

Site Asbestos Management Plan

for

Westshield Limited

at

Cherryfield Drive, Kirby, Liverpool, L32 8RX

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Site Asbestos Management Plan

Prepared For: Westshield Limited, Ashcroft House, Bredbury Parkway, Bredbury, Stockport, SK6 2SN

Project Title: P-508411 – Land off Cherry Field Drive

Site Address: Cherryfield Drive, Kirby, Liverpool, L32 8RX

Client/Owner/Developer: Barratt and David Wilson Homes North West, 303 Bridgewater Place, Birchwood, Warrington, WA3 6XF

Principal Contractor: Westshield Limited, Ashcroft House, Bredbury Park Way, Bredbury, Stockport, SK6 2SN (enabling works phase only)

Revision History

Revision	Date	Description	Prepared By	Reviewed By
DRAFT	01/10/2025	First Draft for Comment	Dave Cooper, BSc. (Hons.), CCP (Asbestos), AFOH	Andy Viggars
DRAFT 2	11/11/2025	Incorporating comments from Knowsley Council's Environmental Health Department's review of a previous AMP drafted by Urban Regeneration	Dave Cooper, BSc. (Hons.), CCP (Asbestos), AFOH	Andy Viggars

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1. Introduction and Project Overview

1.1 Background

Environmental Essentials Limited (EE) has been instructed by Westshield Limited to develop a site asbestos management plan (SAMP) to support a package of work at the proposed residential development at the site south and west of Cherryfield Drive in Kirby.

Westshield Limited will be undertaking demolition, remediation and enabling works in relation to the proposed redevelopment, by Barratt and David Wilson Homes, of a parcel of land at the former Kirkby Community College, south of Cherryfield Drive, Kirkby, Liverpool, L32 8RX for, low rise residential housing (circa 800 houses) with associated adopted estate roads and utility infrastructure.

This document refers to other reports prepared for the development as listed in Table 1 below:

Author	Title	Reference	Client	Date
E3P	Remediation and Enabling Works Strategy	15-280-R2-5	Barratt and David Wilson Homes	November 2024
E3P	Demolition & remediation and enabling works specification Cherryfield Drive, Kirkby	15-280-L1-2	Barratt and David Wilson Homes	29th November 2024

Table 1: Summarising the reports referred to during the production of this site asbestos management plan

This document should be read in conjunction with these documents.

In preparing the reports listed in Table 1, E3P used previous reports that had been provided as follows:

Author	Title	Reference	Client	Date
Clancy Consulting	Preliminary Geoenvironmental Appraisal Report for Phase 2 Site, Cherryfield Drive, Knowsley	10/1519/001	Knowsley Metropolitan Council	May 2020
Clancy Consulting	Geo-Environmental Appraisal Report for Knowsley Community College, Liverpool	10/1533/001	Knowsley Metropolitan Council	July 2020
Resource & Environmental Consultants Ltd	Geoenvironmental Site Assessment	45759Fp1r0	Knowsley Metropolitan Council	September 2014
ALM Consult Ltd	Interpretative Report	30090/11	Knowsley Metropolitan Council	September 2015
ALM Consult Limited	Hazardous Gas Risk Assessment	30090/11/2	Knowsley Metropolitan Council	December 2015
ESG	Factual Report on Ground Investigation	F5013-15	2020 Knowsley Limited	February 2016
Ian Farmer Associates	Factual Report on Ground Investigation	41989	St Modwen Developments	March 2017
RPS	Due Diligence Information for Land Development	-	St Modwen Developments	June 2017
Atkins	Phase 1 Geo-Environmental Desk Study	5145660	St Modwen (Kirkby 2) Developments Ltd	December 2016
Buro Happold	Ground Engineering Site Appraisal	021706	-	December 2006

Buro Happold	Geoenvironmental and Geotechnical Interpretative Report: Phase 1 Ground Investigation (GDO 205 Landfill)	021706	-	November 2007
Cundall	Geotechnical Due Diligence Brief	1028732.SPC.GL.001	Barratt Developments PLC	June 2021

Table 2: Reports provided to E3P

In preparing the reports detailed in Table 1 E3P also conducted two phases of geoenvironmental investigation at the site, the information from these geoenvironmental investigations is reported in the following:

- E3P – Phase I & II Geoenvironmental Site Assessment Reports reference 15-280-R1-4, dated May 2025, prepared for Barratt and David Wilson Homes

Report 15-280-R1-4 was prepared using the information provided in the reports in Table 1.

A remediation and enabling works strategy was then also prepared by E3P:

- E3P - Remediation and Enabling Works Strategy reference 15-280-R2-5 dated November 2024, prepared for Barratt and David Wilson Homes

This SAMP is designed to support the information detailed in that remediation strategy and is aimed to comply with that document specifically outlining the plan for managing soil and made ground that is impacted by asbestos and asbestos-containing materials.

This document sets out how the site will address asbestos in terms of identification, handling, remediation, validation, potential re-use, disposal and monitoring in accordance with UK regulations.

Most notably this document should support site remediation with respect to asbestos as a contaminant of concern as detailed within section 3.5.3 of the E3P remediation strategy.

Environmental Essentials Limited accepts no liability for the accuracy of the information provided in third-party reports or investigations most notably those listed in Table 1 and Table 2 or for the geoenvironmental investigations undertaken by E3P reference 15-280-R1-4.

1.2 Objectives

The primary objectives of this document are to provide a plan (with respect to asbestos) to:

- Protect human health and the environment.
- Provide for sustainable development by minimizing the amount of soil and made ground that must leave the site as hazardous waste.
- Ensure compliance with current health and safety legislation.
- Ensure compliance with current environmental legislation.
- Ensure compliance with current waste legislation.
- Ensure compliance with industry developed guidance.
- Define procedures to support safe asbestos remediation.
- Ensure material and waste is managed in a manner that is compliant with UK hazardous waste regulations and the Definition of Waste: Code of Practice developed by Contaminated Land: Assessment in Real Environments (CL:AIRE) (as appropriate).

2. Regulatory Framework

2.1 General

This plan complies with the following legislation, approved codes of practice, health and safety executive (HSE) guidance, Environment Agency (EA) guidance and industry written guidance, this list is not exhaustive and focusses on the key aspects in terms of asbestos management and remediation on a development/construction site:

2.2 Health and Safety

- The Control of Asbestos Regulations 2012 [Statutory Instrument 2012 No. 632]
- Approved Code of Practice: Managing and working with asbestos [L143]
- HSE Guidance: Asbestos: The Survey Guide (Second Edition 2012) [HSG246]
- HSE Guidance: Asbestos: The Licensed Contractors Guide [HSG 247]
- HSE Guidance: Asbestos: The Analysts' Guide (Second edition July 2021) [HSG248]

2.3 Environment

- The Environmental Permitting (England and Wales) Regulations 2016 [Statutory Instrument 2016 No. 1154, as amended]

2.4 Material/Waste

- The Hazardous Waste (England and Wales) Regulations 2005 [Statutory Instrument 2005 No. 894, as amended]
- Guidance on the classification and assessment of waste Technical Guidance WM3 (1st Edition 2014 v1.2.GB Oct 2021) [WM3]
- The Definition of Waste: Development Industry Code of Practice (Version 2, March 2011) [DoWCoP]

2.5 Health & Safety, Environment & Waste – Industry Developed Guidance

- CIRIA: Asbestos in soil and made ground: a guide to understanding and managing risks (March 2014) [C733]
- CIRIA: Asbestos in soil and made ground good practice site guide (February 2017) [C765]
- Joint Industry Working Group Asbestos in Soil and Construction & Demolition (C&D) Materials guidance Control of Asbestos Regulations 2012: Interpretation for Managing and Working with Asbestos in Soil and Construction & Demolition materials: Industry Guidance [CAR SOIL]
- The Society of Brownfield Risk Assessment (SoBRA) - Sampling Protocol for Asbestos in Soil

3. Site Background and Asbestos Contamination

3.1 Site History

The subject site is a large irregular shaped parcel of land located to the south and west of Cherryfield Drive in Kirkby.

The site is located approximately 13km to the northeast of Liverpool and covers approximately 22 Hectares (Ha).

The southern sector of the site comprises maintained grassland with an area in the southeast of the site having recently undergone the felling of semimature and mature trees. The central sector of the site is currently unmaintained vacant grassland. Within the north of the site, is an area of active car park and former roadways and hardstanding associated with previous development. Knowsley Community College is located in the northwest of the site. There is an additional area of vacant land with areas of hardstanding associated with former development, with a small building fronting Cherryfield Drive.

Historical mapping indicates that the site was undeveloped until the 1960s, with the subsequent construction of the college campus in the northwestern sector and a school in the south-eastern sector. Circa 1961, historical mapping shows earthworks associated with the adjacent landfill site, by 1976 the landfill is no longer shown.

Residential dwellings and retail buildings, including a fuel station and electrical substations, are shown at the northern site boundary pre-1961.

Aerial imagery indicates the southeastern sector of the site was cleared pre-2011; the hotel pre-2012; the residential housing pre-2015, the college in the northwest pre-2016; with the remainder of buildings in the north of the site demolished by pre-2019 and pre-2021.

There is currently no evidence of the fuel (petrol filling station) above ground however it is understood the underground storage tanks are still present.

At present, the site is largely vacant, with the former roads and hardstanding at the north of the site and areas of car parking associated with the now demolished school and college. Two buildings associated with the former college remain in the north-western sector and are currently vacant, however, will require demolition prior to the remediation and enabling works taking place.

An overview of the site is shown in Figure 1 and Figure 2 below.

Figure 1: Site Overview



Figure 2: Proposed Development



3.2 Site Investigations

A detailed overview of desktop reports and site investigation undertaken is included in Section 1.1 of this report, most notably Tables 1 and 2.

3.3 Nature and Extent of Contamination with respect to Asbestos

Asbestos-containing materials (ACM), and made-ground that is impacted by asbestos have been identified as follows:

The remediation strategy prepared by E3P reference 15-280-R2-5 confirms that asbestos present as chrysotile, crocidolite and amosite (fibrous grunerite) have been identified in shallow made ground deposits.

Testing

Out of 62 samples tested from the site five samples had positive identification for asbestos quantified between <0.001% and 0.009% on a weight for weight (w/w) basis by hand picking weight, in various locations on site..

For this reason, it is considered by E3P that there is a risk that loose asbestos fibres may be present throughout the made ground across the site due to the nature of the fill materials however levels of asbestos above <0.001% are considered to be localised hotspots.

Visual Assessment

The same remediation strategy also confirms that visual signs of ACM were encountered within WS141 which was formed during site investigation undertaken by E3P. ACMs had also been identified within various exploratory hole locations undertaken historically by others with the recommendation that these visual asbestos containing materials be removed by a licensed asbestos removal contractor (LARC). Further assessments of the work activities as detailed in Appendix A2 have shown that the work on site is classified as non-licensed work. Regardless of this to ensure the best experience that can be used to deal with the asbestos fragments and the asbestos hot spots a LARC will be used.

The proposal for remediation of asbestos impacted soils and made ground as detailed in this report is that they are to be placed in accordance with the asbestos conceptual site model detailed in the E3P remediation strategy with a suitable cover system placed in all garden and landscaped areas to prevent exposure to future site users. Asbestos impacted soils and made ground are to be managed in accordance with the conceptual site model detailed within Figure 2.1 on Page 18 of the remediation strategy prepared by E3P reference 15-280-R2-5 dated November 2024.

An asbestos **hotspot removal** should be completed in areas in which asbestos quantification is greater than 0.001% (w/w) or where visual pieces of asbestos have been identified.

It is a requirement of the same remediation strategy that all anthropogenic material impacted by trace asbestos fibres or ACM is controlled in a legislatively compliant manner and that this should include reassurance air testing in line with HSE Guidance: Asbestos: The Analysts' Guide (Second edition July 2021) [HSG248].

A summary of the locations where asbestos has been encountered as summarised in the remediation strategy is shown below:

Location, Depth (m) below ground level (bgl)	Asbestos Encountered	Soil Description
TP132 (0.30.2 m)	Chrysotile loose fibrous debris	Granular made ground
TP140 (0.1 m)	Loose fibres and bitumen	Re-worked topsoil
TP118 (0.5m)	Amosite, loose fibres	Granular Made Ground
TP202 (1.0 m)	Loose fibres and bitumen	Made Ground
WS141 (surface)	Asbestos cement sheets	Surface and topsoil
WS206 (0.9 m)	Loose fibres and bitumen	Made Ground

Table 3: Summary of identified asbestos-containing materials and samples within E3P remediation strategy

This document details the risk assessment and control measures to be used when undertaking ACM fragment removal, asbestos hot spot removal or when generally working with soils that are impacted with low levels of asbestos fibres.

3.3 Limitations

This management plan covers issues with respect to asbestos only, other contaminants of concern are not specifically addressed but may be covered in:

- E3P - Remediation and Enabling Works Strategy reference 15-280-R2-5 dated November 2024, prepared for Barratt and David Wilson Homes

This remediation strategy may also be supported by other management plans with respect to other contaminants of concern as deemed appropriate.

3.4 Summary

The information contained within the above remediation strategy shows that there are three main categories of asbestos containing material:

1. Fragments of asbestos-containing material
 - a. Near WS 141 (Asbestos cement sheets)
2. Hotspots where the level of asbestos fibres is higher than $< 0.001\%$
 - a. TP140 at 0.1m bgl (0.002%)
 - b. TP202 at 1.0m bgl (0.005%)
 - c. TP118 at 0.5m bgl (0.009%)
3. Low level loose asbestos fibres $< 0.001\%$ that have been assumed may be present generally within the made ground

The remediation strategy also refers to the reports undertaken by others which details the following:

4. ALM Consult report: Loose asbestos fibres (amosite, chrysotile, and tremolite) are noted extensively across the eastern part of the site and in the southwest of the site.
5. Buro Happold report: Visual evidence of cement bound asbestos site wide
6. Ian Farmers reports: Asbestos fibres within five samples

For this reason it is assumed sources of asbestos could be present across the site.

Should asbestos-containing materials or asbestos impacted made ground with levels of asbestos higher than $< 0.001\%$ (w/w) be encountered the remediation strategy details that these will be removed as hot spots with reassurance air testing in line with HSE Guidance: Asbestos: The Analysts' Guide (Second edition July 2021) [HSG248] being undertaken

Upon completion of this activity as detailed in the remediation strategy validation samples will be collected by a suitably qualified and experienced person (SQEP) at 10 linear metre centres from the side and base of the excavation.

4. Risk Assessment

4.1 Exposure Risks

The main route for exposure to asbestos fibres is through inhalation of airborne fibres. Asbestos management is therefore based on two fundamental principles with these being:

- To prevent exposure to airborne asbestos fibres
- To prevent the spread of asbestos fibres (therefore controlling the risk of secondary exposure)

The release of asbestos fibres from soil and made ground has been the subject of detailed risk assessment by a number of organisations, most notably:

- Construction Industry Research and Information Association (CIRIA)
- Contaminated Land: Assessment In Real Environments (CL:AIRE)
- The Society of Brownfield Risk Assessment (SoBRA)

It is recognised that asbestos fibres bound to a soil/made ground matrix is sufficient to prevent significant airborne fibre release unless two conditions are met with these being:

1. The soil/made ground is dry: It is accepted that if soil and made ground are kept adequately wet then this moisture content will prevent the release of airborne asbestos fibres.
2. Mechanical disturbance is present: This may take the form of ambient conditions such as wind or by conditions encountered on a development/construction site such as vehicle movements; excavation; processing of soil, made ground and site won materials; haulage, re-use and disposal

In considering the risk from asbestos on development/construction site the source, pathway, and receptor model is used to identify a pollutant linkage. A pollutant linkage exists only when all three of these elements are connected. Risks are therefore controlled by implementing control measures that are designed to “break” any pollutant linkage, these control measures will be made appropriate to a specific site and will be dependent upon the types of asbestos fibres or asbestos-containing materials that are present.

Any control measures that are implemented can be validated through air monitoring arrangements.

4.2 Sources

Asbestos fibres and asbestos -containing materials are present within the soil and made ground at the site, a detailed review in relation to this is included in Section 3.4 above, the location of sources are also shown in Appendix B which is an extract of the plan on Page 85 of the remediation strategy prepared by E3P reference:

- E3P - Remediation and Enabling Works Strategy reference 15-280-R2-5 dated November 2024, prepared for Barratt and David Wilson Homes

4.3 Pathways

As described above the route for exposure to asbestos fibres is through inhalation, for this reason in order for any pollutant linkage to exist asbestos-containing materials or free asbestos fibres must be disturbed in such a manner that they become airborne.

4.4 Receptors

With respect to this SAMP receptors are the people who could be harmed if they were exposed to asbestos fibres at significant levels, it is well documented that the more times you are exposed to asbestos fibres the higher levels of asbestos fibres in air you are exposed to, usually measured as fibres per millilitre (f/ml), then the level of risk of experiencing a health effect as a result of asbestos exposure is increased.

With regard to this project receptors include

- Site management, operatives, and visitors
- Trespassers
- Off-site human receptors (public in car parks, medical Centre, shopping area, streets, schools)
- Off-site human receptors (residents of neighboring houses)
- Future site occupiers

4.5 Effects of Asbestos Exposure

A number of health effects can present themselves if people are exposed to asbestos these are:

- Effects on the skin such as lesions around the implanted fibres, such as warts and corns, known as asbestos corns
- Pleural plaques and diffuse pleural thickening: This can cause difficulties in breathing
- Asbestosis: This is a fibrosis (physical scarring of the lung) that can cause difficulties in breathing
- Lung Cancer: This is a cancer of the lung that is like that contracted from smoking tobacco
- Mesothelioma: This is a specific form of cancer of the lining of the lungs or abdomen (pleural membrane or peritoneum respectively) nearly always associated with asbestos exposure

4.6 Occupational Exposure

While at work exposure to asbestos must be kept as low as is reasonably practicable (ALARP) and for any work with asbestos not to require the use of a licensed asbestos removal contractor (LARC) one of the defining criteria is that the level of asbestos fibres in air when measured over a 4 hour period (time weighted average) must not exceed the **control limit** of 0.1 f/ml, this is not considered a “safe” environmental level and all efforts must be made to reduce exposure to the lowest level reasonably practicable which considers the cost (in time and money) and trouble of implementing control measure when assessed against the overall risk.

4.7 Environmental Exposure

Asbestos is a naturally occurring fibrous silicate mineral and as such there is an ambient level of asbestos fibres in the air we breathe.

No UK policy exists defining a safe environmental level of ambient asbestos fibres in air and as such there are no published criteria defining this level.

Measurements of the ambient levels of asbestos fibres in air have been undertaken with some of the known levels being published as:

- rural areas (outdoors – remote from asbestos emission sources): below 0.0001 f/ml ^{(1) (2) (3)}
- urban areas (outdoors) – general levels may vary from below 0.0001 f/ml ^{(1) (2) (3)}
- in buildings without specific asbestos sources – generally below 0.001 f/ml ^{(1) (2)}

[\(1\) UK Health Security Agency – Guidance – Asbestos: Toxicological Overview \(15th May 2025\)](#)

Using data from U.S. Department of Health and Human Services: Agency for Toxic Substances and Disease Registry. 'Case studies in environmental medicine: Asbestos toxicity', 1997

[\(2\) Discussion Paper on Guidelines for Airborne Concentrations of Asbestos Fibres in Ambient Air: Implications for Quantitative Risk Assessment](#)

[\(3\) CIRIA: Asbestos in soil and made ground: a guide to understanding and managing risks \(March 2014\) \[C733\]](#)

For this reason given the location of the proposed development site background levels of asbestos fibre are expected to be in the order of 0.001 f/ml to potentially as low as 0.00001 f/ml.

With this being the case if the level of asbestos fibres in air can be shown through air monitoring not to increase above these levels during remediation, earthworks and construction related activities at the site then the level of risk from exposure to asbestos can be demonstrated to have materially increased above background levels.

4.8 Control Measures

The control measures that are to be used during the remediation, earthworks and construction activities during the development of the site are detailed in Section 5

5. Remediation Strategy

5.1 Remediation Objectives

The remediation objectives (with respect to asbestos) are to remediate the asbestos impacted soil and made ground and to sustainably re-use the materials on site at depth as far as is reasonably practicable in line with the existing remediation strategy:

- E3P - Remediation and Enabling Works Strategy reference 15-280-R2-5 dated November 2024, prepared for Barratt and David Wilson Homes

In particular the conceptual site model for target levels in this strategy are shown in Figure 2.1 on Page 18 of this remediation strategy

It may be the case that the re-use of material will be undertaken under a materials management plan (MMP) in line with the protocols outlined in The Definition of Waste: Development Industry Code of Practice (Version 2, March 2011) [DoWCoP] this MMP would be independently verified by a Qualified Person (QP).

To comply with an MMP the material for re-use must satisfy four factors as outlined below:

1. **Protection of Human Health and the Environment:** This factor ensures that the reuse of materials does not pose a risk to human health or cause pollution to the environment.
2. **Suitability for Use:** The material must be suitable for its intended use without the need for further treatment or processing.
3. **Certainty of Use:** There needs to be a clear and defined plan for how the material will be used, including details about the site and the specific application.
4. **Quantity of Material:** The quantity of material to be reused must be clearly defined and justified.

These factors will be assessed and validated by the Principal Contractor (Westshield)

Any fragments of asbestos-containing material will be removed from site as hazardous waste.

5.2 Remediation Approach and Control Measures

The approach to the remediation activities and control measures have been prepared and consider the following:

1. Planning
2. Training
3. Site Management and supervision
4. Engineering control, safe system of work and methodology

Planning

Before considering the approach to remediation of asbestos-containing materials, impacted soils and made ground an assessment of the type, location and extent of asbestos-containing materials present at the site has been undertaken to comply with Regulation 5 of CAR2012, further

identification and assessment will run concurrently with remediation to support site management decisions:

- Based on the information obtained from the remediation strategy and other reports on ACMs and asbestos in made ground encountered is present as below:
 - Fragments of asbestos-containing material
 - Near WS 141 (Asbestos cement sheets)
 - Hotspots where the level of asbestos fibres is higher than < 0.001%
 - TP140 at 0.1m bgl (0.002%)
 - TP202 at 1.0m bgl (0.005%)
 - TP118 at 0.5m bgl (0.009%)
 - Low level loose asbestos fibres < 0.001% that may be present generally within the made ground
 - Loose asbestos fibres (amosite, chrysotile, and tremolite) across the eastern part of the site and also in the southwest of the site.
 - Visual evidence of cement bound asbestos site wide

The Joint Industry Working Group (JIWG) Decision Support Tool has been used to create a series of models covering:

Appendix A1 – Receptors

A1.1 – Material buried at shallow depth beneath cover systems, future site occupier – **Negligible Ranking**

A1.2 – Material with fragments buried at shallow depth, potentially disturbed by excavation, off site Receptors – **Low Ranking**

A1.3 – Material with fragments buried at shallow depth, potentially disturbed by excavation – on site Receptor (Construction Worker) – **Low Ranking**

Appendix A2 – Work Categories (Licensing Status)

Appendix Reference	Asbestos Encountered / Work Type	Location	Licensing status
A2.1	Fragments of asbestos containing material	Near WS 141 Visual evidence potentially site wide.	Non licensed work
A2.2	Hotspots where the level of asbestos fibres is higher than < 0.001%	TP140 at 0.1m bgl (0.002%) TP202 at 1.0m bgl (0.005%) TP1180 at 0.5m bgl (0.009%) Eastern part of the site Southwest of the site	Non licensed work
A2.3	Low level loose asbestos fibres < 0.001% that may be present within the made ground	Potentially site wide	Control of Asbestos Regulations 2012 are not applicable

Table 4: Summary of licensing status of work activities

The approach to dealing with asbestos-containing materials has therefore been assessed as one of three activities.

1. Work on fragments of asbestos-containing materials (asbestos cement)
2. Work on hotspots where levels of asbestos are higher than < 0.001% (w/w)
3. The remainder of the site where low level loose asbestos fibres are present < 0.001% (w/w)

The models prepared using the decision support tool (Appendix A2) have shown that the work with asbestos in relation to these activities is non-licensed work.

- Any contractor engaged in the asbestos remediation element of the project will undertake the following to comply with CAR2012, most notably the following regulations are of importance:
 - **Regulation 5 – Identification of the presence of asbestos:** Existing and ongoing site investigation work is being used to define this.
 - **Regulation 6 – Assessment of work which exposes employees to asbestos:** Employers to undertake a risk assessment.
 - **Regulation 7 – Plans of work:** Prepare a Plan of Work (method statement) for the work that is compliant with Regulation 7.
 - **Regulation 10 – Information, instruction and training:** Employees will have adequate information instruction and training suitable for the activities they are undertaking.
 - **Regulation 11 and Regulation 16 – Prevention or reduction of exposure to asbestos and Duty to prevent the spread of asbestos:** All employees will work in accordance with the Plan of Work to ensure that exposure to asbestos is as low as is reasonably practicable and to ensure that asbestos is not spread.

Training

The work requires minor work with asbestos-containing materials or impacted soil or significant movement of soil and made ground with low levels of asbestos fibres using heavy plant and equipment.

Managers, supervisors and operatives will therefore receive suitable and sufficient training to cover their scope of work this will either be Category A – Asbestos Awareness Training for general site operatives or Category B – non-licensed works training (as appropriate). Alternatively the decision may be made to use a licensed contractor to undertake removal of the fragments of asbestos-cement sheeting.

Organisation	Role	Training
Westshield	Senior Project Manager	Suitable and sufficient non-licensed work training to cover scope of work drawing influence from Category B training
Westshield	Contract Manager	Suitable and sufficient non-licensed work training to cover scope of work drawing influence from Category B training
Westshield	Supervisors and Operatives	Category B – Non licensed works training (if involved in asbestos work)
Westshield	Supervisors and Operatives	Category A – Asbestos Awareness Training
All site operatives	Supervisors and operatives	Category A – Asbestos Awareness Training

Table 5: Summary of training with respect to asbestos

Site management and supervision

Site management will have the responsibility to ensure that dust generated on site is prevented/minimised.

Regular progress meetings between site management, sub-contractors, consultants, and client representatives are undertaken to cover site operations. These meetings will discuss the impacts of asbestos-containing materials and asbestos impacted soils during the project.

Site management will ensure that all workers including sub-contractors and consultants are competent (can demonstrate through training, experience, ability and knowledge) to implement this SAMP.

Any operative involved in physically working with asbestos will need to adhere to the recommended Plan of Work along with decontamination procedures and suitable and sufficient Personal Protective Equipment (PPE) and Respiratory Protective Equipment (PPE).

This SAMP is relevant to **non-licensed work** with asbestos only, should any material be encountered on site that could lead to **licensed work with asbestos** then work will temporarily be suspended, the situation assessed, and a suitable plan made to deal with the licensed work activity.

Engineering control, safe system of work and methodology

As described previously the route for exposure is inhalation, for this reason engineering controls and methodologies will be designed and implemented to prevent (so far as is reasonably practicable) the generation of dust which could contain low levels of asbestos fibres. Preventing the generation of dust is the primary control measure as this avoids fibre generation at source and provides collective measures over local measures such as providing personal protective equipment (PPE).

These controls will consider the recommendations outlined in CIRIA: Asbestos in soil and made ground good practice site guide (February 2017) [C765] most notably those defined in Section 5 and Table 5.1.

- The main control measure for reducing exposure and spread of asbestos fibres is for dust levels to be minimised through dust suppression techniques.
- Works will be regularly monitored using a weather station, weather records will be maintained, and weather forecasts will be used to help control works as precipitation is an adequate means of minimising dust generation, a windsock will be sited adjacent to site management offices.
- Works will be undertaken to prevent/minimise dust. Works close to the edge of the boundary will be undertaken during or after higher levels of precipitation when soil and made ground are adequately wet. Alternatively dust suppression techniques from engineering control systems such as water bowsers, dust busters, jet sprays, fogging lances or similar may be utilised.
- Vehicles removing material from sites will always be sheeted, additionally vehicle traffic movements will be planned to ensure haulage vehicles remain on hardstanding and these hardstanding will be subject to maintenance/cleaning using a road sweeper as necessary the emissions from road sweeping activities will be monitored using the air monitoring techniques described in Section 7.
- Segregation of haul roads and roads going vehicles will be made so far as is reasonably practicable.
- The site speed limit will be a maximum of 10mph.

- Material stockpiling will be kept to a minimum with any stockpiles situated in sheltered location the height of which should be > 0.5 m below the level of any adjacent building, structure or localised topography. During windy conditions stockpiles will be dampened down.

An indication that conditions are not being adequately controlled would be significant amounts of dust passing beyond the site boundary or for high levels of dust to be seen on site, this could be indicated through reporting or measurement. If this is found to be the case this is to be mitigated as follows

- Site management will undertake an investigation as to the potential source of the dust
- Existing control measures will be reviewed for adequacy, any non-functional items will be repaired/replaced
- Where control measures are not being followed by workforce a task briefing in the form of a toolbox talk will be provided to re-inforce the importance of those control measures. Employees persistently violate control measures and procedures may face disciplinary action.
- If control measures are being followed but dust levels are not well controlled a review of existing control measures will be made and alternative solutions sought.
- The results of all investigations and procedural changes will be documented.

Additional control measures will be required in relation to work with asbestos-containing materials and hotspots these will include:

- Working in accordance with a Plan of Work that written in compliance with Regulation 7 of the Control of Asbestos Regulation 2012
- Using only appropriately trained employees or sub-contractors, the number of employees undertaking the work should be minimised
- Segregating the work area and creating a respirator zone
- Adequately wetting the area before any disturbance activity
- Ensuring the area remains adequately wet during work activities (the work area should be damp but should not become an unmanageable slurry)
- Arrangements will be in place to deal with waste for example double-bagging asbestos-containing materials and placing them in a lockable skip or where larger hot spots are being moved these may be loaded into a haulage vehicle or roll-on roll off skip with a suitable lining.

Any workers working with asbestos-containing materials will also need to wear suitable and sufficient Personal Protective Equipment (PPE) and Respiratory Protective Equipment (PPE).

PPE/RPE requirements given the type of work activity being undertaken are detailed in the table below

Work Activity	Licensing Status	RPE	PPE	Dust suppression	Hygiene/Decontamination
1. Work on fragments of asbestos-containing materials (asbestos cement)	Non-licensed work	BS EN 140 with P3	BS EN ISO 13982-1 Type 5 or 6	Localised mechanical dust suppression	Preliminary and full decontamination facilities
2. Work on hotspots where levels of asbestos are higher than < 0.001% (w/w)	Non licensed work	BS EN 140 with P3	BS EN ISO 13982-1 Type 5 or 6	Localised mechanical dust suppression	Preliminary and full decontamination facilities

3.The remainder of the site where low level loose asbestos fibres are present < 0.001% (w/w)	CAR does not apply	BS EN 149 type FFP3 respirator	BS EN ISO 13982-1 Type 5 or 6	Manual or localised dust suppression	Preliminary localised decontamination facilities
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Table 5: PPE, RPE and decontamination requirements

Work on fragments of ACM or on hotspots will be undertaken as follows

1. Excavation of the areas/stockpiles under inspection protocol under the supervision of a suitably trained member of staff or LARC. The inspection is undertaken to confirm that asbestos-containing materials are not visible to the naked eye, this will be followed by representative validation sampling. All plant operatives and labour trained in accordance with the requirements of this document, all work will be undertaken with monitoring in place from an asbestos consultant accredited by the United Kingdom Accreditation Service (UKAS)
2. Validation sampling will be undertaken once removal has been carried out to validate the removal of the fragments and hotspots. Sample results will be monitored with records maintained by the Principal Contractor.
3. Material sampling shall be undertaken by a suitably qualified environmental consultant with subsequent testing to inform waste/material route being undertaken by an independent MCERT and UKAS accredited laboratory (as appropriate), or equivalent.
4. Upon completion of excavation work the materials shall be handed over to client / earthworks team for movement and subsequent deposition.
5. A finished site close out report shall be produced with a photographic record of the works, a diary of the works, sign off of areas after inspection by asbestos consultant, soils testing results.
6. This methodology may be triggered, used and paused as appropriate as assessment and identification delineates or negates areas of asbestos contamination or uncontaminated material (as appropriate).

PPE and RPE Requirements

Operatives will wear the following items of PPE and RPE as required by the risk assessment undertaken by their employer in accordance with Regulation 6 of CAR2012

- Safety Boots or safety wellington boots or Category 3, Type 5 or 6 (BS EN ISO 13982-1) overshoes (plant operators)
- Category 3, Type 5 or 6 (BS EN ISO 13982-1) coveralls complete with elasticated, hood, cuffs and ankles.
- Full face FFP3 powered respirator or Ori-nasal FFP3 respirator (as appropriate) (BS EN 140 with P3)
- Or Disposable FFP3 respirator (BS EN 149 type FFP3 respirator) for general work where Appendix A2 has indicated that CAR 2012 is not relevant
- Operatives will be Fit2Fit face fit tested for RPE.
- Hard hats

In summary the types of asbestos-containing material identified at the site will be dealt with as follows:

Type of asbestos	Approach
Fragments of asbestos-containing material	Removal before commencement of remediation and earthworks Gridded site inspection to verify no other fragments visible before commencement of remediation and earthworks
Hotspots where the level of asbestos fibres is higher than < 0.001%	Removal with validation sampling before commencement of remediation and earthworks
Low level loose asbestos fibres < 0.001% that may be present generally within the made ground	Background and ongoing monitoring

Table: Summary of approach to dealing with asbestos-containing materials and asbestos fibres

6. Material/Waste

With respect to asbestos, impacted soils and made ground will be classified, handled, transported and disposed of using the following three routes.

Route 1 – Hazardous Waste (Offsite Disposal)

Fragments of asbestos-containing material and asbestos hotspots will be removed by a contractor or LARC and disposed of as hazardous waste.

Route 2 – Non-hazardous (On site re-use)

Material that has been deemed to satisfy the requirements of conceptual site model details within Figure 2.1 on Page 18 of the remediation strategy prepared by E3P reference 15-280-R2-5 dated November 2024 will be re-used on site.

7. Monitoring and Validation

Ongoing monitoring will be designed to cover the requirements of occupational health and safety and environmental monitoring.

Monitoring to demonstrate compliance will involve a number of methods including visual assessment and airborne fibre monitoring using phase contrast optical microscopy and scanning electron microscopy

Monitoring with respect to occupational health and safety

The monitoring strategy will incorporate the following types of monitoring to comply with the requirements of CAR2012, HSG247 and HSG248:

Phase Contrast Optical Microscopy (PCOM): Personal sampling is carried out to:

- check employees' airborne exposure to asbestos.
- confirm the adequacy of controls and RPE (i.e. whether the RPE chosen provides the appropriate degree of protection).
- establish employee exposure records.
- support current and future risk assessments.

Phase Contrast Optical Microscopy (PCOM): Static sampling will be carried out as follows:

- **Background sampling:** To establish the prevailing fibre concentration. This is carried out before an activity which may lead to airborne asbestos contamination. Background sampling gives a useful baseline with which other samples can be compared (e.g. leak and reassurance samples). The prevailing site conditions will also need to be stated.
- **Leak sampling:** To assess the suitability of the work area and control measures, to make sure it remains intact and that airborne fibres do not migrate. These samples are typically taken by the on-site analyst to confirm that fibre concentrations outside the work area are not too high. It is not envisaged that leak sampling will be used during this project as near source static sampling adjacent to a work area will satisfy this requirement.
- **Near-source static sampling:** To assess the release and spread of asbestos fibre concentrations near sources e.g. work without an enclosure or during disturbance of asbestos in soil and made ground.
- **Far Source/Perimeter Sampling:** Conducted around the perimeter of the site where there may be other workers, public access or residential and commercial buildings.

Monitoring with respect to occupational health and safety and the environment

Scanning Electron Microscopy (SEM): Static sampling with subsequent analysis by SEM will be carried out at the perimeter of the site initially to establish ambient environmental levels and then periodically to achieve low limits of detection.

Chapter 12 of CIRIA C733 suggests monitoring on a site impacted by asbestos to achieve limits of detection to the order of 0.0001 f/ml to 0.00001 f/ml. In practice this is at the very edge of commercially available techniques so SEM analysis will aim to achieve limits of detection to the order of 0.0001 – 0.00004 f/ml

For work on ACMs or hotspots PCOM air monitoring will be undertaken during the work activity. For work on the remainder of the site where low level loose asbestos fibres are present < 0.001% (w/w), air monitoring will be undertaken periodically on a monthly basis.

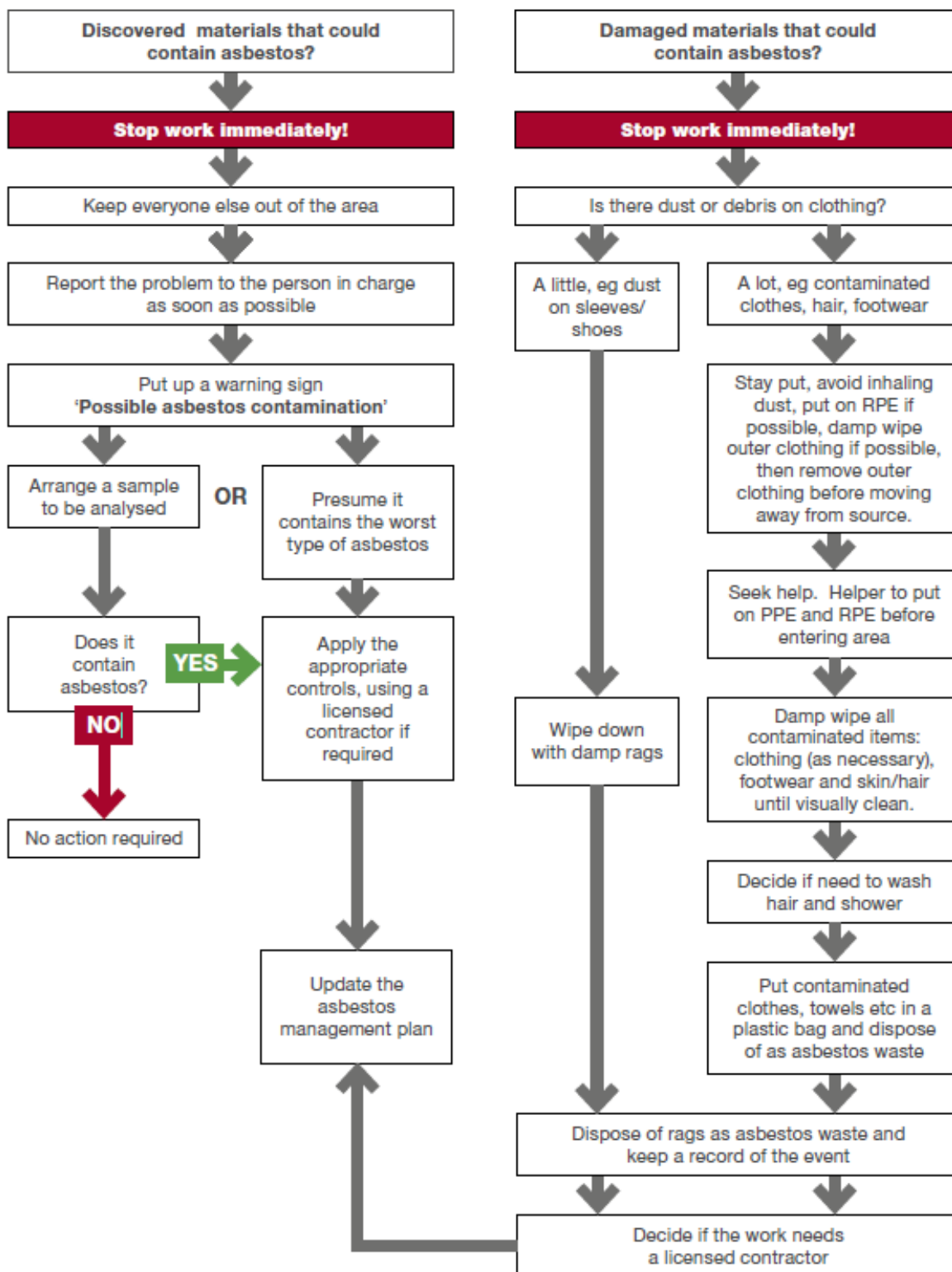
8. Emergency Procedures

Emergency procedures and responsibilities are summarised below:

Reporting	All staff are responsible for: • Following the Emergency Procedures outlined below • Making reports in line with site requirements in the event of an incident or near miss involving asbestos Asbestos / Site Managers are responsible for: • Obtaining information (i.e. from Project Managers) to determine exposure to asbestos and completing the Asbestos Exposure Assessment Form.
Isolating	All staff and contractors are responsible for: • Isolating areas in the event of a potential asbestos emergency. • Placing temporary signage. • Isolating potentially contaminated people in an adjacent location Asbestos / Site Managers are responsible for: • Placing asbestos restricted signage • Risk assessment required access to the area using • Arranging for decontamination if necessary • Support and advice on incident response Site management are responsible for: • Out of hours response to asbestos reports – isolating areas and contacting the project team.
Communicating	All staff and contractors are responsible for: • Reporting and communicating potential or actual asbestos incidents to the project team. Site management and project team are responsible for: • Liaising with site users, notifying restricted access areas. Receipt and handling of concerns from site operatives Health and Safety Representatives are responsible for: • Communicating the incident to if reportable under RIDDOR
Investigating	Site management and Contractors are responsible for: • Gathering information on the work taking place at the time of identification/disturbance. • Completion of incident investigation report Asbestos / Site Managers are responsible for: • Checking the site asbestos management plan, and clarifying status of material if required • Support and advise on investigation report Health and Safety Representatives are responsible for: • Support and advice on investigation report • Document retention
Resolving	Site management and Contractors are responsible for: • Corrective and preventive actions arising from investigation reports Asbestos / Site Managers are responsible for: • Arranging for decontamination. • Contacting asbestos contractors for removals and clearances.

What to do if you discover asbestos during a planned work activity

What to do if you discover or accidentally disturb asbestos during your work

Flow chart

Step 1 – Stop All Work

It is critical that all work in the area of the incident is stopped. All tools and equipment should be left in the area. If the area is otherwise occupied by staff, students or visitors it should be vacated immediately.

No attempt to clean up should be made. Access to the area should be immediately restricted.

Step 2 – Restrict Access

The area in the vicinity of the incident should be evacuated. Any person potentially contaminated with asbestos fibres should be isolated at the decontamination unit and the decontamination requirement assessed.

The LARC and site management shall risk assess the requirement to access the area i.e. in the event of an emergency such as for service isolation.

Under no circumstance should any person who is not authorised and /or is not wearing appropriate RPE and PPE enter the area. Access to the area will usually only be undertaken by a LARC or Asbestos Consultant once approved by site management.

To prevent access into the area place warning signage or barriers as appropriate.

Step 3 – Decontaminate

It is important to recognise that although exposure to any individual should be minimized it is also important to ensure that the spread of asbestos contamination is limited to prevent further individuals becoming exposed. Any person who is likely to have been contaminated with asbestos fibres during the incident should be advised to move from the immediate vicinity of the incident. If possible, any contaminated outer layers of clothing should be left in the area before they leave.

The contaminated person should be asked to remain at the decontamination unit while an assessment and advice on the extent of the contamination is made using the 'personal decontamination procedures. Where possible, a disposable FFP3 half mask will be provided to the contaminated individual (s) along with disposable coveralls.

For 'light' contamination e.g. a little dust on sleeves or shoes, this may be wiped down with damp rags. For more serious contamination such as dust or debris on clothes, hair, footwear the person should remove any outer layers of clothing, wipe all areas of contamination with a damp cloth / rag including footwear, skin and hair.

For significant contamination, once the initial decontamination is complete and if available, the person should be advised to shower and dress in replacement clothing or a fresh coverall.

The Employer will endeavour to provide disposable coveralls for transit or until replacement clothing can be sourced.

All wipes, rags, towels, contaminated clothing, coveralls and RPE should be placed in a plastic bag, or similar and left in the area of decontamination. These items will be considered as contaminated and will

be addressed during the clean-up operation where they will be transferred by a specialist into Asbestos waste bags and disposed of as Asbestos Waste.

All areas where decontamination has occurred, or the contaminated person has transited through shall be considered as potentially contaminated with asbestos and access restricted pending review and action by the Asbestos / Site Manager.

Under no circumstances is any person who is not authorised, appropriately trained and not wearing the correct PPE / RPE to assist with the physical decontamination process.

Step 4 – Report the incident

The incident should be reported as soon as possible, this should be as soon as the incident occurs, or if not as soon as practicable after the initial response is made.

Depending on the personnel involved in the incident the reporting pathway will vary however the incident will ultimately be reported to the site management

9. Appendices

Index to Appendices

A. Joint Industry Working Group: JIWG Decision Support Tools – Asbestos in Soil and Construction & Demolition Materials

A1 – Receptor Rankings

A2 – Work Categories

B – Location of asbestos-containing materials and asbestos hotspots

A. Joint Industry Working Group: JIWG Decision Support Tool – Asbestos in Soil and Construction & Demolition Materials

A1 – Receptor Risk Rankings

A1.1 – Material buried at shallow depth beneath cover systems, future site residents



Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case')	Loose fibrous asbestos debris	3
Extent of degradation of ACMs	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Asbestos fibre type	Mainly amphibole and chrysotile mixtures, including trace crocidolite	2
Sub-total		13
Hazard ranking		Medium

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.

It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Stage 2

Emission Factors

Score

Amount of asbestos fibre in selected ACM/fibre type as % of I Very Low quantities - 0.001 to 0.01%wt/wt

1

Respirable fibre index for ACM – RIVM report 711701034 (2003) High

4

Activity type and effect on deterioration of ACMs

No disturbance activity

0

Best description of primary host material matrix

Coarse to Fine Gravel

3

Sub-total

8

Exposure ranking

Low

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Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Stage 3

Pathway and Receptor Sensitivity

Score

Receptor category

Residential

No score required

Age of Receptor

Infant (under 5)

4

Duration of exposure/site occupancy

<1 hour in any week (e.g. short duration work or equivalent infrequent exposure event when exposure aggregated over 1 yr)

0

Receptor ranking

4

Low

Combined hazard, exposure and receptor ranking

Low

Pathway: Distance of Receptor from Soil

In or within 10m of area of disturbance

4

Pathway: Depth to impacted material

Material buried at depth, unlikely to be disturbed except for deeper construction related excavation

B

Pathway ranking

4B

Very Low

Overall ranking

Negligible

JIWG
Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	P508411
Site Name	Land off Cherryfield Drive, Kirkby, Liverpool, L32 8RX
Client	Westshield Limited
Run by	Dave Cooper (Commercial Manager & Senior Consultant)
Date	01.10.2025
Reviewed by	Andy Viggars (Project Manager)
Characterisation of scenario being evaluated	Residential use of the site following remediation and construction works, asbestos impacted soils to be retained at depth under permanent hardstanding or cover systems (600mm in gardens / 300mm in areas of public open space/landscaping as per requirements of E3P – Remediation and Enabling Works Strategy reference 15-280-R2-5 dated November 2024, prepared for Barratt and David Wilson Homes
Interpretation of scenario ranking by DST	Hazard Ranking – Medium / Exposure Ranking – Low / Receptor Ranking – Low / Combined Hazard, Exposure and Receptor Ranking – Low / Pathway Ranking – very Low Overall Ranking – Negligible

A1.2 – Material with fragments buried at shallow depth, potentially disturbed by excavation, off site Receptors

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Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case')	Loose fibrous asbestos debris	3
Extent of degradation of ACMs	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	Occasional/random occurrences of visible contamination by ACMs	1
Asbestos fibre type	Mainly amphibole and chrysotile mixtures, including trace crocidolite	2
Sub-total		14
Hazard ranking		Medium

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Asbestos in Soil and Construction & Demolition Materials

Stage 2

Emission Factors

Score

Amount of asbestos fibre in selected ACM/fibre type as % of 1	Very Low quantities - 0.001 to 0.01 %wt/wt	1
Respirable fibre index for ACM - RIVM report 711701034 (2005)	High	4
Activity type and effect on deterioration of ACMs	High disturbance, significant deterioration expected	4
Best description of primary host material matrix	Coarse to Fine Gravel	3

Sub-total

12

Exposure ranking

Medium

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Asbestos in Soil and Construction & Demolition Materials

Stage 3

Pathway and Receptor Sensitivity

Score

Receptor category	Residential	No score required
Age of Receptor	Infant (under 5)	4
Duration of exposure/site occupancy	> 1hr <10 hr daily exposure (e.g. part-time to full time occupational exposure or extended daily recreational exposure)	3

Receptor ranking 7 High

Combined hazard, exposure and receptor ranking Medium

Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance	4
Pathway: Depth to impacted material	Material buried at shallow depth, potential to be disturbed by excavation	C

Pathway ranking 4C Low

Overall ranking Low


Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	P508411
Site Name	Land off Cherryfield Drive, Kirkby, Liverpool, L32 8RX
Client	Westshield Limited
Run by	Dave Cooper (Commercial Manager & Senior Consultant)
Date	01.10.2025
Reviewed by	Andy Viggars (Project Manager)
Characterisation of scenario being evaluated	Remediation earthworks to prepare site for residential development – potential exposure to adjacent residents of the site
Interpretation of scenario ranking by DST	Hazard Ranking – Medium / Exposure Ranking – Medium / Receptor Ranking – High / Combined Hazard, Exposure and Receptor Ranking – Medium / athway Ranking – Low Overall Ranking Low

A1.3 – Material with fragments buried at shallow depth, potentially disturbed by excavation – On site Receptor (Construction Worker)

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Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case')	Loose fibrous asbestos debris	3
Extent of degradation of ACMs	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	Occasional/random occurrences of visible contamination by ACMs	1
Asbestos fibre type	Mainly amphibole and chrysotile mixtures, including trace crocidolite	2
Sub-total		14
Hazard ranking		Medium

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It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.



Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Stage 2

Emission Factors

Score

Amount of asbestos fibre in selected ACM/fibre type as % Very Low quantities - 0.001 to 0.01 %wt/wt

1

Respirable fibre index for ACM - RIYM report 711701034 (20 High

4

Activity type and effect on deterioration of ACMs

High disturbance, significant deterioration expected

4

Best description of primary host material matrix

Coarse to Fine Gravel

3

Sub-total

12

Exposure ranking

Medium

JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Stage 3

Pathway and Receptor Sensitivity

Score

Receptor category

Construction

No score required

Age of Receptor

Young adult (>16 and <24)

2

Duration of exposure/site occupancy

> 1hr <10 hr daily exposure (e.g. part-time to full time occupational exposure or extended daily recreational exposure)

3

Receptor ranking

5

Medium

Combined hazard, exposure and receptor ranking

Medium

Pathway: Distance of Receptor from Site

In or within 10m of area of disturbance

4

Pathway: Depth to impacted material

Material buried at shallow depth, potential to be disturbed by excavation

C

Pathway ranking

4C

Low

Overall ranking

Low



Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	P508411
Site Name	Land off Cherryfield Drive, Kirkby, Liverpool, L32 8RX
Client	Westshield Limited
Run by	Dave Cooper (Commercial Manager & Senior Consultant)
Date	01.10.2025
Reviewed by	Andy Viggars (Project Manager)
Characterisation of scenario being evaluated	Remediation earthworks to prepare site for residential development - potential exposure to adjacent residents of the site
Interpretation of scenario ranking by DST	Hazard Ranking - Medium / Exposure Ranking - Medium / receptor Ranking - Medium / Combined Hazard, Exposure and Receptor Ranking - Medium / Patchway Ranking - Low Overall Ranking - Low

A. Joint Industry Working Group: JIWG Decision Support Tool – Asbestos in Soil and Construction & Demolition Materials

A2 – Work Category Rankings

A2.1 – Removal of asbestos cement fragments



Joint Industry **Working Group**

Asbestos in Soil and Construction & Demolition Materials

Project Reference	P508411
Site Name	Land off Cherryfield Drive, Kirkby, Liverpool, L32 8RX
Client	Westshield Limited
Run by	Dave Cooper (Commercial Manager and Senior Consultant)
Date	01.10.2025
Scenario details	Removal of asbestos cement fragments

Decision Support Tool for CAR2012 Work Categories

Stage 1

Hazard Factors

Select ACM type (run model for each type to generate 'Worst Case' output)
Extent of degradation of ACMs at outset of work
Friability and degree of bonding by matrix (ACM matrix, not ground materials)
Distribution of Visible Asbestos Across Affected Area
Amount of asbestos fibre in selected ACM/fibre type as % of host material

Bonded ACMs: cement, vinyl, composites, textured decorative coatings, bitumen products	1
Degraded (Significant degradation in ACM; material has lost its basic integrity)	3
Non-friable ACM or ACM with fibres firmly linked in a matrix	0
Occasional/random occurrences of visible contamination by ACMs	1
Large quantities - >0.1 %wt/wt	4

Score

Sub-total

9

Note: the asbestos licensing regime is unaffected by the type of asbestos fibre present in ACMs

Hazard ranking

Low

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It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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Asbestos in Soil and Construction & Demolition Materials

Stage 2

Exposure Factors

Anticipated airborne fibre concentration - Control Limit or SALI?
 Anticipated duration of exposure to asbestos
 Activity type and effect on deterioration of ACMs during work
 Best description of primary host material matrix (soil/made ground)
 Respirable fibre index for ACM - RIVM report 711701034 (2003)

<0.1 fibres/ml (4 Hr TWA) or <0.6 fibres/ml (10 minute STEL)	2
> 2 hours in a 7 day period and Up to 10 hours in a day (e.g. full time occupational exposure)	4
Sampling, manual or mechanical (no or minimal deterioration expected)	0
Coarse to Fine Gravel	3
Very low	1

Sub-total

Score

10

Exposure ranking

Low

Combined hazard and exposure ranking

19

Low

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Asbestos in Soil and Construction & Demolition Materials

Stage 3

Risk Assessment Outputs

Probable Licensing Status

RPE*

Dust Suppression**

Hygiene/Decontamination***

Non-Licensed Work

EN149 type FFP3 disposable

Manual/localised dust suppression

Localised and basic personal decontamination facilities

*Where RPE has to be worn continuously for long periods (e.g. more than 1-hour), then powered RPE may be necessary.

**Reduction in control measures possible if natural mitigation factors are present (e.g. raining, wet ground)

***Guide only; suitability of selected personal hygiene measures may be reviewed on a site/contamination-specific basis

A2.2 – Asbestos hotspot remediation work

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Asbestos in Soil and Construction & Demolition Materials

Project Reference	P508411
Site Name	Land off Cherryfield Drive, Kirkby, Liverpool, L32 8RX
Client	Westshield Limited
Run by	Dave Cooper (Commercial Manager and Senior Consultant)
Date	01.10.2025
Scenario details	Asbestos hotspot remediation work

Decision Support Tool for CAR2012 Work Categories

Stage 1

Hazard Factors

	Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Loose fibrous asbestos debris
Extent of degradation of ACMs at outset of work	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)
Distribution of Visible Asbestos Across Affected Area	Occasional/random occurrences of visible contamination by ACMs
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Very Low quantities - <0.001 to 0.01 %wt/wt
Sub-total	13

Note: the asbestos licensing regime is unaffected by the type of asbestos fibre present in ACMs

Hazard ranking

Medium

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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Asbestos in Soil and Construction & Demolition Materials

Stage 2

Exposure Factors

	Score
Anticipated airborne fibre concentration - Control Limit or SALI?	<0.1 fibres/ml (4 Hr TWA) or <0.6 fibres/ml (10 minute STEL) 2
Anticipated duration of exposure to asbestos	> 2 hours in a 7 day period and Up to 10 hours in a day (e.g. full time occupational expos 4
Activity type and effect on deterioration of ACMs during work	Sampling, manual or mechanical (significant deterioration expected) 2
Best description of primary host material matrix (soil/made ground)	Coarse to Fine Gravel 3
Respirable fibre index for ACM - RIVM report 711701034 (2003)	High 4
Sub-total	15
Exposure ranking	Medium
Combined hazard and exposure ranking	28 Medium

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Asbestos in Soil and Construction & Demolition Materials

Stage 3

Risk Assessment Outputs

Probable Licensing Status	Non-Licensed Work
RPE*	EN140 with P3 filter half mask
Dust Suppression**	Localised mechanical dust suppression
Hygiene/Decontamination***	Localised and enhanced personal decontamination facilities

*Where RPE has to be worn continuously for long periods (e.g. more than 1-hour), then powered RPE may be necessary.

**Reduction in control measures possible if natural mitigation factors are present (e.g. raining, wet ground)

***Guide only; suitability of selected personal hygiene measures may be reviewed on a site/contamination-specific basis

A2.3 – General remediation earthworks to prepare site for residential development

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Asbestos in Soil and Construction & Demolition Materials

Project Reference	P508411
Site Name	Land off Cherryfield Drive, Kirkby, Liverpool, L32 8RX
Client	Westshield Limited
Run by	Dave Cooper (Commercial Manager and Senior Consultant)
Date	01.10.2025
Scenario details	General remediation earthworks to prepare site for residential development

Decision Support Tool for CAR2012 Work Categories

Stage 1

Hazard Factors

Select ACM type (run model for each type to generate 'Worst Case' output)
 Extent of degradation of ACMs at outset of work
 Friability and degree of bonding by matrix (ACM matrix, not ground materials)
 Distribution of Visible Asbestos Across Affected Area
 Amount of asbestos fibre in selected ACM/fibre type as % of host material

Free dispersed fibres/fibre bundles	2
Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
No visible ACMs/fibre bundles	0
Trace quantities - <0.0001 to 0.001 %wt/wt	0

Sub-total

Score

0

Note: the asbestos licensing regime is unaffected by the type of asbestos fibre present in ACMs

Hazard ranking

Negligible

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.

It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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Asbestos in Soil and Construction & Demolition

Stage 2

Exposure Factors

Anticipated airborne fibre concentration - Control Limit or SALI?
 Anticipated duration of exposure to asbestos
 Activity type and effect on deterioration of ACMs during work
 Best description of primary host material matrix (soil/made ground)
 Respirable fibre index for ACM - RIVM report 711701034 (2003)

<0.1 fibres/ml (4 Hr TWA) or <0.6 fibres/ml (10 minute STEL)	2
> 2 hours in a 7 day period and Up to 10 hours in a day (e.g. full time occupational exposure)	4
Sampling, manual or mechanical (no or minimal deterioration expected)	0
Coarse to Fine Gravel	3
High	4

Sub-total

Score

13

Exposure ranking

Medium

Combined hazard and exposure ranking

13

Low

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Asbestos in Soil and Construction & Demolition Materials

Stage 3

Risk Assessment Outputs

Probable Licensing Status

RPE*

Dust Suppression**

Hygiene/Decontamination***

CAR do not apply

EN149 type FFP3 disposable

Manual/localised dust suppression

Localised and basic personal decontamination facilities

*Where RPE has to be worn continuously for long periods (e.g. more than 1-hour), then powered RPE may be necessary.

**Reduction in control measures possible if natural mitigation factors are present (e.g. raining, wet ground)

***Guide only; suitability of selected personal hygiene measures may be reviewed on a site/contamination-specific basis

B – Location of asbestos-containing materials and asbestos hotspots, extract from Page 85 of the remediation strategy prepared by E3P reference: E3P - Remediation and Enabling Works Strategy reference 15-280-R2-5 dated November 2024, prepared for Barratt and David Wilson Homes

