Bulk ID Report EP3244 24082023  
**Client:** EP Risk Management Pty Ltd  
**Client Address:** Suite 13.01, Level 13, 80 Mount Street,  
North Sydney, NSW  
**Contact:** Jenny Shao  
**E-mail:** [jenny.shao@eprisk.com.au](mailto:jenny.shao@eprisk.com.au)  
**Date Sampled:** 23-08-23  
**Date Analysed:** 28-29/08/2023  
**Date Authorised:** 29-08-23  
**Sampled By:** As received by client (Jenny Shao)  
**Site:** ESR



Accredited for compliance with ISO/IEC 17025 - Testing  
 Accreditation No:2220  
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

### Asbestos in Bulk Samples and Non-homogenous Material

**Test Method:** Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

**Analysed At:** Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 48

### Approved Identifier

Panika Wongchanda & Matthew Tang

### Approved Signatory

Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_001	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 476.7 g > 2mm fraction ~ 41.9 g < 2mm fraction ~ 434.8 g < 2mm sub sample ~ 32.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_002	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 422.9 g > 2mm fraction ~ 282.6 g < 2mm fraction ~ 140.3 g < 2mm sub sample ~ 36.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_003	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 574 g > 2mm fraction ~ 463 g < 2mm fraction ~ 111 g < 2mm sub sample ~ 41.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_004	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 459.3 g > 2mm fraction ~ 222.7 g < 2mm fraction ~ 236.6 g < 2mm sub sample ~ 31.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004



Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_005	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 469.4 g > 2mm fraction ~ 242.1 g < 2mm fraction ~ 227.3 g < 2mm sub sample ~ 38.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_006	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 436.7 g > 2mm fraction ~ 67.2 g < 2mm fraction ~ 369.5 g < 2mm sub sample ~ 36 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_007	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 418.8 g > 2mm fraction ~ 181.7 g < 2mm fraction ~ 237.1 g < 2mm sub sample ~ 38.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_008	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 513.7 g > 2mm fraction ~ 148.7 g < 2mm fraction ~ 365 g < 2mm sub sample ~ 41.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_009	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 586.6 g > 2mm fraction ~ 258.5 g < 2mm fraction ~ 328.1 g < 2mm sub sample ~ 41.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_010	As received - Brown non-homogenous soil, rocks & debris <b>&gt;2mm Fraction</b> Matted fibre bundles containing <b>Chrysotile (white asbestos)</b> found in the >2mm fraction raw weight: ~ 0.0017 g	Total sample ~ 648.8 g > 2mm fraction ~ 316.8 g < 2mm fraction ~ 332 g < 2mm sub sample ~ 40.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_011	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 649.7 g > 2mm fraction ~ 245.3 g < 2mm fraction ~ 404.4 g < 2mm sub sample ~ 40.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_012	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 464.4 g > 2mm fraction ~ 138.2 g < 2mm fraction ~ 326.2 g < 2mm sub sample ~ 39.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_013	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 439.2 g > 2mm fraction ~ 274.2 g < 2mm fraction ~ 165 g < 2mm sub sample ~ 42.7 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_014	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 530.1 g > 2mm fraction ~ 274.9 g < 2mm fraction ~ 255.2 g < 2mm sub sample ~ 43.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_015	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 495.8 g > 2mm fraction ~ 270.7 g < 2mm fraction ~ 225.2 g < 2mm sub sample ~ 40.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_016	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 487.8 g > 2mm fraction ~ 164.8 g < 2mm fraction ~ 323 g < 2mm sub sample ~ 37.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_017	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 595 g > 2mm fraction ~ 311 g < 2mm fraction ~ 284 g < 2mm sub sample ~ 44.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_018	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 516.6 g > 2mm fraction ~ 274.1 g < 2mm fraction ~ 242.5 g < 2mm sub sample ~ 39.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_019	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 482.8 g > 2mm fraction ~ 178.8 g < 2mm fraction ~ 304 g < 2mm sub sample ~ 42.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_020	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 522.1 g > 2mm fraction ~ 314.9 g < 2mm fraction ~ 207.2 g < 2mm sub sample ~ 41.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_021	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 508.5 g > 2mm fraction ~ 200.7 g < 2mm fraction ~ 307.8 g < 2mm sub sample ~ 42.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_022	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 461.4 g > 2mm fraction ~ 43.7 g < 2mm fraction ~ 417.7 g < 2mm sub sample ~ 41.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_023	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 443.4 g > 2mm fraction ~ 151.3 g < 2mm fraction ~ 292.1 g < 2mm sub sample ~ 41.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_024	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 434.4 g > 2mm fraction ~ 207.5 g < 2mm fraction ~ 226.9 g < 2mm sub sample ~ 36.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_025	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 516.6 g > 2mm fraction ~ 253.5 g < 2mm fraction ~ 263.1 g < 2mm sub sample ~ 45.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_026	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 768.5 g > 2mm fraction ~ 392.4 g < 2mm fraction ~ 376.1 g < 2mm sub sample ~ 42 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_027	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 754.9 g > 2mm fraction ~ 445.1 g < 2mm fraction ~ 309.8 g < 2mm sub sample ~ 50.5 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_028	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 578 g > 2mm fraction ~ 358 g < 2mm fraction ~ 220 g < 2mm sub sample ~ 41 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_029	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 761.2 g > 2mm fraction ~ 434.3 g < 2mm fraction ~ 326.9 g < 2mm sub sample ~ 43.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_030	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 478 g > 2mm fraction ~ 322.8 g < 2mm fraction ~ 155.2 g < 2mm sub sample ~ 37.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_031	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 593.9 g > 2mm fraction ~ 433.8 g < 2mm fraction ~ 160.1 g < 2mm sub sample ~ 41.7 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_032	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 523.3 g > 2mm fraction ~ 130.6 g < 2mm fraction ~ 392.7 g < 2mm sub sample ~ 49 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_033	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 687.6 g > 2mm fraction ~ 286.7 g < 2mm fraction ~ 400.9 g < 2mm sub sample ~ 40.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_034	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 508.1 g > 2mm fraction ~ 128.3 g < 2mm fraction ~ 379.8 g < 2mm sub sample ~ 40.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004



Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_035	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 481.9 g > 2mm fraction ~ 142.7 g < 2mm fraction ~ 339.2 g < 2mm sub sample ~ 40.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_036	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 543.5 g > 2mm fraction ~ 184.8 g < 2mm fraction ~ 358.7 g < 2mm sub sample ~ 43.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_037	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 459.9 g > 2mm fraction ~ 168.2 g < 2mm fraction ~ 291.7 g < 2mm sub sample ~ 37.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_038	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 406.2 g > 2mm fraction ~ 129.5 g < 2mm fraction ~ 276.7 g < 2mm sub sample ~ 41.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_039	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 475.2 g > 2mm fraction ~ 197.6 g < 2mm fraction ~ 277.6 g < 2mm sub sample ~ 48.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_040	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 492.5 g > 2mm fraction ~ 305.8 g < 2mm fraction ~ 186.7 g < 2mm sub sample ~ 38.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_041	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 287.2 g > 2mm fraction ~ 109.8 g < 2mm fraction ~ 177.4 g < 2mm sub sample ~ 46.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_042	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 283.1 g > 2mm fraction ~ 59.6 g < 2mm fraction ~ 223.5 g < 2mm sub sample ~ 37.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_043	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 400.5 g > 2mm fraction ~ 128.5 g < 2mm fraction ~ 272 g < 2mm sub sample ~ 48.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_044	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 349.3 g > 2mm fraction ~ 101.8 g < 2mm fraction ~ 247.5 g < 2mm sub sample ~ 38 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_045	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 358.1 g > 2mm fraction ~ 153.2 g < 2mm fraction ~ 204.9 g < 2mm sub sample ~ 37.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_046	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 329.9 g > 2mm fraction ~ 133.3 g < 2mm fraction ~ 196.6 g < 2mm sub sample ~ 39.5 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_047	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 387.5 g > 2mm fraction ~ 136.8 g < 2mm fraction ~ 250.7 g < 2mm sub sample ~ 37.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
AEC14_VAL_048	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 360.6 g > 2mm fraction ~ 126 g < 2mm fraction ~ 234.6 g < 2mm sub sample ~ 40.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

#### Notes

Subsampling is carried out as per Coffey SOP WILAB1 using the coning and quartering method, please note subsampling may reduce the accuracy of the analytical result.

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[illegible]



## Bulk Identification Report

**Job No:** 754-SYDEN234000 Bulk ID Report EP3244 04092023  
**Client:** EP Risk Management Pty Ltd  
**Client Address:** Suite 13.01, Level 13, 80 Mount Street,  
North Sydney, NSW  
**Contact:** Jenny Shao  
**E-mail:** [jenny.shao@eprisk.com.au](mailto:jenny.shao@eprisk.com.au)  
**Date Sampled:** 4/09/2023  
**Date Analysed:** 5/09/2023  
**Date Authorised:** 5/09/2023  
**Sampled By:** As received by client (Jenny Shao)  
**Site:** ESR



Accredited for compliance with ISO/IEC 17025 - Testing  
Accreditation No:2220  
Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

**Test Method:** **Asbestos in Bulk Samples and Non-homogenous Material**  
Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

**Analysed At:** Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 1

**Approved Identifier**  
Panika Wongchanda

**Approved Signatory**  
Matthew Tang

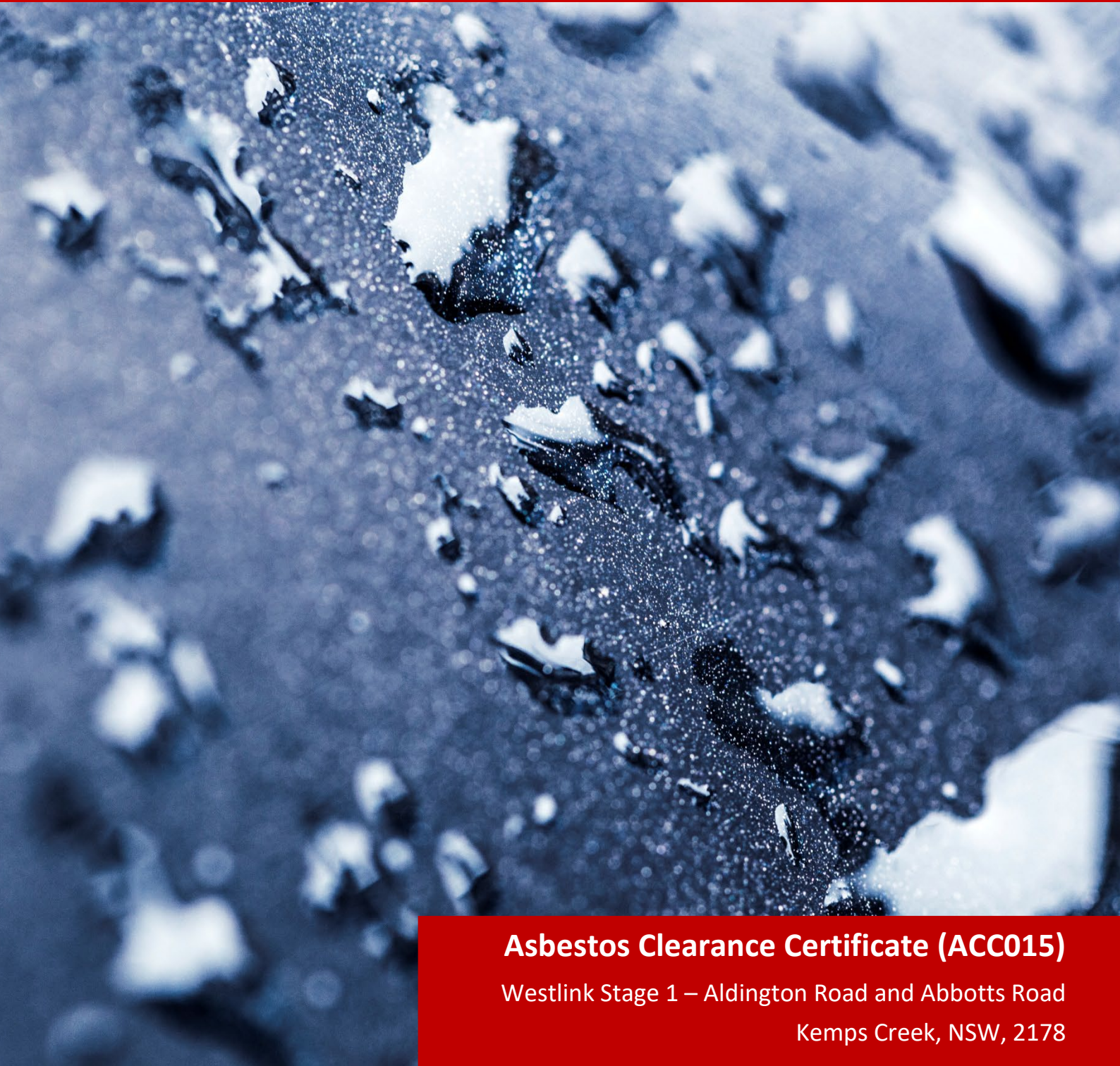
Sample No.	Location & Description	Sample Size (~)	Results
AEC14_VAL_049	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 528.3 g > 2mm fraction ~ 162.5 g < 2mm fraction ~ 365.8 g < 2mm sub sample ~ 37.7 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

### Notes

Subsampling is carried out as per Coffey SOP WILAB1 using the coning and quartering method, please note subsampling may reduce the accuracy of the analytical result.

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## Asbestos Clearance Certificate (ACC015)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC015\_ESR\_Westlink Stage 1\_AEC15\_v1 | 24 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services





# Asbestos Clearance Certificate – ACC015

## Westlink Stage 1 – AEC15

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Hayley Erskine – Graduate Environmental Scientist

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	<ul style="list-style-type: none"> <li><b>AEC15:</b> 03.08.223</li> <li><b>AEC15 Vegetation Scrape:</b> 04.08.2023 &amp; 07.08.2023</li> </ul>
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to AEC15 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <ul style="list-style-type: none"> <li><b>AEC15:</b> covers an approximate surface area of 100 m<sup>2</sup> and includes soils up to a depth of 0.1 m below ground level (mBGL).</li> <li><b>AEC15 Vegetation Scrape:</b> covers an approximate surface area of 1,950 m<sup>2</sup> and includes surface soils and all stockpiles to the former house footprint.</li> </ul>
Scope of work (as advised by client/contractor):	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC015 was as follows:</p> <ul style="list-style-type: none"> <li><b>AEC15:</b> Bonded asbestos in surface soils &lt;0.1m below surface.</li> <li><b>AEC15 Vegetation Scrape:</b> Potential visible asbestos in surface soils (subject to vegetation scrape).</li> </ul> <p>The remediation methodology for AEC15 as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>Systematic inspection of surface and hand picking of visible ACM fragments.</li> <li>Rake surface soils in one direction, to a depth of 0.1m below ground level, using an excavator fitted with a tooth bucket.</li> <li>Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>Rake surface soils in a direction 90° perpendicular to the first raking direction, to a depth of 0.1 mBGL using an excavator fitted with a tooth bucket.</li> <li>Systematic inspection of raked surface and hand picking of visible ACM fragments.</li> <li>ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), Remedial Action Plan (RAP), 290-308 Aldington Road and 59-63 Abbotts Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).

	<p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm).</li> </ul> <p>The remediation methodology for AEC15 Vegetation Scrape as per the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Vegetation will be removed (i.e. stripped, tilled or grubbed), in order to facilitate clear and unobstructed visual assessment of surface soils.</li> <li>• A grid-based walkover assessing the presence of visible asbestos in surface soils. The walkover will be undertaken on transects spaced 5 m apart, with at least one pass in north/south direction and one in an east/west direction.</li> <li>• The walkover will be undertaken by a person with suitable experience in the identification of potential asbestos containing materials.</li> <li>• ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation cleared of vegetation and photographic record.</li> </ul> <p>Due to a large quantity of ACM fragments and building and demolition waste identified to the former house footprint, material from this area was excavated to approximately 0.1 - 0.2 mBGL and transported to the stockpile pad as B3 material requiring ex-situ treatment.</p> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> </ul>
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	<ul style="list-style-type: none"> <li>Field screening for bonded (non-friable) ACM (&gt;7mm).</li> </ul>
Type of asbestos containing material (ACM) removed:	<input type="checkbox"/> Friable. <input checked="" type="checkbox"/> Non-Friable. <input type="checkbox"/> Asbestos containing dust/debris. <input checked="" type="checkbox"/> Asbestos in Soil (ASBINS). <input type="checkbox"/> Other: N/A
Asbestos controls adopted during removal works:	<input checked="" type="checkbox"/> Exclusion zone. <input checked="" type="checkbox"/> Personal Protective Equipment (PPE). <input type="checkbox"/> Wet decontamination unit. <input checked="" type="checkbox"/> Dry decontamination unit or area. <input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input checked="" type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	<ul style="list-style-type: none"> <li>AEC15: 03.08.2023</li> <li>AEC15 Vegetation Scrape: 04.08.2023 &amp; 07.03.2023</li> </ul>		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

#### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base and walls of the in-situ rake footprint to AEC15 as well as to the base and walls of the former house footprint in AEC15.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. Where bonded (non-friable) ACM was detected within the sieve, the area was retreated as per the approved RAP methodology and a visual and field screening undertaken again. No bonded (non-friable) ACM was detected during the sieve tests. Results have been summarised below.

Area	Sample ID	Location	Sample Depth	Result
AEC15 – In-situ rake footprint	AEC15-VAL-001	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-002	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-003	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-004	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-005	Western wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-006	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-007	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC15-VAL-008	Eastern wall of excavation footprint	0.1 mBGL	No Asbestos Detected
AEC15 – Former house footprint	AEC15-VAL-009	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-010	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-011	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-012	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-013	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-014	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-015	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-016	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected

	AEC15-VAL-017	Base of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-018	Northern wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-019	Northern wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-020	Southern wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-021	Southern wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-022	Eastern wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-023	Eastern wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-024	Western wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected
	AEC15-VAL-025	Western wall of former house footprint	0.1 – 0.2 mBGL	No Asbestos Detected

## 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. The visual inspection was limited to surficial soils only and does not include soil beneath trees remaining in the Clearance Area. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act 2011</i>.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>



## 6. ASBESTOS REMOVAL DOCUMENTATION


Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.

## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and sieve tests. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	J. Shao	24.08.2023	K. Guenther	24.08.2023	T. Chatman	24.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	24.08.2023	EP3244.003_ACC015_ESR_Westlink Stage 1_AEC15_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

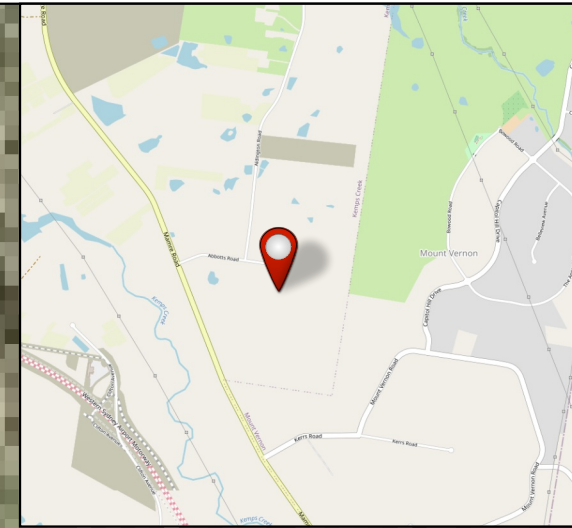
Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

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## ***Attachment 1 – Figure***



**Legend**

- Approximate Validation Sample Locations
- AEC15
- AEC15 Vegetation Scrape
- Former House Footprint (Removed as B3)



## ***Attachment 2 – Photolog***





**Plate 1** – 03/08/2023

Surficial soils within AEC15 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.



**Plate 2** – 03/08/2023

Surficial soils within AEC15 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.





**Plate 3** – 03/08/2023

Field screening of residual rake footprint in AEC15 following in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.



**Plate 4** – 04/08/2023

Material from the former house footprint in AEC15 observed to be contaminated with a large quantity of ACM fragments and building and demolition waste. This material was excavated to approximately 0.1 – 0.2 mBGL and transported to the stockpile pad as B3 material requiring ex-situ treatment.





**Plate 5** – 07/08/2023

Surfacial soils within AEC15 subsequent to vegetation scrape.



**Plate 6** – 07/08/2023

Residual soils within the former house footprint in AEC15 subsequent to B3 scrape.





**Plate 7** – 07/08/2023

Residual soils within the former house footprint in AEC15 subsequent to B3 scrape.



**Plate 8** – 07/08/2023

Residual soils within the former house footprint in AEC15 subsequent to B3 scrape.







## Asbestos Clearance Certificate (ACC005)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC005\_ESR\_Westlink Stage 1\_AEC32 and AEC32a\_v1 | 7 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services





## Asbestos Clearance Certificate – ACC005

### Westlink Stage 1 – AEC32 and AEC32a

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Sean Kelly – Senior Occupational Hygienist (LAA001369) Jenny Shao – Occupational Hygienist (LAA001462) Naomi Madigan – Graduate Environmental Scientist

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	<ul style="list-style-type: none"> <li><b>AEC32 – TP201:</b> 26.07.2023</li> <li><b>AEC32a – TP207:</b> 25.07.2023</li> <li><b>AEC32 and AEC32a Vegetation Scrape:</b> 27.07.2023 – 28.07.2023, 31.07.2023 – 01.08.2023</li> </ul>
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to AEC32 and AEC32a within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <ul style="list-style-type: none"> <li><b>AEC32 – TP201:</b> covers an approximate surface area of 80 m<sup>2</sup> and includes soils up to a depth of 0.1 m below ground level (mBGL).</li> <li><b>AEC32a – TP207:</b> covers an approximate surface area of 230 m<sup>2</sup> and includes soils up to a depth of 0.1 mBGL.</li> <li><b>AEC32 and AEC32a Vegetation Scrape:</b> covers an approximate surface area of 1,530 m<sup>2</sup> and includes surface soils only to the western end and soils to a depth of 0.2 mBGL in the eastern end.</li> </ul>
Scope of work (as advised by client/contractor):	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC32 and AEC32a was as follows:</p> <ul style="list-style-type: none"> <li><b>AEC32 – TP201:</b> Bonded asbestos in surface soils &lt;0.1m below surface.</li> <li><b>AEC32a – TP207:</b> Bonded asbestos in surface soils &lt;0.1m below surface.</li> <li><b>AEC32 and AEC32a Vegetation Scrape:</b> Visible asbestos in surface soils.</li> </ul> <p>The remediation methodology for AEC32 – TP201 and AEC32a – TP207 as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>Systematic inspection of surface and hand picking of visible ACM fragments.</li> <li>Rake surface soils in one direction, to a depth of 0.1m below ground level, using an excavator fitted with a tooth bucket.</li> </ul>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), Remedial Action Plan (RAP), 290-308 Aldington Road and 59-63 Abbots Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).

- Systematic inspection of raked surface and hand picking of visible ACM fragments.
- Rake surface soils in a direction 90° perpendicular to the first raking direction, to a depth of 0.1 mBGL using an excavator fitted with a tooth bucket.
- Systematic inspection of raked surface and hand picking of visible ACM fragments.
- ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.

Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:

- A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.
- Field screening for bonded (non-friable) ACM (>7mm).

The remediation methodology for AEC32 and AEC32a Vegetation Scrape as per the RAP (Alliance 2023) involved the following:

- Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.
- Vegetation will be removed (i.e. stripped, tilled or grubbed), in order to facilitate clear and unobstructed visual assessment of surface soils.
- A grid-based walkover assessing the presence of visible asbestos in surface soils. The walkover will be undertaken on transects spaced 5 m apart, with at least one pass in north/south direction and one in an east/west direction.
- The walkover will be undertaken by a person with suitable experience in the identification of potential asbestos containing materials.
- ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification..

During the in-situ mechanical raking and emu picking of AEC32 – TP201 and AEC32a – TP207, a large quantity of ACM fragments and building and demolition waste was identified within the work area. A stockpile was generated from each area and transported to the stockpile pad as B3 material requiring ex-situ treatment.

During the vegetation scrape, a large quantity of ACM fragments and building and demolition waste was identified to the eastern portion of the AEC32 and AEC32a Vegetation Scrape. As such,



	<p>material from this area was excavated to 0.2 mBGL and transported to the stockpile pad as B3 material requiring ex-situ treatment.</p> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>A visual assessment of the surface soils and residual remediation cleared of vegetation and photographic record.</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input type="checkbox"/> Other: N/A</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p> <p><input checked="" type="checkbox"/> Dust suppression water.</p> <p><input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum.</p> <p><input type="checkbox"/> Wet wiping.</p> <p><input checked="" type="checkbox"/> Air Monitoring.</p> <p><input type="checkbox"/> N/A.</p>
Post removal work encapsulation:	<p><input type="checkbox"/> Geotextile marker layer.      <input checked="" type="checkbox"/> N/A.</p> <p><input type="checkbox"/> PVA / Adhesive.      <input type="checkbox"/> Other.</p> <p><input type="checkbox"/> Imported 'clean' soils.</p>

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	<ul style="list-style-type: none"> <li>AEC32 – TP201: 26.07.2023</li> <li>AEC32a – TP207: 25.07.2023</li> <li>AEC32 and AEC32a Vegetation Scrape: 01.08.2023</li> </ul>		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base of the in-situ rake footprint to AEC32 – TP201 and AEC32a – TP207, as well as to the eastern portion of the AEC32 and AEC32a Vegetation Scrape which was removed to 0.2 mBGL. Sieving tests were undertaken across the base and walls of each footprint, where practicable.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. No bonded (non-friable) ACM was detected during the sieve tests. Results have been summarised below.

Area	Sample ID	Location	Sample Depth	Result
AEC32 - TP01	AEC32-VAL-001	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32-VAL-002	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32-VAL-003	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC32 - TP207	AEC32a-VAL-001	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-002	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-003	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-004	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected

	AEC32a-VAL-005	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-006	Base of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-007	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-008	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-009	Northern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-010	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-011	Eastern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-012	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-013	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
	AEC32a-VAL-014	Southern wall of in-situ rake area	0.1 mBGL	No Asbestos Detected
AEC32 and AEC32a Vegetation Scrape (Eastern Portion)	AEC32 and AEC32a-VAL-001	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-002	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-003	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-004	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-005	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-006	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-007	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-008	Base of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-009	Southern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-010	Eastern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-011	Eastern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-012	Eastern wall of excavation footprint	0.2 mBGL	No Asbestos Detected



	AEC32 and AEC32a-VAL-013	Northern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-014	Northern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-015	Western wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-016	Western wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-017	Western wall of excavation footprint	0.2 mBGL	No Asbestos Detected
	AEC32 and AEC32a-VAL-018	Southern wall of excavation footprint	0.2 mBGL	No Asbestos Detected

## 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. The visual inspection was limited to surficial soils only and does not include soil beneath trees remaining in the Clearance Area. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 6. ASBESTOS REMOVAL DOCUMENTATION


Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.

## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the remediation footprint during the asbestos visual clearance inspection and sieve tests. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	H. Erskine	07.08.2023	K. Guenther	07.08.2023	J. Shao	07.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	07.08.2023	EP3244.003_ACC005_ESR_Westlink Stage 1_AEC32 and 32a_v1	ESR Australia Pty Ltd



## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.

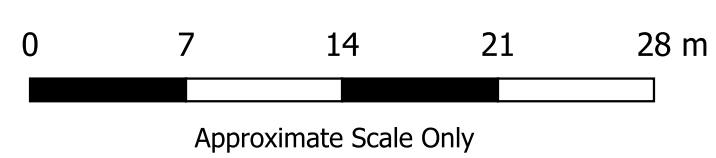
## ***Attachment 1 – Figure***



**Legend**

- AEC32a - In-situ Mechanical Rake
- AEC32 - Veg Scrape
- Eastern B3 Scrape to 0.2 mBGL
- Validation Samples

**Figure 1 - Clearance Area**





## ***Attachment 2 – Photolog***



**Plate 1 – 26/07/2023**

Surficial soils within AEC32 – TP201 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.



**Plate 2 – 26/07/2023**

Surficial soils within AEC32 – TP201 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.





**Plate 3** – 26/07/2023

Surfacial soils within AEC32 – TP201 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.



**Plate 4** – 26/07/2023

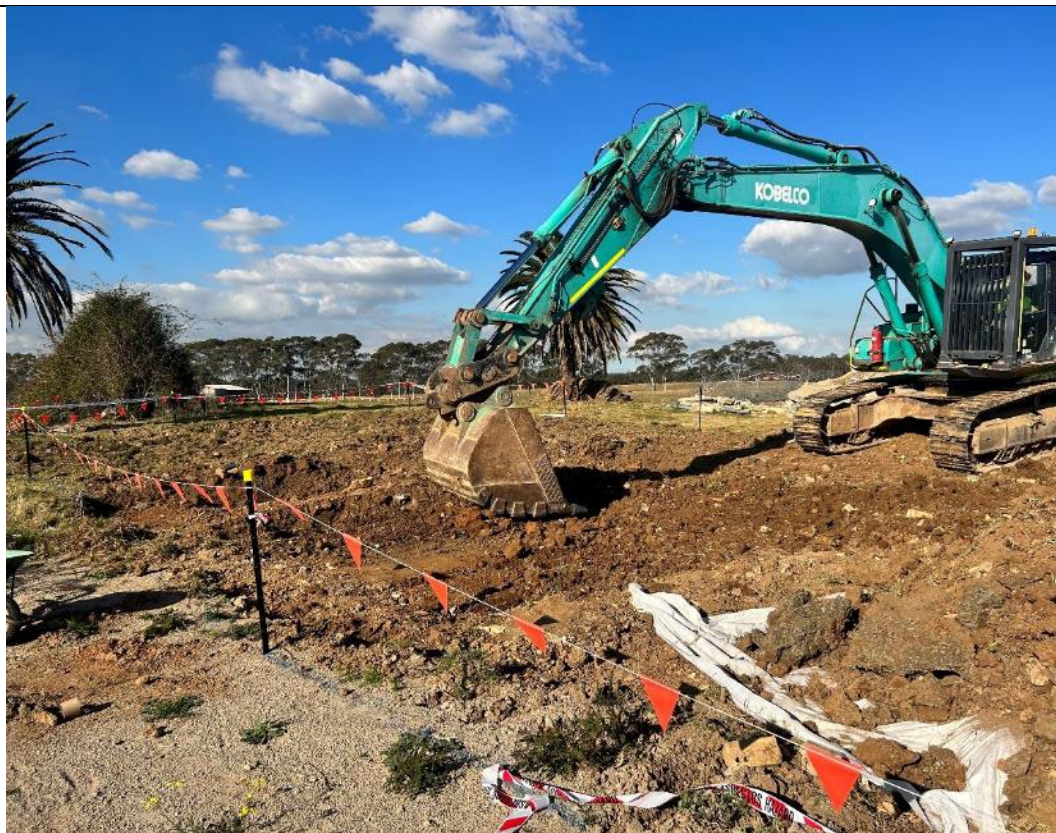
Surfacial soils within AEC32 – TP201 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.





**Plate 5 – 25/07/2023**

Surficial soils within AEC32 – TP207 in the process of in-situ mechanical raking.



**Plate 6 – 25/07/2023**

Surficial soils within AEC32 – TP207 in the process of in-situ mechanical raking.





**Plate 7** – 25/07/2023

Surficial soils within AEC32 – TP207 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.



**Plate 8** – 25/07/2023

Surficial soils within AEC32 – TP207 subsequent to in-situ mechanical raking and emu picking of bonded (non-friable) ACM fragments.





**Plate 9** – 01/08/2023

AEC32 and AEC32a subsequent to a vegetation scrape and scrape to 0.2 mBGL in the eastern end and emu picking of bonded (non-friable) ACM fragments.



**Plate 10** – 01/08/2023

AEC32 and AEC32a subsequent to a vegetation scrape and scrape to 0.2 mBGL in the eastern end and emu picking of bonded (non-friable) ACM fragments.





**Plate 10** – 01/08/2023

AEC32 and AEC32a subsequent to a vegetation scrape and scrape to 0.2 mBGL in the eastern end and emu picking of bonded (non-friable) ACM fragments.

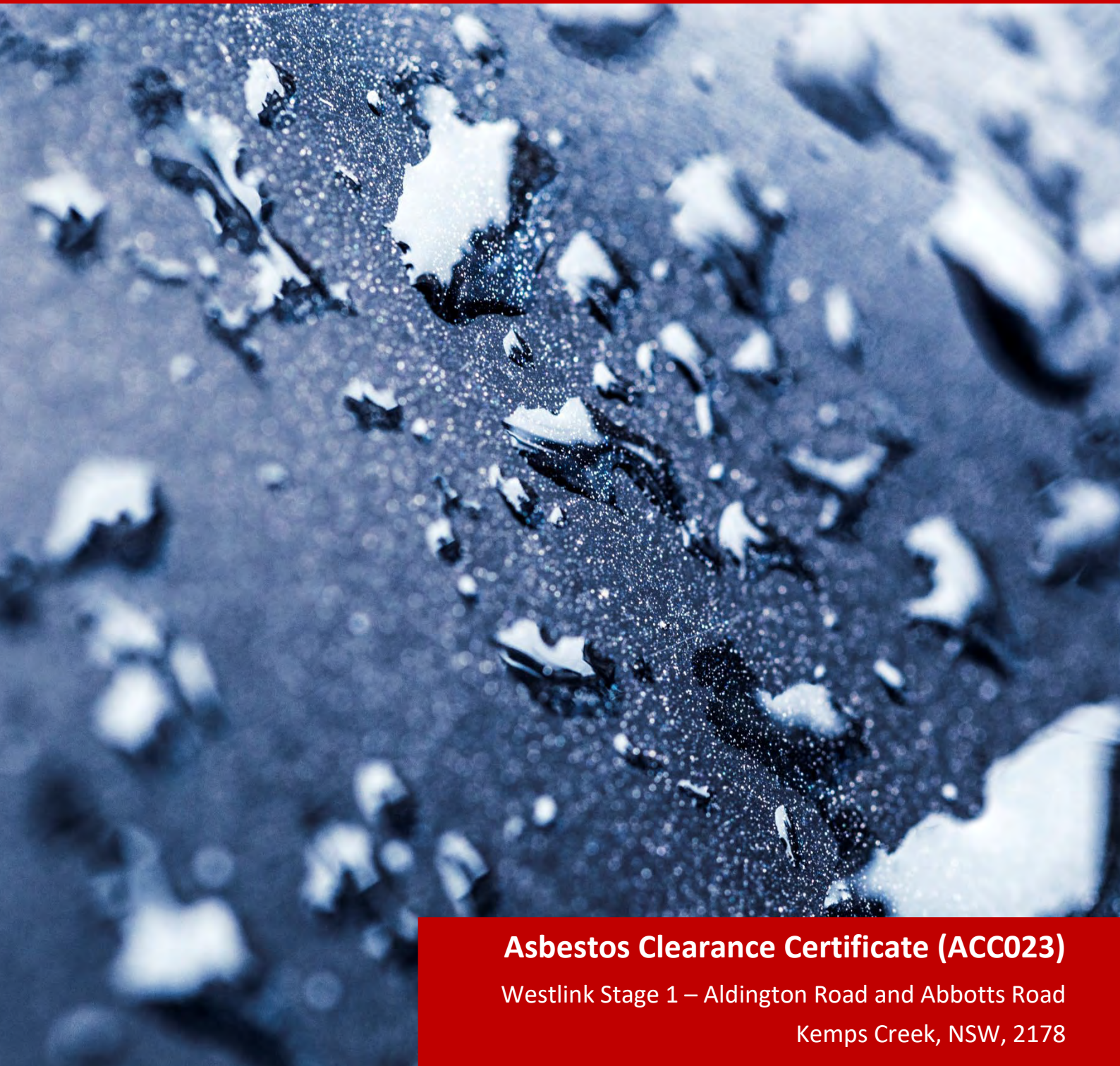


**Plate 10** – 01/08/2023

AEC32 and AEC32a subsequent to a vegetation scrape and scrape to 0.2 mBGL in the eastern end and emu picking of bonded (non-friable) ACM fragments.







## Asbestos Clearance Certificate (ACC023)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC023\_ESR\_Westlink Stage 1\_AEC33\_v2 | 8 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services





## Asbestos Clearance Certificate – ACC023

### Westlink Stage 1 – AEC33

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldginton Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Sean Kelly – Senior Occupational Hygienist (LAA001369)



#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	01.08.2023 – 02.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to AEC33 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>AEC33 covers an approximate surface area of 2,000 m<sup>2</sup> and includes surface soils only.</p>
Scope of work (as advised by client/contractor):	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC33 was: Visible asbestos in surface soils.</p> <p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works will be undertaken in a manner that avoids further damage or burial of the ACM by the process.</li> <li>• Vegetation will be removed (i.e. stripped, tilled or grubbed) from these AECs), in order to facilitate clear and unobstructed visual assessment of surface soils.</li> <li>• A grid-based walkover will then be undertaken for the purpose of assessing the presence of visible asbestos in surface soils.</li> <li>• The walkover will be undertaken on transects spaced 5m apart, with at least one pass in a north/south direction and one in an east/west direction, in each individual AEC.</li> <li>• The walkover will be undertaken by a person suitably experienced in the identification of potential asbestos containing materials.</li> <li>• ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul> <p>Prior to remediation works two (2) unexpected finds (UFs) were identified within AEC33:</p> <ul style="list-style-type: none"> <li>• UF020 – Asbestos cement (AC) conduit.</li> <li>• UF021 – AC sheeting.</li> </ul> <p>These UFs were removed as bonded (non-friable) ACM prior to commencement of the vegetation scrape.</p>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), Remedial Action Plan (RAP), 290-308 Aldington Road and 59-63 Abbots Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).

	<p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>A visual assessment of the surface soils for visible asbestos.</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input checked="" type="checkbox"/> Other: AC conduit and AC sheeting.</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p> <p><input checked="" type="checkbox"/> Dust suppression water.</p> <p><input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum.</p> <p><input type="checkbox"/> Wet wiping.</p> <p><input checked="" type="checkbox"/> Air Monitoring.</p> <p><input type="checkbox"/> N/A.</p>
Post removal work encapsulation:	<p><input type="checkbox"/> Geotextile marker layer.      <input checked="" type="checkbox"/> N/A.</p> <p><input type="checkbox"/> PVA / Adhesive.      <input type="checkbox"/> Other.</p> <p><input type="checkbox"/> Imported 'clean' fill.</p>

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works	
Date of clearance inspection:	02.08.2023
Asbestos Work Area	
Evidence of PVA/sealant application:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>



#### 4. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. The visual inspection was limited to surficial soils only and does not include soil beneath trees remaining in the Clearance Area. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

#### 5. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

#### 6. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<p><input type="checkbox"/> Continue works under Class A asbestos conditions.</p> <p><input type="checkbox"/> Continue works under Class B asbestos conditions.</p> <p><input type="checkbox"/> Provide a final clearance at the conclusion of the removal works.</p> <p><input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol.</p> <p><input type="checkbox"/> N/A.</p>
------------------	---

Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.
-------------	--

## 7. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the Clearance Area during the asbestos visual clearance inspection. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Sean Kelly	Signature:	
LAA Number:	LAA001369		

## 8. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

## QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	H. Erskine	07.08.2023	K. Guenther	07.08.2023	J. Shao	07.08.2023
v1	H. Erskine	08.08.2023	K. Guenther	08.08.2023	J. Shao	08.08.2023

## DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	07.08.2023	EP3244.003_ACC023_ESR_Westlink Stage 1_AEC33_v2	ESR Australia Pty Ltd
v2	08.08.2023	EP3244.003_ACC023_ESR_Westlink Stage 1_AEC33_v2	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.



## ***Attachment 1 – Figure***





**Asbestos Clearance Certificate (ACC033)**  
**Westlink Stage 1 - Aldington Road, Abbotts Road & Mamre Road, Kemps Creek, NSW, 2178**

**Figure 1 - Clearance Area**

Job No: EP3244  
Date: 08/08/2023  
Drawing Ref: EP3244.003 Fig. 1  
Version No: v2



0 7 14 21 28 m  
Approximate Scale Only

Coordinate System: WGS 84  
Drawn by: JS Checked by: HE  
Scale of regional map not shown  
Source: Nearmap / OpenStreetMap





## ***Attachment 2 – Photolog***





**Plate 1 – 02/08/2023**

Surficial soils within AEC33 subsequent to vegetation scrape & emu picking of ACM fragments.



**Plate 2 – 02/08/2023**

Surficial soils within AEC33 subsequent to vegetation scrape & emu picking of ACM fragments.





**Plate 3** – 02/08/2023

Surficial soils within AEC33 subsequent to vegetation scrape & emu picking of ACM fragments.



**Plate 4** – 02/08/2023

Surficial soils within AEC33 subsequent to vegetation scrape & emu picking of ACM fragments.







## Asbestos Clearance Certificate (ACC007)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC007\_ESR\_Westlink Stage 1\_AEC38\_v1 | 8 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services



## Asbestos Clearance Certificate – ACC007

### Westlink Stage 1 – AEC38

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Sean Kelly – Senior Occupational Hygienist (LAA001369) Naomi Madigan – Graduate Environmental Scientist

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	11.07.2023, 14.07.2023, 26.07.2023 – 27.07.2023, 28.07.2023 & 01.08.2023 – 04.08.2023 & 07.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to AEC38 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>AEC38 covers an approximate surface area of 8,200 m<sup>2</sup> and includes surface soils only. AEC38 is divided into an 'upper' and 'lower' area.</p>
Scope of work (as advised by client/contractor):	<p>As per the Alliance (2023) Remediation Action Plan (RAP)<sup>1</sup>, the contaminant of potential concern (CoPC) identified within AEC38 was: Visible asbestos in surface soils.</p> <p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Vegetation will be removed (i.e. stripped, tilled or grubbed), in order to facilitate clear and unobstructed visual assessment of surface soils.</li> <li>• A grid-based walkover assessing the presence of visible asbestos in surface soils. The walkover will be undertaken on transects spaced 5 m apart, with at least one pass in north/south direction and one in an east/west direction.</li> <li>• The walkover will be undertaken by a person with suitable experience in the identification of potential asbestos containing materials.</li> <li>• ACM fragments disposed to a suitably licensed waste receiving facility, with a waste classification.</li> </ul> <p>During the walkover of the 'lower' portion of AEC38, multiple bonded (non-friable) ACM fragments &lt;7mm were identified along the southern and southwestern end. Based on the small size of these fragments, two (2) areas were considered impracticable for emu picking. As such, soils within these two (2) marked areas were scraped to a maximum depth of 0.1 mBGL, with soils transported and stockpiled at the stockpiling pad as F3 material. This was raised as UF022.</p>

<sup>1</sup> Alliance Geotechnical & Environmental Solutions Pty Ltd (Alliance), Remedial Action Plan (RAP), 290-308 Aldington Road and 59-63 Abbots Road, Kemps Creek NSW, ref: 13546-ER-2-2\_Rev1, dated 02 May 2023 (Alliance 2023).



	<p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation cleared of vegetation for visible asbestos.</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm) in areas where a surface scrape was undertaken.</li> </ul>
Type of asbestos containing material (ACM) removed:	<input type="checkbox"/> Friable. <input checked="" type="checkbox"/> Non-Friable. <input type="checkbox"/> Asbestos containing dust/debris. <input checked="" type="checkbox"/> Asbestos in Soil (ASBINS). <input type="checkbox"/> Other: N/A
Asbestos controls adopted during removal works:	<input checked="" type="checkbox"/> Exclusion zone. <input checked="" type="checkbox"/> Personal Protective Equipment (PPE). <input type="checkbox"/> Wet decontamination unit. <input checked="" type="checkbox"/> Dry decontamination unit or area. <input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input checked="" type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works	
Date of clearance inspection:	28.07.2023 & 01.08.2023 – 04.08.2023 & 07.08.2023
Asbestos Work Area	
Evidence of PVA/sealant application:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

#### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base and walls of the two (2) areas excavated to 0.1 mBGL as they were deemed unsuitable for emu-picking. Sieving tests were undertaken across the base and walls of each footprint, where practicable.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. No bonded (non-friable) ACM was detected during the sieve tests. Results have been summarised below.

Area	Sample ID	Location	Sample Depth	Result
Area 1	AEC38-VAL-001	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-002	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-003	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-004	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-005	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-006	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-007	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-008	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-009	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-010	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-011	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-012	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-013	Wall of trench	0.1 mBGL	No Asbestos Detected

	AEC38-VAL-014	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-015	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-016	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-017	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-018	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-019	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-020	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-021	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-022	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-023	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-024	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-025	Base of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-026	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-033	Wall of trench	0.1 mBGL	No Asbestos Detected
Area 2	AEC38-VAL-027	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-028	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-029	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-030	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-031	Wall of trench	0.1 mBGL	No Asbestos Detected
	AEC38-VAL-032	Wall of trench	0.1 mBGL	No Asbestos Detected



## 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. The visual inspection was limited to surficial soils only and does not include soil beneath trees remaining in the Clearance Area. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 6. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<p><input type="checkbox"/> Continue works under Class A asbestos conditions.</p> <p><input type="checkbox"/> Continue works under Class B asbestos conditions.</p> <p><input type="checkbox"/> Provide a final clearance at the conclusion of the removal works.</p> <p><input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol.</p> <p><input type="checkbox"/> N/A.</p>
------------------	---

Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.
-------------	--

## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the Clearance Area during the asbestos visual clearance inspection. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

## QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	N. Madigan	08.08.2023	K. Guenther	08.08.2023	J. Shao	08.08.2023

## DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	08.08.2023	EP3244.003_ACC007_ESR_Westlink Stage 1_AEC38_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

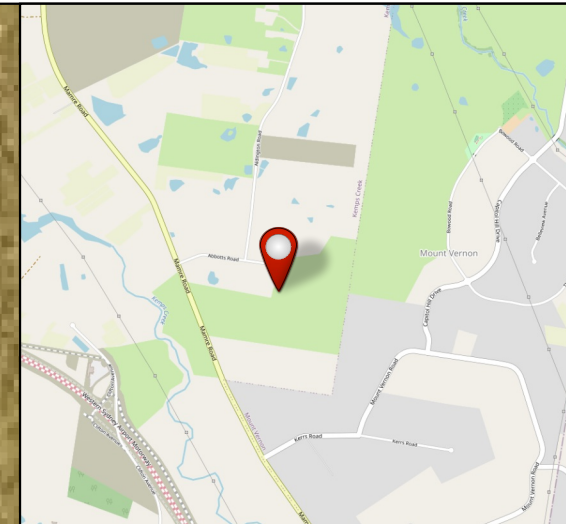
All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

The report(s) and/or information produced by EP Risk should not be reproduced and/or presented/reviewed except in full.



## ***Attachment 1 – Figure***



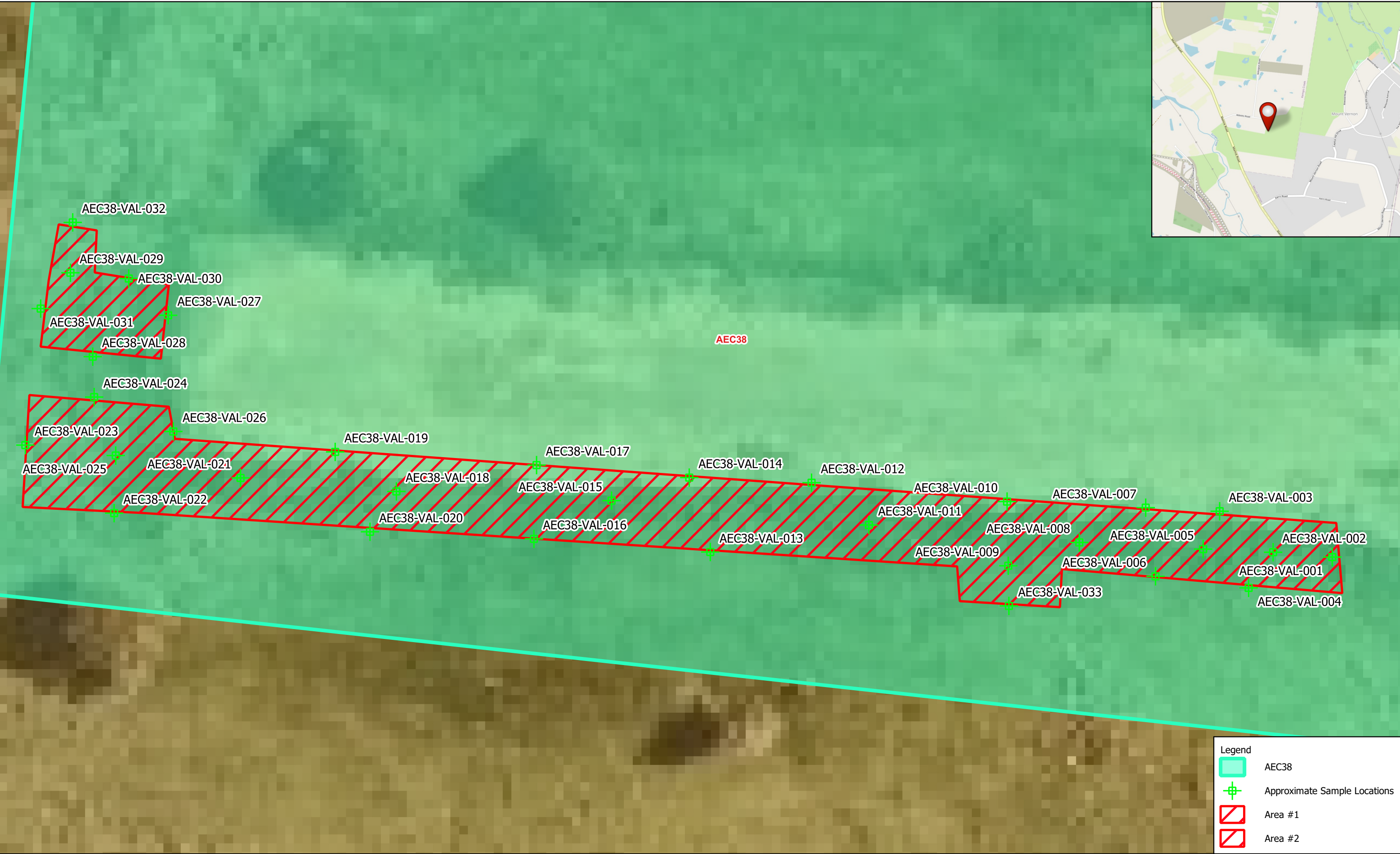
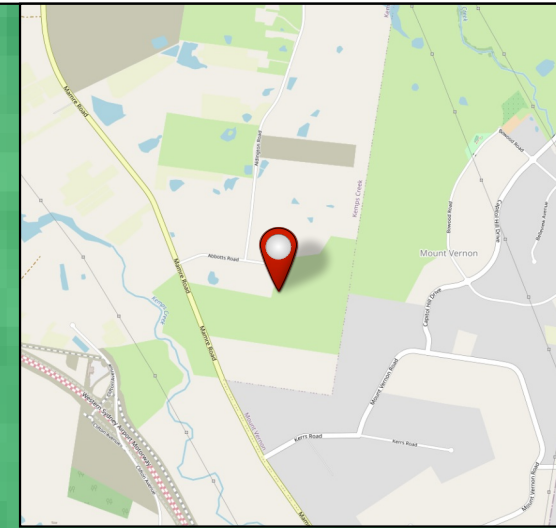


Legend





-  AEC38
-  Area #1
-  Area #2

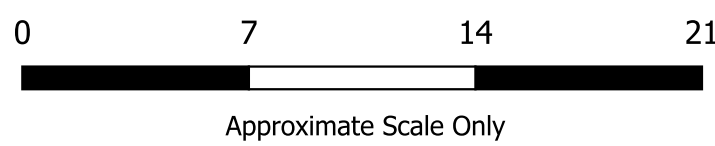






**Legend**

-  AEC38
-  Approximate Sample Locations
-  Area #1
-  Area #2





## ***Attachment 2 – Photolog***



**Plate 1** – 28/07/2023

AEC38 (Upper) following vegetation scrape + emu pick of surficial soils.



**Plate 2** – 28/07/2023

AEC38 (Upper) following vegetation scrape + emu pick of surficial soils.



**Plate 3** –28/07/2023

AEC38 (Upper) following vegetation scrape + emu pick of surficial soils.



**Plate 4** – 28/07/2023

AEC38 (Upper) following vegetation scrape + emu pick of surficial soils.





**Plate 5 – 02/08/2023**

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.



**Plate 6 – 02/08/2023**

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.





**Plate 7** – 02/08/2023

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.



**Plate 8** – 02/08/2023

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.





**Plate 9** – 02/08/2023

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.



**Plate 10** – 07/08/2023

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.





**Plate 11** – 07/08/2023

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.



**Plate 12** – 07/08/2023

AEC38 (Lower) following vegetation scrape + emu pick of surficial soils.







## Asbestos Clearance Certificate (ACC011)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC011\_ESR\_Westlink Stage 1\_UF001\_v1 | 7 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services





# Asbestos Clearance Certificate – ACC011

## Westlink Stage 1 – UF001

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Naomi Madigan – Graduate Environmental Scientist



#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	31.07.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to Unexpected Find (UF) - UF001 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF001 comprised of:</p> <ul style="list-style-type: none"> <li>Asbestos containing material (ACM) fragments in poor condition identified to the entry of the Northern Lot entry gate, south of AEC01a.</li> <li>Friable asbestos in soils (ASBINS) within a 3 m x 2 m box out, up to a depth of 0.2 metres below ground surface (mBGS).</li> </ul>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE to manage and remove the UF was as follows:</p> <ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>Soil within the 3 m x 2 m box out, up to a depth of 0.2 m BGS was carefully excavated and stockpiled for load out as friable (F3) material to the on-site stockpiling pad.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy encompassing the following:</p> <ul style="list-style-type: none"> <li>A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>Collection of validation samples of the residual in-situ material.</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input checked="" type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input type="checkbox"/> Other:</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p>

	<input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input checked="" type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	31.07.2023		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>



#### 4. ASBESTOS GRAVIMETRIC (AF/FA) RESULTS

Following the visual clearance inspection of the Clearance Area, EP Risk collected one (1) 500 mL sample of the residual in-situ material following excavation of soils to 0.2 mBGL. The sample was submitted to a National Association of Testing Authorities (NATA) accredited laboratory for Asbestos Gravimetric Analysis (non-NATA) for the detection of Asbestos Fines (AF)/Fibrous Asbestos (FA).

No asbestos was detected above the reporting limit of 0.1 g/kg. Moreover, no trace (respirable) asbestos fibres were detected. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
UF001-VAL-001	Base of excavation footprint	0.2 mBGL	No Asbestos Detected

#### 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken.</p> <p>No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 6. ASBESTOS REMOVAL DOCUMENTATION


Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.

## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and within the gravimetric asbestos sample. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
4. Certificate of Analysis	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	N. Madigan	07.08.2023	K. Guenther	07.08.2023	J. Shao	07.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	07.08.2023	EP3244.003_ACC011_ESR_Westlink Stage 1_UF001_v1	ESR Australia Pty Ltd



## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

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## ***Attachment 1 – Figure***

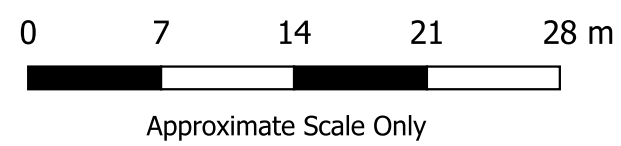




**Asbestos Clearance Certificate (ACC011)**  
**Westlink Stage 1 - Aldington Road, Abbotts Road & Mamre Road, Kemp's Creek, NSW, 2178**

**Figure 1 - Clearance Area**

Job No: EP3244  
Date: 04/08/2023  
Drawing Ref: EP3244.003 Fig. 1  
Version No: v1



Coordinate System: WGS 84  
Drawn by: JS Checked by: NM  
Scale of regional map not shown  
Source: Nearmap / OpenStreetMap





## ***Attachment 2 – Photolog***





**Plate 1 – 11/07/2023**

UF001 prior to remediation works; ACM fragments in poor condition identified adjacent to site entry gate.



**Plate 2 – 11/07/2023**

UF001 prior to remediation works; ACM fragments in poor condition identified adjacent to site entry gate.





**Plate 3** – 31/07/2023

UF001 subsequent to excavation of surficial soils as F3 material.



**Plate 4** – 31/07/2023

UF001 subsequent to excavation of surficial soils as F3 material.



## ***Attachment 3 – Certificate of Analysis***

## Bulk Identification Report

**Job No:** 754-SYDEN234000 Bulk ID Report EP3244 01082023  
**Client:** EP Risk Management Pty Ltd  
**Client Address:** Suite 13.01, Level 13, 80 Mount Street,  
North Sydney, NSW  
**Contact:** Jenny Shao  
**E-mail:** [jenny.shao@eprisk.com.au](mailto:jenny.shao@eprisk.com.au)  
**Date Sampled:** 31-07-23  
**Date Analysed:** 01-08-23  
**Date Authorised:** 01-08-23  
**Sampled By:** As received by client (Naomi Madigan & Zak Bursey)  
**Site:** ESR



Accredited for compliance with ISO/IEC 17025 - Testing  
 Accreditation No:2220  
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

### Asbestos in Bulk Samples and Non-homogenous Material

**Test Method:** Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

**Analysed At:** Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 2

**Approved Identifier**  
 Panika Wongchanda

**Approved Signatory**  
 Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
UF001-VAL-001	As received - Brown non-homogeneous soil & rocks	Total sample ~ 603 g > 2mm fraction ~ 185.3 g < 2mm fraction ~ 417.7 g < 2mm sub sample ~ 37.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF018_VAL-001	As received - Brown non-homogeneous soil & rocks	Total sample ~ 528 g > 2mm fraction ~ 336.2 g < 2mm fraction ~ 191.8 g < 2mm sub sample ~ 42.5 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

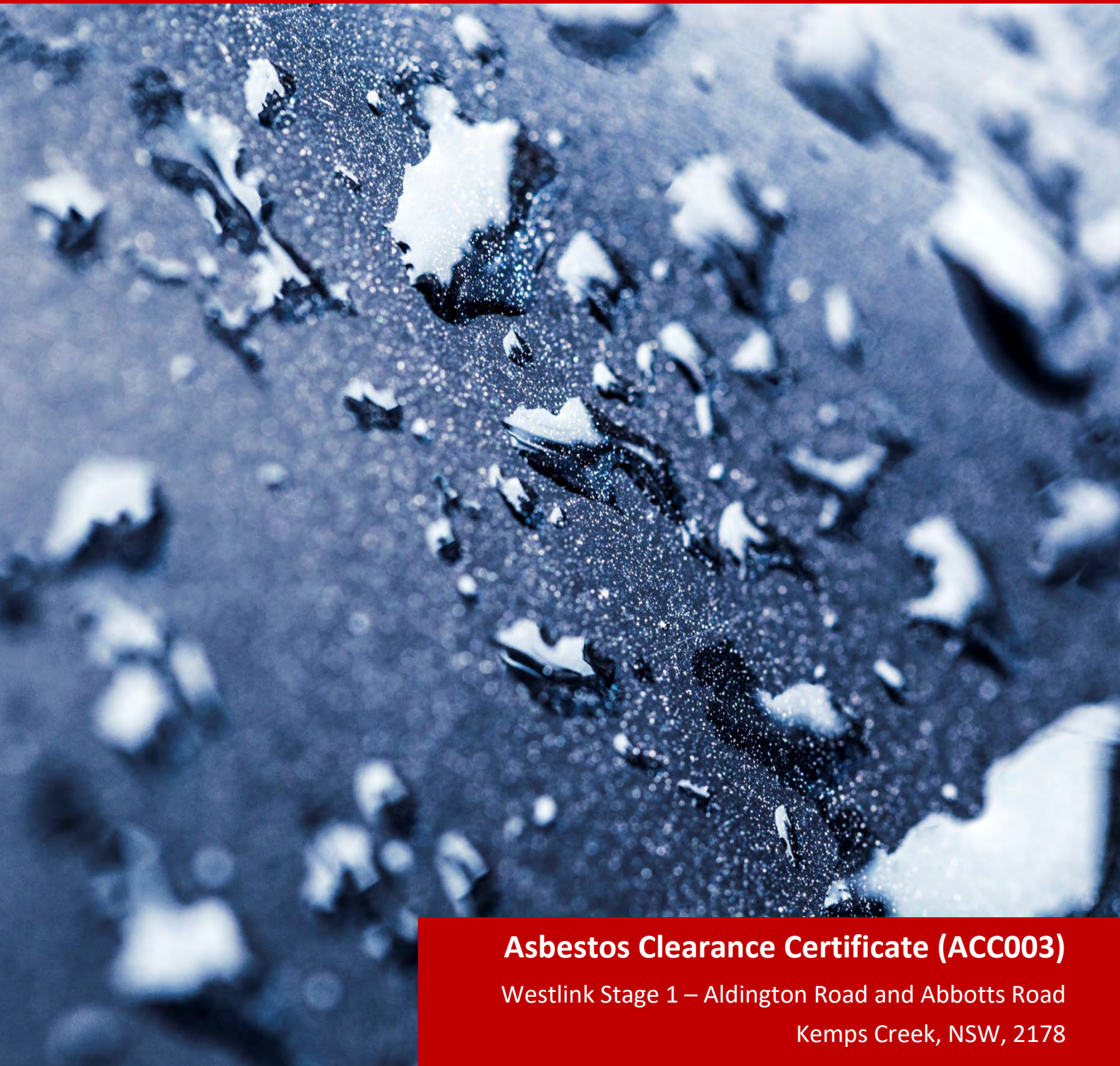
### Notes

Subsampling is carried out as per Coffey SOP WILAB1 using the coning and quartering method, please note subsampling may reduce the accuracy of the analytical result.

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## Asbestos Clearance Certificate (ACC003)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC003\_ESR\_Westlink Stage 1\_UF003\_v1 | 2 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services



# Asbestos Clearance Certificate – ACC003

## Westlink Stage 1 – UF003

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Sean Kelly – Senior Occupational Hygienist (LAA001369) Zak Bursey – Graduate Environmental Scientist



#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845



## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	14.07.2023 & 24.07.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to Unexpected Find (UF) - UF003 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF003 comprised of:</p> <ul style="list-style-type: none"> <li>Bonded (non-friable) asbestos cement (AC) conduit, approximately 4 m in length, running in a north-south direction adjacent to TP09.</li> <li>Friable asbestos in soils (ASBINS) within a 1 m x 1 m box out within the break point of the conduit, up to a depth of 0.3 metres below ground surface (mBGS).</li> </ul>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE to manage and remove the UF was as follows:</p> <ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>Soil within the 1 m x 1 m box out, up to a depth of 0.3m BGS around the breakpoint of the asbestos cement conduit was carefully excavated and stockpiled for load out as friable (F3) material to the on-site stockpiling pad.</li> <li>Following the initial excavation, a 1 m trench on either side of the AC conduit was carefully excavated to expose the remaining length of the conduit.</li> <li>Once the entire length of the conduit was identified, the conduit was carefully removed from the trench and wrapped in black plastic sheeting for disposal in the asbestos skip bin.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy encompassing the following:</p> <ul style="list-style-type: none"> <li>A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>Collection of validation samples of the residual in-situ material beneath the conduit break point.</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input checked="" type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).</p>



	<input checked="" type="checkbox"/> Other: AC Conduit
Asbestos controls adopted during removal works:	<input checked="" type="checkbox"/> Exclusion zone. <input checked="" type="checkbox"/> Personal Protective Equipment (PPE). <input type="checkbox"/> Wet decontamination unit. <input checked="" type="checkbox"/> Dry decontamination unit or area. <input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input checked="" type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

<b>Non-Friable and Friable Works</b>			
Date of clearance inspection:	14.07.2023 & 24.07.2023		
<b>Asbestos Work Area</b>			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

#### 4. ASBESTOS GRAVIMETRIC (AF/FA) RESULTS

Following the visual clearance inspection of the Clearance Area, EP Risk collected one (1) 500 mL sample of the residual in-situ material beneath the conduit break point. The sample was submitted to a National Association of Testing Authorities (NATA) accredited laboratory for Asbestos Gravimetric Analysis (non-NATA) for the detection of Asbestos Fines (AF)/Fibrous Asbestos (FA).

No asbestos was detected above the reporting limit of 0.1 g/kg. Moreover, no trace (respirable) asbestos fibres were detected. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
UF003-VAL-001	Base of excavation footprint	0.3 mBGL	No Asbestos Detected

#### 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken.</p> <p>No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 6. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>


## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.



## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and within gravimetric asbestos samples. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	H. Erskine	02.08.2023	K. Guenther	02.08.2023	J. Shao	02.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	02.08.2023	EP3244.003_ACC003_ESR_Westlink Stage 1_UF003_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

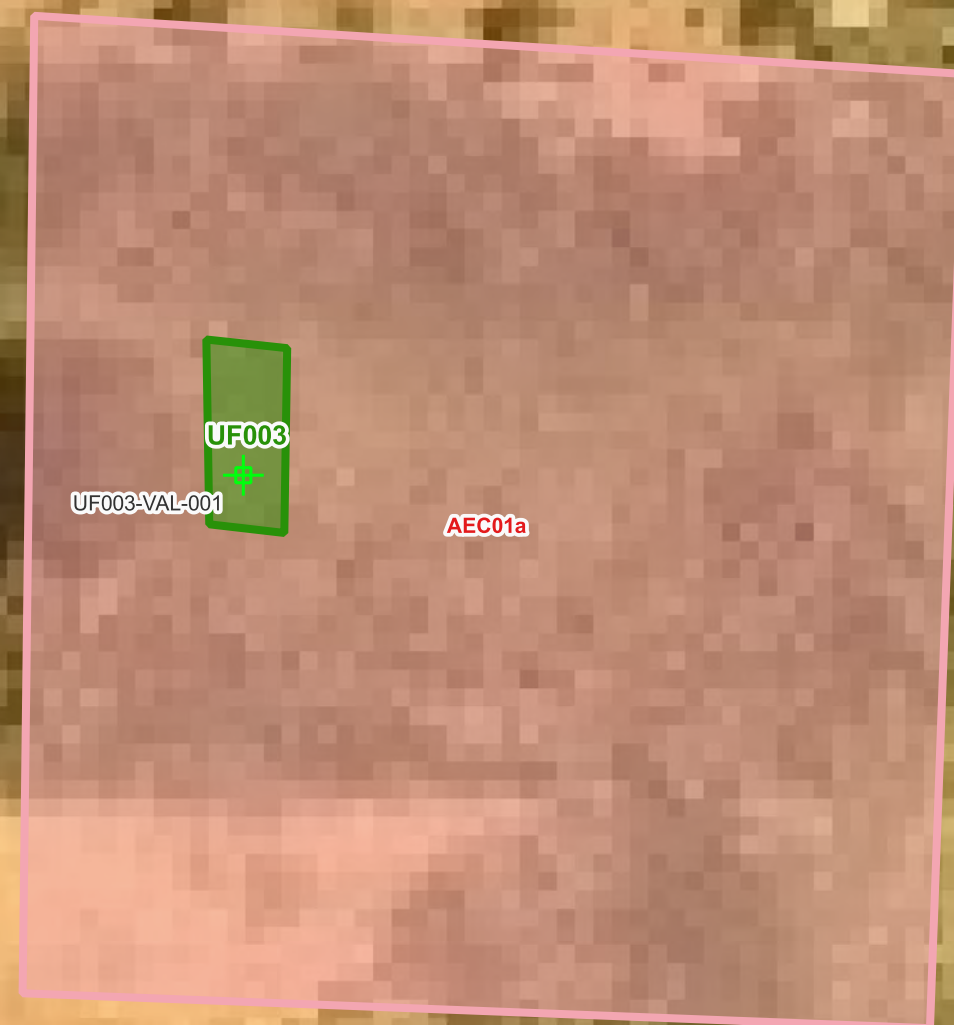
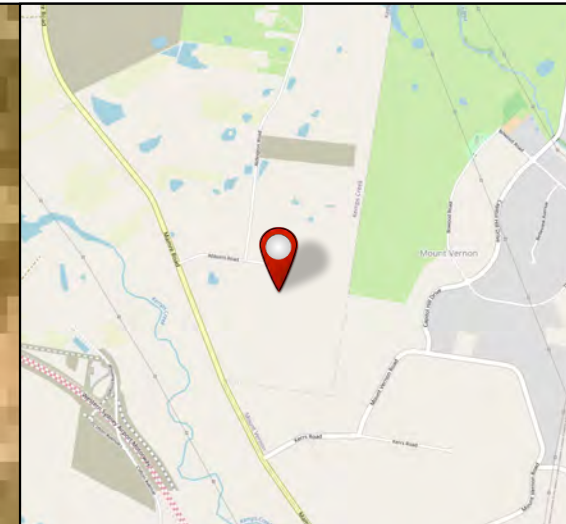
Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.




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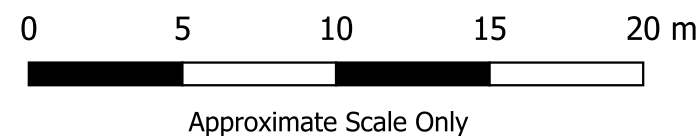
## ***Attachment 1 – Figure***





Legend

-  Asbestos AEC
-  UF003
-  Validation Samples



## ***Attachment 2 – Photolog***





**Plate 1 – 14/07/2023**

UF003 – Asbestos cement conduit identified within AEC01a during remediation in-situ treatment works.



**Plate 2 – 14/07/2023**

UF003 – Breakpoint of asbestos cement conduit.





**Plate 3 – 14/07/2023**

UF003 – Breakpoint of asbestos cement conduit.



**Plate 3 – 14/07/2023**

Post remedial works: Excavated trench and 1 m x 1 m box out at the breakpoint of asbestos cement conduit.

## ***Attachment 3 – Certificate of Analysis***

## Bulk Identification Report V3

**Job No:** 754-SYDEN234000 Bulk ID Report EP3244.001 17072023 V3  
**Client:** EP Risk Management Pty Ltd  
**Client Address:** Suite 13.01, Level 13, 80 Mount Street,  
 North Sydney, NSW  
**Contact:** Jenny Shao  
**E-mail:** [jenny.shao@eprisk.com.au](mailto:jenny.shao@eprisk.com.au)  
**Date Sampled:** 14-07-23  
**Date Analysed:** 17-07-23  
**Date Authorised:** 18-07-23  
**Sampled By:** As received by client (Zak Bursey)  
**Site:** ESR



Accredited for compliance with ISO/IEC 17025 - Testing  
 Accreditation No:2220  
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

### Asbestos in Bulk Samples and Non-homogenous Material

**Test Method:** Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

*Please note; this report; 754-SYDEN234000 Bulk ID Report EP3244.001 17072023 V3 supersedes the report; 754-SYDEN234000 Bulk ID Report EP3244.001 17072023 V2 issued on the 18/07/2023. This is due to a formatting error, the results remain the same.*

**Analysed At:** Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 2

**Approved Identifier**  
 Panika Wongchanda

**Approved Signatory**  
 Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
UF003_VAL_001	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 512 g > 2mm fraction ~ 269.7 g < 2mm fraction ~ 242.3 g < 2mm sub sample ~ 29.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
DW23-016	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 511.2 g > 2mm fraction ~ 192.4 g < 2mm fraction ~ 318.8 g < 2mm sub sample ~ 42.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

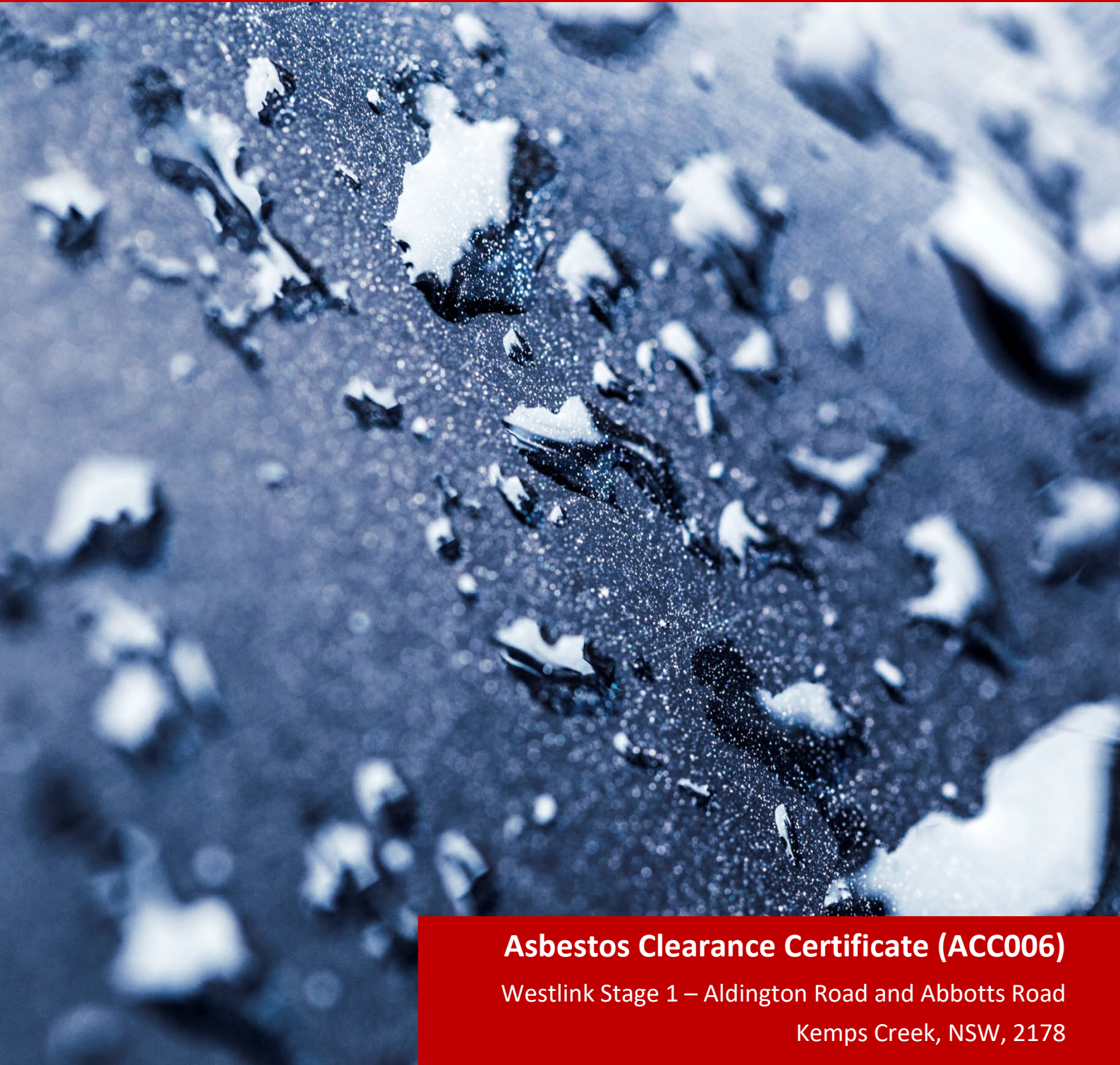
### Notes

Subsampling is carried out as per Coffey SOP WILAB1 using the coning and quartering method, please note subsampling may reduce the accuracy of the analytical result.

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## Asbestos Clearance Certificate (ACC006)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC006\_ESR\_Westlink Stage 1\_UF019\_v1 | 7 August 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services



## Asbestos Clearance Certificate – ACC006

### Westlink Stage 1 – UF019

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462)



## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	01.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to Unexpected Find (UF) - UF019 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF019 comprised of:</p> <ul style="list-style-type: none"> <li>Concrete stockpile contaminated with bonded (non-friable) asbestos containing material (ACM) fragments identified directly northeast of AEC01a.</li> </ul>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE to manage and remove the UF was as follows:</p> <ul style="list-style-type: none"> <li>Works will be undertaken in a manner that avoids further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>The concrete stockpile was carefully excavated and loaded out to the on-site stockpiling pad, located outside of Lot 13.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy encompassing the following:</p> <ul style="list-style-type: none"> <li>A visual assessment of surface soils for visible asbestos.</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input type="checkbox"/> Other: N/A</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p> <p><input checked="" type="checkbox"/> Dust suppression water.</p> <p><input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum.</p> <p><input type="checkbox"/> Wet wiping.</p> <p><input checked="" type="checkbox"/> Air Monitoring.</p> <p><input type="checkbox"/> N/A.</p>

Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer.	<input checked="" type="checkbox"/> N/A.
	<input type="checkbox"/> PVA / Adhesive.	<input type="checkbox"/> Other.
	<input type="checkbox"/> Imported 'clean' soils.	

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	03.08.2023		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### 4. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken.</p> <p>No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p>

	This ACC was true at the time of the inspection only.
--	---

## 5. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 6. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP). <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.



## 7. CLEARANCE DECLARATION

Visible ACM was not identified to surficial soils beneath the footprint of the concrete stockpile during the asbestos visual clearance inspection. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 8. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	N. Madigan	07.08.2023	K. Guenther	07.08.2023	J. Shao	07.08.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	07.08.2023	EP3244.003_ACC006_ESR_Westlink Stage 1_UF019_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

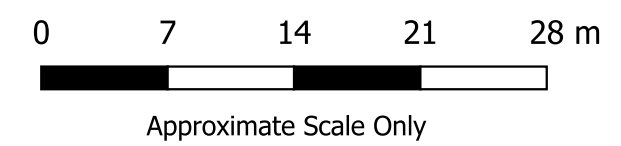
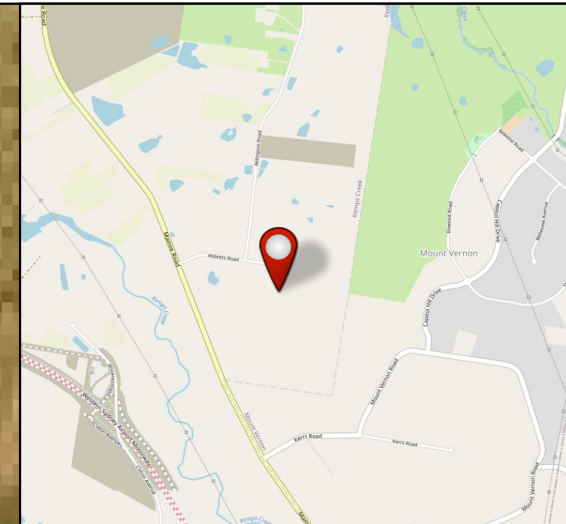
Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

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## ***Attachment 1 – Figure***





## ***Attachment 2 – Photolog***





**Plate 1 – 12/07/2023**

UF019 - Concrete stockpile contaminated with ACM fragments.



**Plate 2 – 12/07/2023**

UF019 - Concrete stockpile contaminated with ACM fragments.



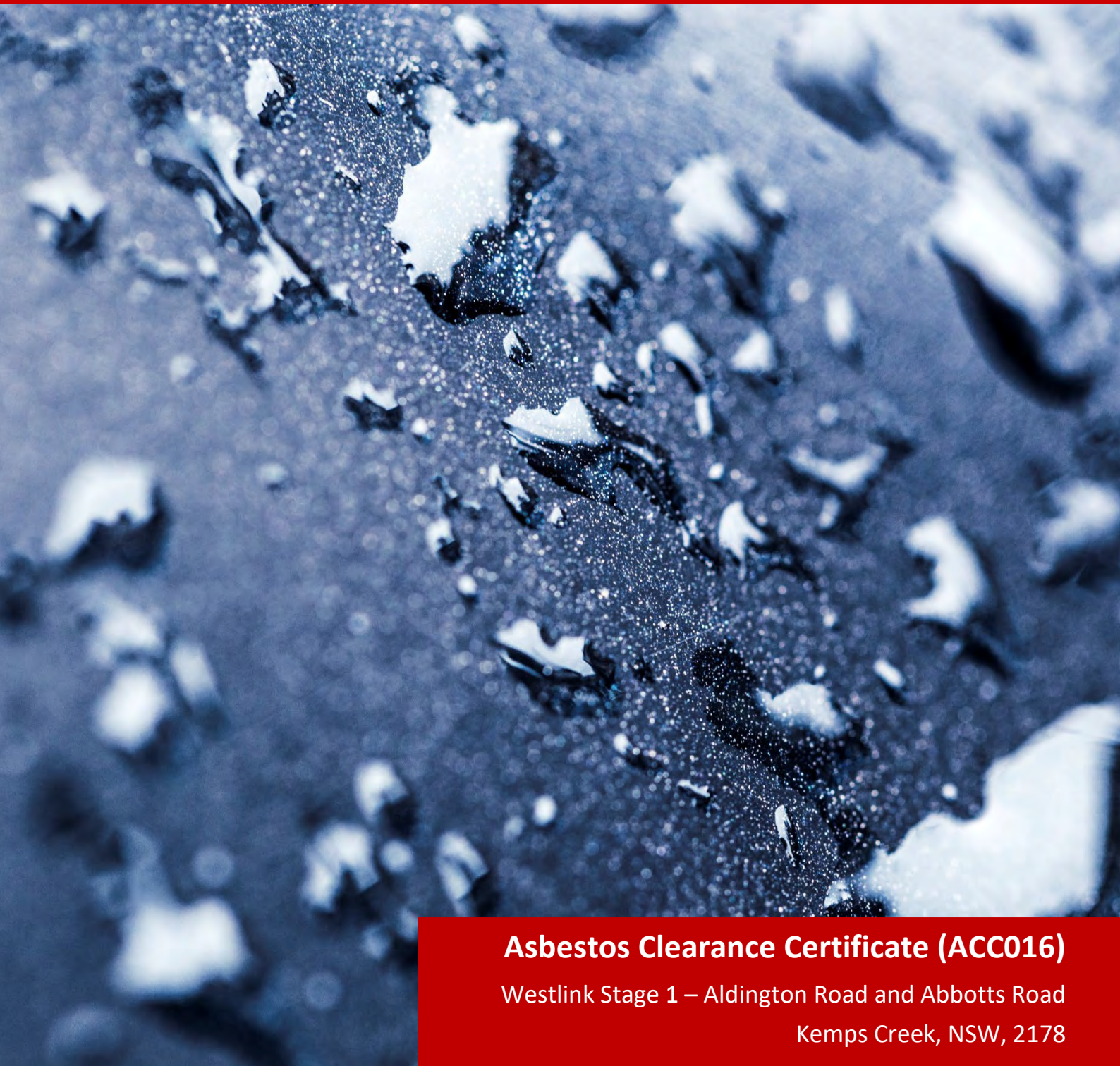


**Plate 3 – 03/08/2023**

Ground surface following removal of UF019 - concrete stockpile contaminated with ACM fragments.







## Asbestos Clearance Certificate (ACC016)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC016\_ESR\_Westlink Stage 1\_UF024\_v1 | 12 September 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services





## Asbestos Clearance Certificate – ACC016

### Westlink Stage 1 – UF024

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Troy Chatman – Environmental Scientist (LAA002022) Sally Kennedy – Environmental Scientist Naomi Madigan – Graduate Environmental Scientist

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	15.08.2023 & 16.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to UF024 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF024 comprised of:</p> <ul style="list-style-type: none"> <li>3x asbestos cement (AC) conduits and associated asbestos in soils (ASBINS) located within the northern end of AEC38 Lower, covering an approximate surface area of 380 m<sup>2</sup> and includes soils up to a depth of 0.1 – 0.3 metres below ground level (mBGL). Due to the damaged condition of the conduits and spread of broken conduit fragments across the area, soil within this area and the 2x most western AC conduits have been classified as friable (F3) material. As the easternmost AC conduit has not been damaged, this conduit can be treated as bonded (non-friable) ACM.</li> <li>2x loads of ASBINS located south of the stockpile/treatment pad haul road covering an approximate surface area of 330 m<sup>2</sup> and includes the two stockpile loads, southern batter and footprint soils up to a depth of 0.1 mBGL. Due to the presence of ACM fragments related to the damaged AC conduit from the northern end of AEC38 Lower, soil within this area has also been classified as friable (F3) material.</li> </ul>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE to manage and remove the UF was as follows:</p> <p><b>3x AC conduits and associated ASBINS:</b></p> <ul style="list-style-type: none"> <li>Works were undertaken in a manner that avoided further damage or burial of the ACM by the process.</li> <li>Soil within the 1 m of either side of the 2x most western damaged AC conduits were carefully excavated to a depth of 0.3 mBGL.</li> <li>A 1 m trench on either side of the easternmost undamaged AC conduit was carefully excavated to expose the remaining length of the conduit. Once the entire length of the conduit was identified, the conduit was carefully removed from the trench wrapped in black plastic sheeting for disposal in the asbestos waste skip bin.</li> <li>The remainder of the area was then subject to a surface scrape to 0.1 mBGL.</li> </ul>

	<ul style="list-style-type: none"> <li>All material excavated was loaded out as friable (F3) material to the on-site stockpiling pad.</li> </ul> <p><b>2x loads of ASBINS:</b></p> <ul style="list-style-type: none"> <li>Works were undertaken in a manner that avoided further damage or burial of the ACM by the process.</li> <li>Initial excavation works involved removing the 2x loads of ASBINS, including the southern batter.</li> <li>Following this, the footprint of the area was subject to a surface scrape to 0.1 mBGL.</li> <li>All material excavated was loaded out as friable (F3) material to the on-site stockpiling pad.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy encompassing the following:</p> <ul style="list-style-type: none"> <li>A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>Field screening for bonded (non-friable) ACM (&gt;7mm).</li> <li>Gravimetric asbestos samples for friable asbestos (AF/fibrous asbestos (FA)).</li> </ul>
Type of asbestos containing material (ACM) removed:	<input checked="" type="checkbox"/> Friable. <input checked="" type="checkbox"/> Non-friable. <input type="checkbox"/> Asbestos containing dust/debris. <input checked="" type="checkbox"/> Asbestos in Soil (ASBINS). <input checked="" type="checkbox"/> Other: AC Conduits
Asbestos controls adopted during removal works:	<input checked="" type="checkbox"/> Exclusion zone. <input checked="" type="checkbox"/> Personal Protective Equipment (PPE). <input type="checkbox"/> Wet decontamination unit. <input checked="" type="checkbox"/> Dry decontamination unit or area. <input checked="" type="checkbox"/> Dust suppression water. <input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.



Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer.	<input checked="" type="checkbox"/> N/A.
	<input type="checkbox"/> PVA / Adhesive.	<input type="checkbox"/> Other.
	<input type="checkbox"/> Imported 'clean' soils.	

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	15.08.2023 & 16.08.2023		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base and walls of the excavation footprint.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. Where bonded (non-friable) ACM was detected within the sieve, the area was retreated as per the approved RAP methodology and a visual and field screening undertaken again.

### 5. ASBESTOS GRAVIMETRIC (AF/FA) RESULTS

In addition to on-site field screening, EP Risk collected 500 mL soil samples from the base and walls of the AF excavation footprint of UF024.

Samples were submitted to a National Association of Testing Authorities (NATA) accredited laboratory for Asbestos Gravimetric Analysis (non-NATA) for the detection of AF/FA.

## 6. VALIDATION RESULTS

No asbestos was detected during field screen tests and within the asbestos gravimetric samples. The results of the validation sampling have been summarised below.

Sample ID	Location	Sample Depth	Field Screening Result	Asbestos Gravimetric Result
UF024_VAL_001	Northern wall of AC conduit excavation	0.2 mBGL	No field screening was undertaken in this area due to the presence of stiff clays.	No asbestos detected
UF024_VAL_002	Eastern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_003	Base of AC conduit excavation	0.3 mBGL		No asbestos detected
UF024_VAL_004	Southern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_005	Western wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_006	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_007	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_008	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_009	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_010	Base of AC conduit excavation	0.3 mBGL		No asbestos detected
UF024_VAL_011	Southern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_012	Eastern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_013	Northern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_014	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_015	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_016	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_017	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_018	Eastern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_019	Southern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_020	Base of AC conduit excavation	0.3 mBGL		No asbestos detected

UF024_VAL_021	Northern wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_022	Western wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_023	Western wall of AC conduit excavation	0.2 mBGL		No asbestos detected
UF024_VAL_024	Base of excavation area	0.1 mBGL		No asbestos detected
UF024_VAL_025	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_026	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_027	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_028	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_029	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_030	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_031	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_032	Base of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_033	Northern wall of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_034	Eastern wall of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_035	Eastern wall of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_036	Southern wall of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_037	Western wall of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected
UF024_VAL_038	Western wall of excavation area	0.1 mBGL	No asbestos detected	No asbestos detected

## 7. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process. A visual inspection of the accessible surface of the Clearance Area only was undertaken. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.



	<p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act 2011</i>.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface of the. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>
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## 8. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 9. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<p><input type="checkbox"/> Continue works under Class A asbestos conditions.</p> <p><input type="checkbox"/> Continue works under Class B asbestos conditions.</p> <p><input type="checkbox"/> Provide a final clearance at the conclusion of the removal works.</p> <p><input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol.</p> <p><input type="checkbox"/> N/A.</p>
Management:	<p><input checked="" type="checkbox"/> Prepare Asbestos Management Plan (AMP) for the wider Site.</p> <p><input checked="" type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP) for the wider Site.</p> <p><input type="checkbox"/> Update Asbestos Register.</p> <p><input type="checkbox"/> Update ASBINS Management Plan.</p> <p><input type="checkbox"/> Provide routine inspections of capping.</p> <p><input type="checkbox"/> N/A.</p>

## 10. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and within gravimetric asbestos samples. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 11. ATTACHMENTS

1. Figures	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	J. Shao	12.09.2023	K. Guenther	12.09.2023	J. Thompson	12.09.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	12.09.2023	EP3244.003_ACC016_ESR_Westlink Stage 1_UF024_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

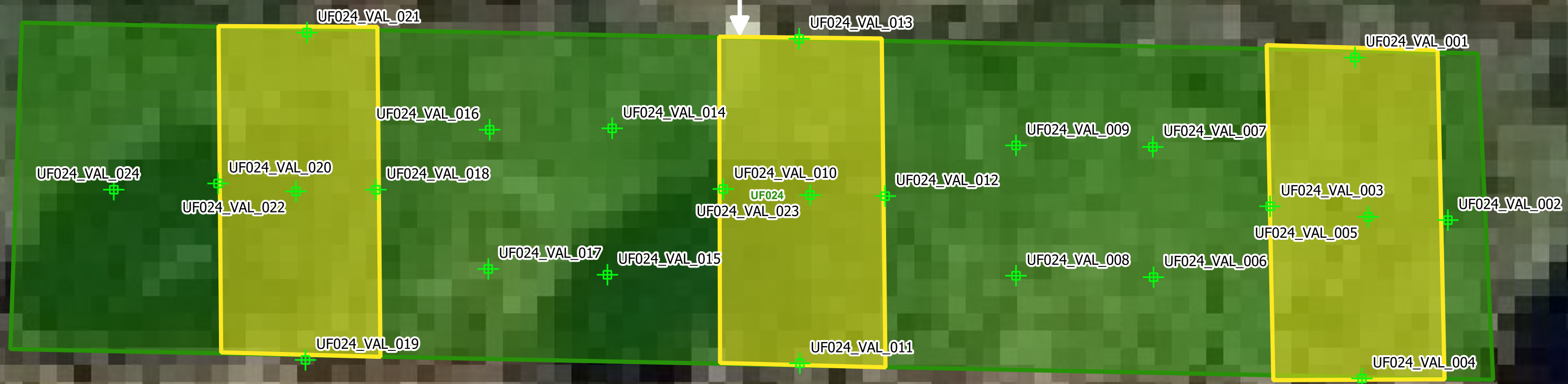
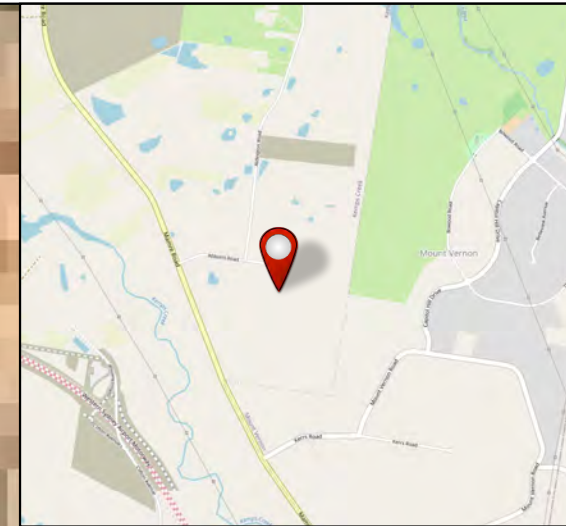
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## ***Attachment 1 – Figures***



- Legend**
- Validation Samples
  - UF024
  - AC Conduits









## ***Attachment 2 – Photolog***



**Plate 1** – 14/08/2023

UF024 (conduits within AEC38 Lower) prior to remediation works.



**Plate 2** – 14/08/2023

UF024 (westernmost damaged conduit within AEC38 Lower) prior to remediation works.





**Plate 3** – 14/08/2023

UF024 (central damaged conduit within AEC38 Lower) prior to remediation works.



**Plate 4** – 14/08/2023

UF024 (eastern undamaged conduit within AEC38 Lower) prior to remediation works.





**Plate 5** – 14/08/2023

UF024 (2x loads of ASBINS) prior to remediation works.



**Plate 6** – 15/08/2023

Residual excavation footprint of UF024 (conduits) subsequent to excavation of F3 material





**Plate 7** – 15/08/2023

Residual excavation footprint of UF024 (conduits) subsequent to excavation of F3 material



**Plate 8** – 15/08/2023

Residual excavation footprint of UF024 (conduits) subsequent to excavation of F3 material.





**Plate 9** – 15/08/2023

Residual excavation footprint of UF024 (conduits) subsequent to excavation of F3 material.



**Plate 10** – 15/08/2023

Residual excavation footprint of UF024 (conduits) subsequent to excavation of F3 material.





**Plate 11** – 16/08/2023

Residual excavation footprint of UF024 (2x loads of ASBINS) subsequent to excavation of F3 material.



**Plate 12** – 16/08/2023

Residual excavation footprint of UF024 (2x loads of ASBINS) subsequent to excavation of F3 material.





**Plate 13** – 16/08/2023

Residual excavation footprint of UF024 (2x loads of ASBINS) subsequent to excavation of F3 material.



**Plate 14** – 16/08/2023

Validation sampling undertaken within UF024 (2x loads of ASBINS) subsequent to excavation of F3 material.

## ***Attachment 3 – Certificate of Analysis***



## Bulk Identification Report

**Job No:** 754-SYDEN234000 Bulk ID Report EP3244 16082023  
**Client:** EP Risk Management Pty Ltd  
**Client Address:** Suite 13.01, Level 13, 80 Mount Street,  
North Sydney, NSW  
**Contact:** Jenny Shao  
**E-mail:** [jenny.shao@eprisk.com.au](mailto:jenny.shao@eprisk.com.au) & [naomi.madigan@eprisk.com.au](mailto:naomi.madigan@eprisk.com.au)  
**Date Sampled:** 15 & 16/08/2023  
**Date Analysed:** 17-08-23  
**Date Authorised:** 17-08-23  
**Sampled By:** As received by client (Jenny Shao)  
**Site:** ESR



Accredited for compliance with ISO/IEC 17025 - Testing  
 Accreditation No:2220  
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

### Asbestos in Bulk Samples and Non-homogenous Material

**Test Method:** Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

**Analysed At:** Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 24

**Approved Identifier**  
 Panika Wongchanda

**Approved Signatory**  
 Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
UF024_VAL_001	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 477.2 g > 2mm fraction ~ 177.7 g < 2mm fraction ~ 299.5 g < 2mm sub sample ~ 43.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_002	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 489.6 g > 2mm fraction ~ 135.3 g < 2mm fraction ~ 354.3 g < 2mm sub sample ~ 40.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_003	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 492.7 g > 2mm fraction ~ 167.6 g < 2mm fraction ~ 325.1 g < 2mm sub sample ~ 44.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_004	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 489.8 g > 2mm fraction ~ 64.9 g < 2mm fraction ~ 424.9 g < 2mm sub sample ~ 36.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_005	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 436.5 g > 2mm fraction ~ 214.6 g < 2mm fraction ~ 221.9 g < 2mm sub sample ~ 40.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

Sample No.	Location & Description	Sample Size (~)	Results
UF024_VAL_006	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 550.9 g > 2mm fraction ~ 111.1 g < 2mm fraction ~ 439.8 g < 2mm sub sample ~ 40.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_007	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 502.9 g > 2mm fraction ~ 141.8 g < 2mm fraction ~ 361.1 g < 2mm sub sample ~ 36.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_008	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 477.2 g > 2mm fraction ~ 199.3 g < 2mm fraction ~ 277.9 g < 2mm sub sample ~ 40.7 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_009	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 478.9 g > 2mm fraction ~ 114.3 g < 2mm fraction ~ 364.6 g < 2mm sub sample ~ 37.5 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_010	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 549.4 g > 2mm fraction ~ 151.4 g < 2mm fraction ~ 398 g < 2mm sub sample ~ 43.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_011	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 478.9 g > 2mm fraction ~ 72.1 g < 2mm fraction ~ 406.8 g < 2mm sub sample ~ 49 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_012	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 540.6 g > 2mm fraction ~ 69.4 g < 2mm fraction ~ 471.2 g < 2mm sub sample ~ 44 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_013	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 485.2 g > 2mm fraction ~ 176.3 g < 2mm fraction ~ 308.9 g < 2mm sub sample ~ 42.2 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_014	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 475.3 g > 2mm fraction ~ 153.7 g < 2mm fraction ~ 321.6 g < 2mm sub sample ~ 39 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_015	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 555.8 g > 2mm fraction ~ 244.1 g < 2mm fraction ~ 311.7 g < 2mm sub sample ~ 45.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_016	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 529.5 g > 2mm fraction ~ 174.3 g < 2mm fraction ~ 355.2 g < 2mm sub sample ~ 37.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

Sample No.	Location & Description	Sample Size (~)	Results
UF024_VAL_017	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 497.7 g > 2mm fraction ~ 129.3 g < 2mm fraction ~ 368.4 g < 2mm sub sample ~ 49.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_018	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 529.3 g > 2mm fraction ~ 259.6 g < 2mm fraction ~ 269.7 g < 2mm sub sample ~ 43.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_019	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 447.9 g > 2mm fraction ~ 117.9 g < 2mm fraction ~ 330 g < 2mm sub sample ~ 43.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_020	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 496.2 g > 2mm fraction ~ 105.6 g < 2mm fraction ~ 390.6 g < 2mm sub sample ~ 38.7 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_021	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 515.7 g > 2mm fraction ~ 124.8 g < 2mm fraction ~ 390.6 g < 2mm sub sample ~ 42.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_022	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 543.3 g > 2mm fraction ~ 95.2 g < 2mm fraction ~ 448.1 g < 2mm sub sample ~ 40.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_023	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 549.9 g > 2mm fraction ~ 461.9 g < 2mm fraction ~ 88 g < 2mm sub sample ~ 38.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_024	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 594 g > 2mm fraction ~ 147.3 g < 2mm fraction ~ 446.7 g < 2mm sub sample ~ 43.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

#### Notes

Subsampling is carried out as per Coffey SOP WILAB1 using the coning and quartering method, please note subsampling may reduce the accuracy of the analytical result.

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## Bulk Identification Report

**Job No:** 754-SYDEN234000 Bulk ID Report EP3244 18082023  
**Client:** EP Risk Management Pty Ltd  
**Client Address:** Suite 13.01, Level 13, 80 Mount Street,  
North Sydney, NSW  
**Contact:** Jenny Shao  
**E-mail:** [jenny.shao@eprisk.com.au](mailto:jenny.shao@eprisk.com.au) & [troy.chatman@eprisk.com.au](mailto:troy.chatman@eprisk.com.au)  
**Date Sampled:** 17/08/2023  
**Date Analysed:** 18/08/2023  
**Date Authorised:** 18/08/2023  
**Sampled By:** As received by client (Jenny Shao)  
**Site:** ESR



Accredited for compliance with ISO/IEC 17025 - Testing  
 Accreditation No:2220  
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

### Asbestos in Bulk Samples and Non-homogenous Material

**Test Method:** Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

**Analysed At:** Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 14

**Approved Identifier**  
 Panika Wongchanda

**Approved Signatory**  
 Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
UF024_VAL_025	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 487.7 g > 2mm fraction ~ 131.8 g < 2mm fraction ~ 355.9 g < 2mm sub sample ~ 33.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_026	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 493.5 g > 2mm fraction ~ 206.7 g < 2mm fraction ~ 286.8 g < 2mm sub sample ~ 35.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_027	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 789.2 g > 2mm fraction ~ 281.7 g < 2mm fraction ~ 507.5 g < 2mm sub sample ~ 41.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_028	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 597.7 g > 2mm fraction ~ 205.4 g < 2mm fraction ~ 392.3 g < 2mm sub sample ~ 40.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_029	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 519.2 g > 2mm fraction ~ 184.8 g < 2mm fraction ~ 334.4 g < 2mm sub sample ~ 43.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

Sample No.	Location & Description	Sample Size (~)	Results
UF024_VAL_030	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 449.1 g > 2mm fraction ~ 154.4 g < 2mm fraction ~ 294.7 g < 2mm sub sample ~ 45.9 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_031	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 538.1 g > 2mm fraction ~ 167 g < 2mm fraction ~ 371.1 g < 2mm sub sample ~ 38.5 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_032	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 501.1 g > 2mm fraction ~ 206 g < 2mm fraction ~ 295.1 g < 2mm sub sample ~ 38.3 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_033	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 503.7 g > 2mm fraction ~ 168.9 g < 2mm fraction ~ 334.8 g < 2mm sub sample ~ 41.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_034	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 481.3 g > 2mm fraction ~ 332.1 g < 2mm fraction ~ 149.2 g < 2mm sub sample ~ 37.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_035	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 436.3 g > 2mm fraction ~ 170.7 g < 2mm fraction ~ 265.6 g < 2mm sub sample ~ 39.1 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_036	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 569.1 g > 2mm fraction ~ 123.4 g < 2mm fraction ~ 445.7 g < 2mm sub sample ~ 42.8 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_037	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 532.5 g > 2mm fraction ~ 190.9 g < 2mm fraction ~ 341.6 g < 2mm sub sample ~ 43.6 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
UF024_VAL_038	As received - Brown non-homogenous soil, rocks & debris	Total sample ~ 535.5 g > 2mm fraction ~ 208 g < 2mm fraction ~ 327.5 g < 2mm sub sample ~ 41.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected No trace (respirable) asbestos detected as per AS 4964 2004

#### Notes

Subsampling is carried out as per Coffey SOP WILAB1 using the coning and quartering method, please note subsampling may reduce the accuracy of the analytical result.

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## Asbestos Clearance Certificate (ACC012)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC012\_ESR\_Westlink Stage 1\_UF025\_v1 | 5 September 2023



QMS Certification Services



QMS Certification Services



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# Asbestos Clearance Certificate – ACC012

## Westlink Stage 1 – UF025

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – <a href="mailto:jacob.dickson@esr.com">jacob.dickson@esr.com</a>
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – <a href="mailto:mreza@tcecontracting.com.au">mreza@tcecontracting.com.au</a> George Chedraoui – <a href="mailto:gchedraoui@tcecontracting.com.au">gchedraoui@tcecontracting.com.au</a> Chris Chen – <a href="mailto:cchen@tcecontracting.com.au">cchen@tcecontracting.com.au</a> Yousef Elomar – <a href="mailto:yelomar@tcecontracting.com.au">yelomar@tcecontracting.com.au</a>
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Sally Kennedy – Environmental Scientist (Competent Person)

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	16.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to UF025 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF025 comprised of soil contaminated with bonded (non-friable) asbestos containing material (ACM) fragments identified south of AEC38 Upper. UF025 covers an approximate surface area of 480 m<sup>2</sup> and includes an ex-situ stockpile of soil and in-situ soils up to a depth of 0.3 m below ground level (mBGL).</p>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works were undertaken in a manner that avoided further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Soil within the UF extent, including the ex-situ stockpile was carefully excavated to a depth of 0.3 mBGL and stockpiled for load out as bonded (B3) material to the on-site stockpiling pad.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm).</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input type="checkbox"/> Other: N/A</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p> <p><input checked="" type="checkbox"/> Dust suppression water.</p>



	<input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input checked="" type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works	
Date of clearance inspection:	16.08.2023
Asbestos Work Area	
Evidence of PVA/sealant application:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base the excavation footprint and along the northern, southern, eastern and western perimeter excavation walls.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. Bonded (non-friable) ACM was not detected during the sieve tests. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
UF025-VAL-001	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-002	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-003	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-004	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-005	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-006	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-007	Base of excavation footprint	0.3 mBGL	No Asbestos Detected

Sample ID	Location	Sample Depth	Result
UF025-VAL-008	Base of excavation footprint	0.3 mBGL	No Asbestos Detected
UF025-VAL-009	Northern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-010	Northern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-011	Northern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-012	Southern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-013	Southern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-014	Southern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-015	Eastern wall of excavation footprint	0.2 mBGL	No Asbestos Detected
UF025-VAL-016	Western wall of excavation footprint	0.2 mBGL	No Asbestos Detected

## 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken.</p> <p>No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act</i> 2011.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 6. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>


## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP) <input checked="" type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP) for the wider Site. <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input type="checkbox"/> N/A.



## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and sieve tests. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	J. Shao	05.09.2023	L. Munnichs	05.09.2023	J. Thompson	05.09.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	05.09.2023	EP3244.003_ACC012_ESR_Westlink Stage 1_UF025_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

It is not possible in an Asbestos Clearance Certificate to present all data, which could be of interest to all readers of this report. Readers are referred to any referenced investigation reports for further data.

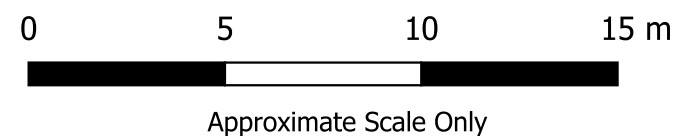
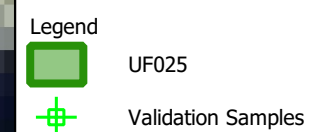
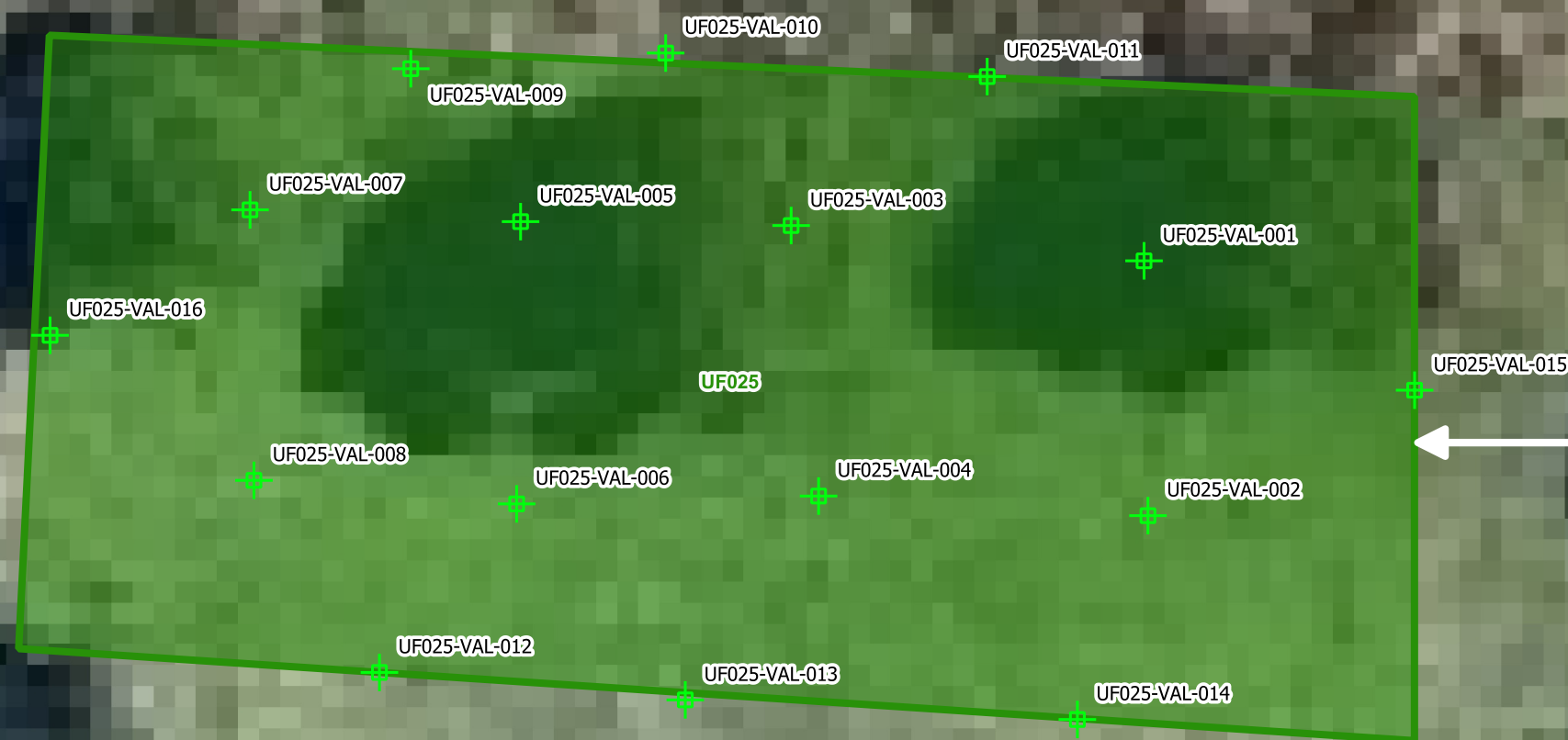
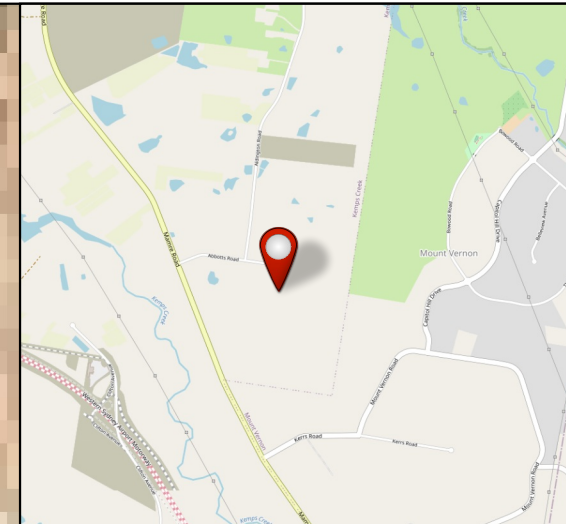
Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect to, their situation.

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## ***Attachment 1 – Figure***





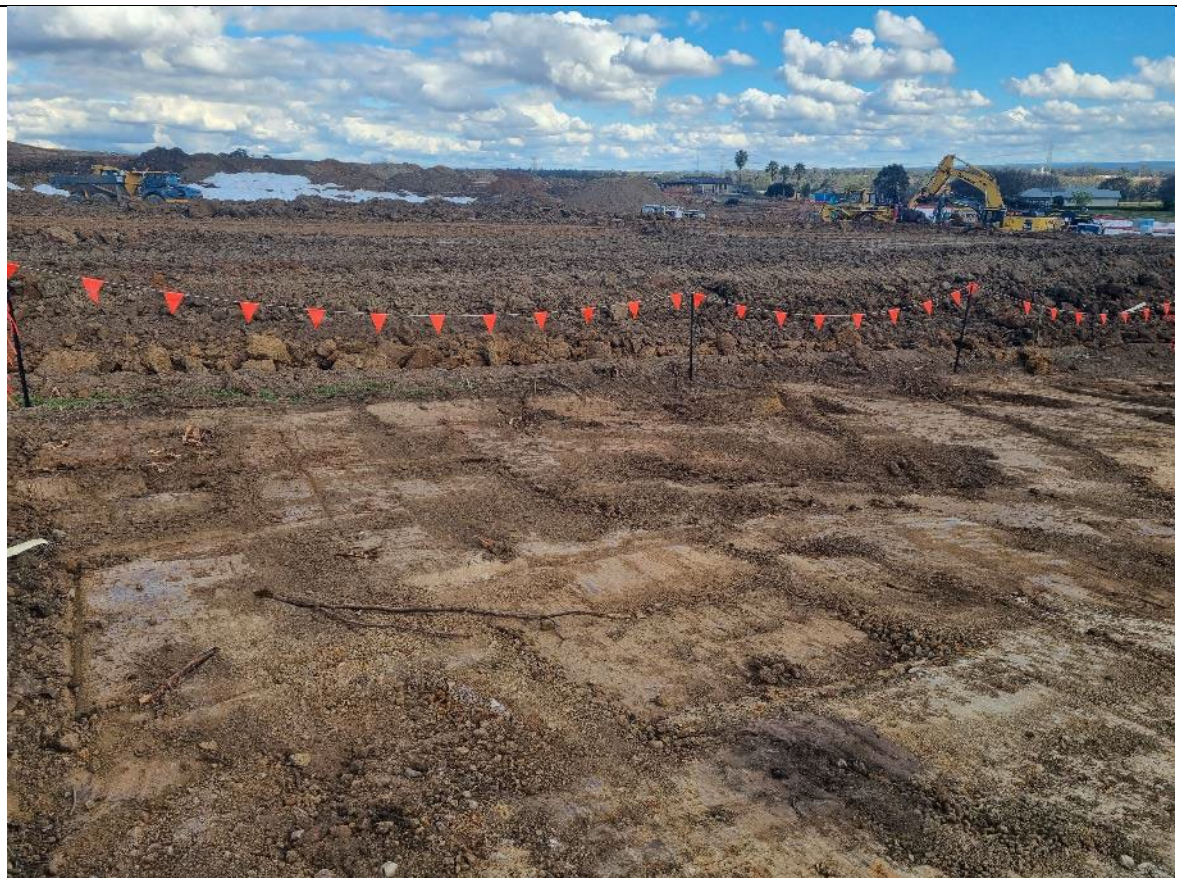
## ***Attachment 2 – Photolog***





**Plate 1** – 16/08/2023

UF025 following excavation of 0.3m BGL of in-situ soils and ex-situ stockpile.



**Plate 2** – 16/08/2023

UF025 following excavation of 0.3m BGL of in-situ soils and ex-situ stockpile.



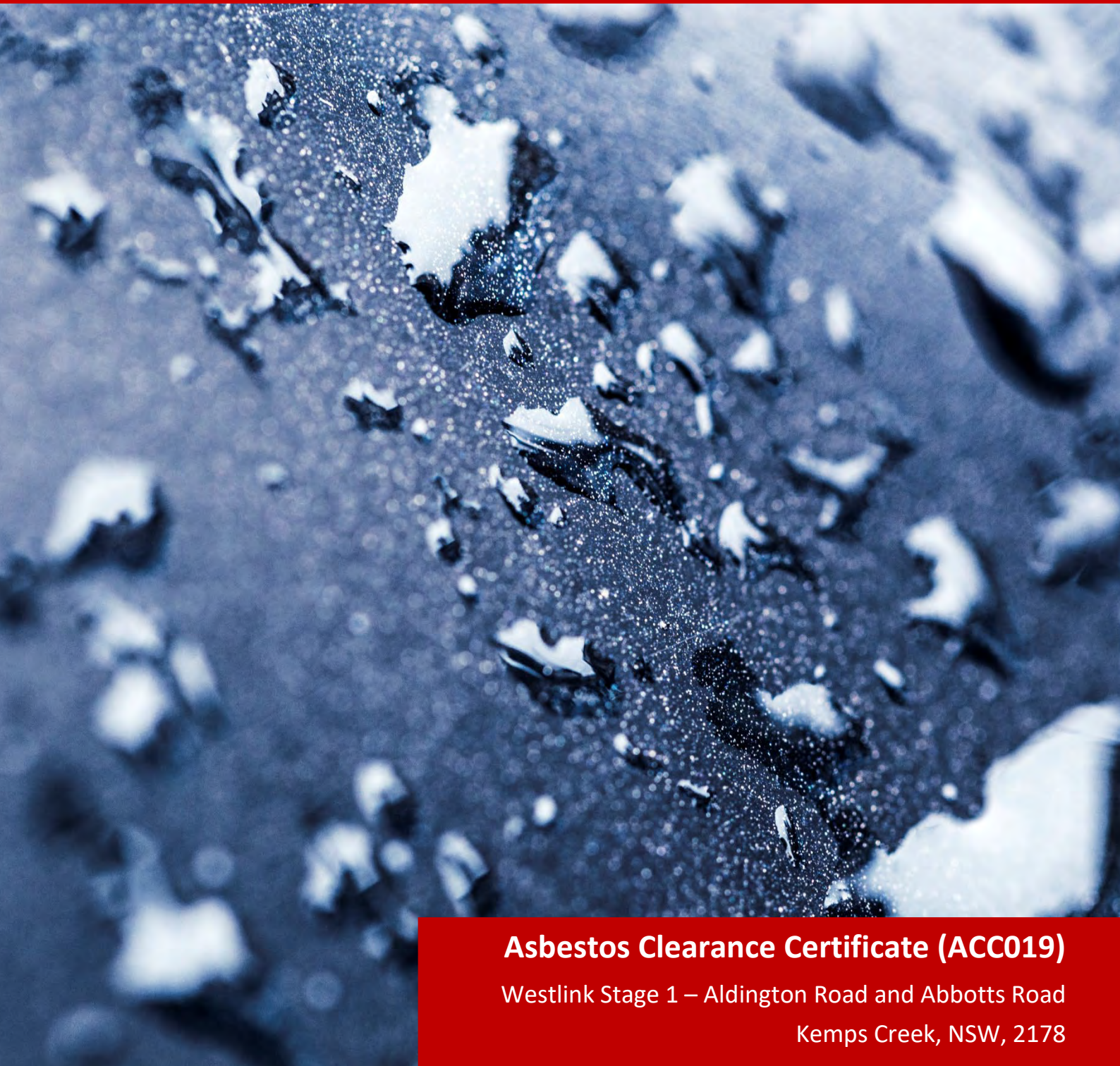


**Plate 3** – 16/08/2023

UF025 following excavation of 0.3m BGL of in-situ soils and ex-situ stockpile.







## Asbestos Clearance Certificate (ACC019)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC019\_ESR\_Westlink Stage 1\_UF026\_v1 | 5 September 2023



QMS Certification Services



QMS Certification Services



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## Asbestos Clearance Certificate – ACC019

### Westlink Stage 1 – UF026

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462) Zak Bursey – Graduate Environmental Scientist (Competent Person)



#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	22.08.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to UF026 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF026 comprised of soil contaminated with bonded (non-friable) asbestos containing material (ACM) fragments identified far northeast of AEC38 Lower. UF025 covers an approximate surface area of 96 m<sup>2</sup> and includes and in-situ soils up to a depth of 1.5 m below ground level (mBGL).</p>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works were undertaken in a manner that avoided further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Soil within the UF extent, was carefully excavated to a depth of 1.5 mBGL and stockpiled for load out as bonded (non-friable) (B3) material to the on-site stockpiling pad for ex-situ treatment/management.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing the following:</p> <ul style="list-style-type: none"> <li>• A visual assessment of the surface soils and residual remediation excavation footprint for visible asbestos.</li> <li>• Field screening for bonded (non-friable) ACM (&gt;7mm).</li> </ul>
Type of asbestos containing material (ACM) removed:	<p><input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input checked="" type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input type="checkbox"/> Other: N/A</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p> <p><input checked="" type="checkbox"/> Dust suppression water.</p>

	<input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum. <input type="checkbox"/> Wet wiping. <input checked="" type="checkbox"/> Air Monitoring. <input type="checkbox"/> N/A.
Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer. <input checked="" type="checkbox"/> N/A. <input type="checkbox"/> PVA / Adhesive. <input type="checkbox"/> Other. <input type="checkbox"/> Imported 'clean' soils.

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works	
Date of clearance inspection:	22.08.2023
Asbestos Work Area	
Evidence of PVA/sealant application:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Results of air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

### 4. FIELD SCREENING FOR BONDED (NON-FRIABLE) ACM RESULTS

Following the visual clearance inspection of the Clearance Area, on-site field screening tests were undertaken across the base and along the northern, southern, eastern and western perimeter excavation walls of the excavation footprint.

The field screening process involved the collection of known 10 L of soil using a shovel and bucket and processing the material through a 7 mm sieve for assessment of bonded (non-friable) ACM. Bonded (non-friable) ACM was not detected during the sieve tests. Results have been summarised below.

Sample ID	Location	Sample Depth	Result
UF026-VAL-001	Northern wall of excavation footprint	0.75 mBGL	No Asbestos Detected
UF026-VAL-002	Northern wall of excavation footprint	0.75 mBGL	No Asbestos Detected
UF026-VAL-003	Eastern wall of excavation footprint	0.75 mBGL	No Asbestos Detected
UF026-VAL-004	Southern wall of excavation footprint	0.75 mBGL	No Asbestos Detected
UF026-VAL-005	Southern wall of excavation footprint	0.75 mBGL	No Asbestos Detected
UF026-VAL-006	Western wall of excavation footprint	0.75 mBGL	No Asbestos Detected
UF026-VAL-007	Base of excavation footprint	1.5 mBGL	No Asbestos Detected



UF026-VAL-008	Base of excavation footprint	1.5 mBGL	No Asbestos Detected
UF026-VAL-009	Base of excavation footprint	1.5 mBGL	No Asbestos Detected

## 5. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process. A visual inspection of the accessible surface of the Clearance Area only was undertaken. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act 2011</i>.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>

## 6. ASBESTOS REMOVAL DOCUMENTATION

Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 7. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<p><input type="checkbox"/> Continue works under Class A asbestos conditions.</p> <p><input type="checkbox"/> Continue works under Class B asbestos conditions.</p> <p><input type="checkbox"/> Provide a final clearance at the conclusion of the removal works.</p> <p><input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol.</p> <p><input type="checkbox"/> N/A.</p>
------------------	---

Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input checked="" type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP) for the wider Site. <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.
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## 8. CLEARANCE DECLARATION

Visible ACM was not identified on the surface of the excavation footprint during the asbestos visual clearance inspection and sieve tests. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 9. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

## QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	J. Shao	05.09.2023	L. Munnichs	05.09.2023	J. Thompson	05.09.2023

## DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	05.09.2023	EP3244.003_ACC019_ESR_Westlink Stage 1_UF026_v1	ESR Australia Pty Ltd

## LIMITATIONS

This Asbestos Clearance Certificate was conducted on the behalf of ESR Australia Pty Ltd for the purpose/s stated in **Section 2**.

EP Risk has prepared this document in good faith but is unable to provide certification outside of areas over which EP Risk had some control or were not reasonably able to check. The report also relies upon information provided by third parties. EP Risk has undertaken all practical steps to confirm the reliability of the information provided by third parties and do not accept any liability for false or misleading information provided by these parties.

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All work conducted, and reports produced by EP Risk are based on a specific scope and have been prepared for the Client and therefore cannot be relied upon by any other third parties unless agreed in writing by EP Risk.

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## ***Attachment 1 – Figure***







## ***Attachment 2 – Photolog***





**Plate 1 – 22/08/2023**

Residual excavation footprint of UF026 subsequent to removal of B3 material.



**Plate 2 – 22/08/2023**

Residual excavation footprint of UF026 subsequent to removal of B3 material.





**Plate 3** – 22/08/2023

Residual excavation footprint of UF026 subsequent to removal of B3 material.



**Plate 4** – 22/08/2023

Residual excavation footprint of UF026 subsequent to removal of B3 material.





**Plate 5** – 22/08/2023

Residual excavation footprint of UF026 subsequent to removal of B3 material.



**Plate 6** – 2/08/2023

Residual excavation footprint of UF026 subsequent to removal of B3 material.





**Plate 7 – 07/08/2023**

Residual soils within the former house footprint in AEC15 subsequent to B3 scrape.



**Plate 8 – 07/08/2023**

Residual soils within the former house footprint in AEC15 subsequent to B3 scrape.







## Asbestos Clearance Certificate (ACC022)

Westlink Stage 1 – Aldington Road and Abbots Road  
Kemps Creek, NSW, 2178

Prepared for: ESR Australia

EP3244.003\_ACC022\_ESR\_Westlink Stage 1\_UF027\_v1 | 8 September 2023



QMS Certification Services



QMS Certification Services



QMS Certification Services





## Asbestos Clearance Certificate – ACC022

### Westlink Stage 1 – UF027

Compliant with Part 3.10 of SafeWork NSW Code of Practice: *How to Safely Remove Asbestos* (2022) as approved under s.274 of the NSW Work Health and Safety Act 2011

#### 1. PROJECT DETAILS

Client Details	
Name of Client:	ESR Australia (ESR)
Client Contact Details:	Jacob Dickson – jacob.dickson@esr.com
Client Address:	Level 24, 88 Phillip Street, Sydney, NSW, 2000
Project and Site Address	
Project:	Westlink Stage 1 (the Site)
Address:	209-308 Aldington Road, Kemps Creek, NSW, 2178 59-63 Abbots Road, Kemps Creek, NSW 2178
Asbestos Removal Contractor (ARC) Details	
Name of Contractor:	TCE Contracting
Contractor Contact Details:	Muhammad Fahmi Reza – mreza@tcecontracting.com.au George Chedraoui – gchedraoui@tcecontracting.com.au Chris Chen – cchen@tcecontracting.com.au Yousef Elomar – yelomar@tcecontracting.com.au
Licence Number:	AD213189
Class A / Class B:	Class A (Friable) & Class B (Bonded – Non-Friable)
EP Risk Details	
Name:	Jenny Shao – Occupational Hygienist (LAA001462)



QHS Certification Services QHS Certification Services QHS Certification Services

#### Melbourne

22/1 Ricketts Road  
Mount Waverley, Vic, 3149  
T 03 8540 7300

#### Sydney

Suite 13.01, 80 Mount Street  
North Sydney, NSW, 2060  
T 02 9922 5021

#### Newcastle

3/19 Bolton Street  
Newcastle, NSW, 2300  
T 02 4048 2845

## 2. ASBESTOS REMOVAL WORK DETAILS

Work Details	
Date of removal works:	04.09.2023
Specific work area(s) / location(s):	<p>This Asbestos Clearance Certificate (ACC) pertains to UF027 within the Site, as presented in <b>Figure 1</b>, is herein referred to as 'Clearance Area'.</p> <p>UF027 comprised of an area (60m<sup>2</sup>) contaminated with sporadic surficial bonded (non-friable) asbestos containing material (ACM) in the form of fibre cement sheet fragments identified to the east of AEC14.</p>
Scope of work (as advised by client/contractor):	<p>The remediation methodology as undertaken by TCE in accordance with the RAP (Alliance 2023) involved the following:</p> <ul style="list-style-type: none"> <li>• Works were undertaken in a manner that avoided further damage or burial of the asbestos-containing material (ACM) by the process.</li> <li>• Bonded (non-friable) ACM fragments were emu picked from surficial soils and disposed of within an asbestos waste bag.</li> </ul> <p>Following the remediation works, EP Risk adopted a validation strategy in line with the RAP (Alliance 2023), encompassing a visual assessment of surficial soils for visible asbestos.</p>
Type of asbestos containing material (ACM) removed:	<p><input type="checkbox"/> Friable.      <input checked="" type="checkbox"/> Non-Friable.</p> <p><input type="checkbox"/> Asbestos containing dust/debris.</p> <p><input type="checkbox"/> Asbestos in Soil (ASBINS).</p> <p><input checked="" type="checkbox"/> Other: Bonded (non-friable) ACM fragments</p>
Asbestos controls adopted during removal works:	<p><input checked="" type="checkbox"/> Exclusion zone.</p> <p><input checked="" type="checkbox"/> Personal Protective Equipment (PPE).</p> <p><input type="checkbox"/> Wet decontamination unit.</p> <p><input checked="" type="checkbox"/> Dry decontamination unit or area.</p> <p><input checked="" type="checkbox"/> Dust suppression water.</p> <p><input type="checkbox"/> High efficiency particulate air (HEPA) filter vacuum.</p> <p><input type="checkbox"/> Wet wiping.</p> <p><input checked="" type="checkbox"/> Air Monitoring.</p> <p><input type="checkbox"/> N/A.</p>

Post removal work encapsulation:	<input type="checkbox"/> Geotextile marker layer.	<input checked="" type="checkbox"/> N/A.
	<input type="checkbox"/> PVA / Adhesive.	<input type="checkbox"/> Other.
	<input type="checkbox"/> Imported 'clean' soils.	

### 3. CLEARANCE INSPECTION DETAILS

Non-Friable and Friable Works			
Date of clearance inspection:	04.09.2023		
Asbestos Work Area			
Evidence of PVA/sealant application:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Visual inspection of work area(s) satisfactory:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Air monitoring undertaken during removal works:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Clearance Air monitoring undertaken at the conclusion of removal works:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Results of control air monitoring satisfactory (< 0.01 f/mL of air):	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the work area(s) suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### 4. LIMITATIONS

Limitations and Exclusions	
Are there limitations to the clearance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Limitations:	<p>This visual clearance certificate pertains to the Clearance Area as referenced in <b>Figure 1</b> only and does not include equipment/plant used in the process.</p> <p>A visual inspection of the accessible surface of the Clearance Area only was undertaken. No surfaces outside of the Clearance Area as described in <b>Section 2</b> formed part of the inspection.</p> <p>The ACC does not encompass the whole of the Site. A separate clearance inspection should be undertaken if further ACM is identified within any other areas of the Site.</p> <p>The visual inspection was conducted in accordance with Part 3.10 of SafeWork NSW Code of Practice: <i>How to Safely Remove Asbestos</i> (2022) as approved under s.274 of the NSW <i>Work Health and Safety Act 2011</i>.</p> <p>EP Risk cannot guarantee any previously buried ACM will not become exposed at the surface. This might be due to the action of wind, rain, weathering, and foot or vehicular/plant traffic.</p> <p>This ACC was true at the time of the inspection only.</p>



## 5. ASBESTOS REMOVAL DOCUMENTATION


Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was a copy of the regulatory notification form provided? (SafeWork NSW)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Was the removal work consistent with the above removal documents?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## 6. RECOMMENDATIONS / MANAGEMENT

Recommendations:	<input type="checkbox"/> Continue works under Class A asbestos conditions. <input type="checkbox"/> Continue works under Class B asbestos conditions. <input type="checkbox"/> Provide a final clearance at the conclusion of the removal works. <input checked="" type="checkbox"/> Continue works under Unexpected Finds Protocol. <input type="checkbox"/> N/A.
Management:	<input type="checkbox"/> Prepare Asbestos Management Plan (AMP). <input checked="" type="checkbox"/> Prepare Long Term Environmental Management Plan (LTEMP) for the wider Site. <input type="checkbox"/> Update Asbestos Register. <input type="checkbox"/> Update ASBINS Management Plan. <input type="checkbox"/> Provide routine inspections of capping. <input checked="" type="checkbox"/> N/A.

## 7. CLEARANCE DECLARATION

Visible ACM was not identified on surface of the Clearance Area. As such, the area is suitable for reoccupation without the need for asbestos related Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE).

Prepared by:	Jenny Shao	Signature:	
LAA Number:	LAA001462		

## 8. ATTACHMENTS

1. Figure(s)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Photolog	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Clearance Air Monitoring Report	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
4. Certificate of Analysis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### QUALITY CONTROL

Version	Author	Date	Reviewer	Date	Quality Review	Date
v1	J. Shao	08.09.2023	L. Munnichs	08.09.2023	J. Thompson	08.09.2023

### DOCUMENT CONTROL

Version	Date	Reference	Submitted to
v1	08.09.2023	EP3244.003_ACC022_ESR_Westlink Stage 1_UF027_v1	ESR Australia Pty Ltd

## LIMITATIONS

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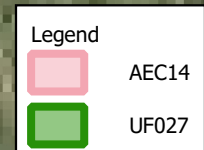
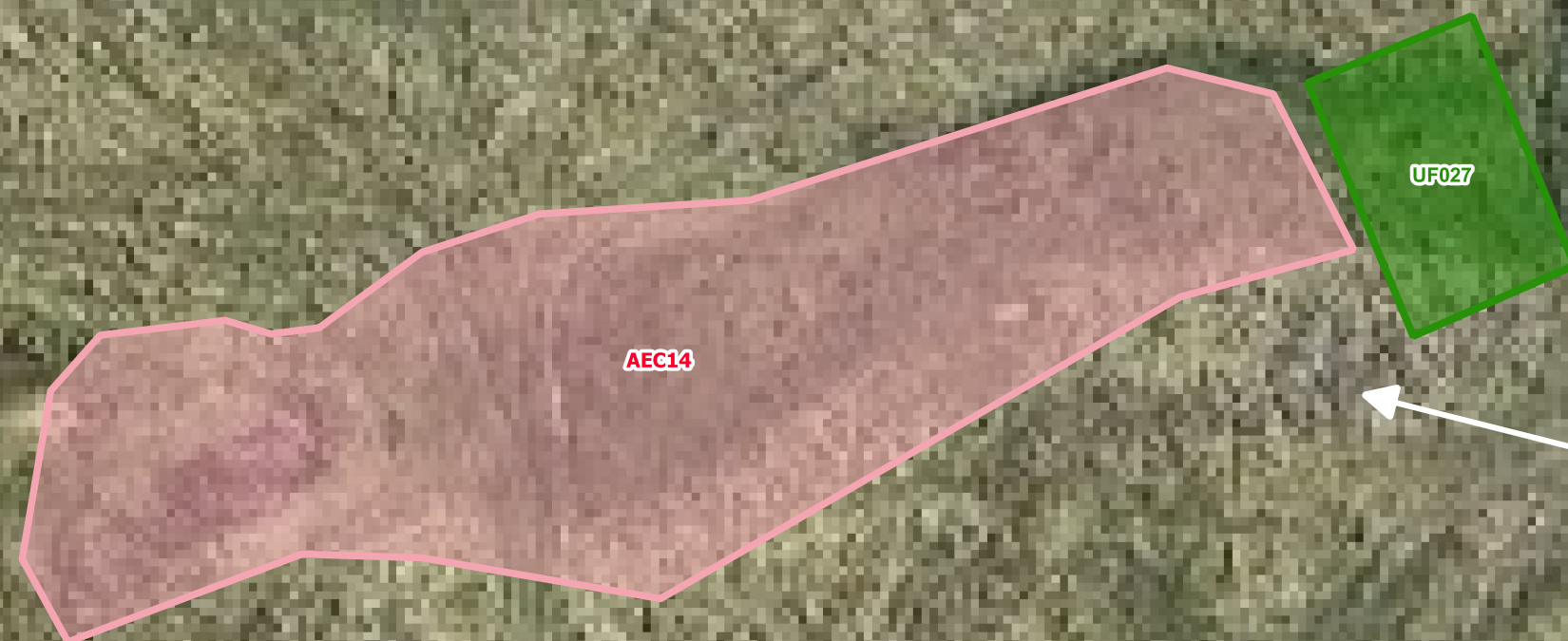
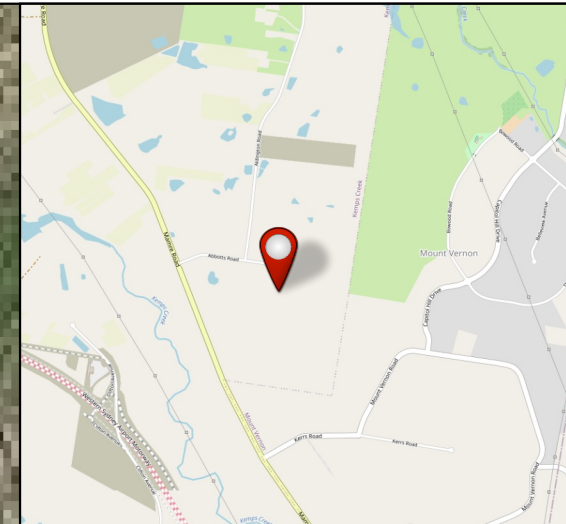
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## ***Attachment 1 – Figure***







## ***Attachment 2 – Photolog***





**Plate 1** – 04/09/2023

UF027 – Sporadic ACM fragments identified to the east of AEC14 prior to emu-picking works.



**Plate 2** – 04/09/2023

UF027 – Sporadic ACM fragments identified to the east of AEC14 prior to emu picking works.





**Plate 3** – 04/09/2023

UF027 – Sporadic ACM fragments identified to the east of AEC14 prior to emu picking works.



**Plate 4** – 04/09/2023

UF027 – Sporadic ACM fragments identified to the east of AEC14 prior to emu picking works.





**Plate 5** – 04/09/2023

UF027 – Sporadic ACM fragments identified to the east of AEC14 prior to emu picking works.



**Plate 6** – 04/09/2023

UF027 – Clearance Area subsequent to emu picking works by TCE to remove sporadic ACM fragments.





**Plate 7** – 04/09/2023

UF027 – Clearance Area subsequent to emu picking works by TCE to remove sporadic ACM fragments.



**Plate 8** – 04/09/2023

UF027 – ACM fragments removed by TCE during emu picking works.

