



Asbestos Management Plan and Risk Assessment For Asbestos Impacted Soils At Hopewood Hall College

Job Number
LKR241014

Report Date
21st July 2025

Client
Willmott Dixon Construction Ltd



www.thelkgroup.com

Ground Investigation | Land Remediation | Project Management



LK REMEDIATE

DOCUMENT QUALITY ASSURANCE

Site Address	Hopwood Hall College
Report Title	Asbestos Management Plan and Risk Assessment
Job Number	LKR241014
Client	Willmott Dixon Construction Limited

Revision	0	Date of Issue	21/07/2025
Document Ref:	LKR241014-AMP-The Seam		
Status	Draft		
Written By	W. Fitzpatrick		
Approved By	D. Anderson		

Revision		Date of Issue	
Document Ref:			
Status			
Written By			
Approved By			

Revision		Date of Issue	
Document Ref:			
Status			
Written By			
Approved By			

DISCLAIMER

This report has been prepared with professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant, experienced in preparing reports of a similar scope.

However, to the extent that the report is based or relies upon information contained in records, reports or other materials provided, which have not been independently produced or verified, LKR gives no warranty, representation, or assurance as to the accuracy or completeness of such information.

This report is prepared solely for the benefit of the client named above. It may not be relied upon by or submitted to a third party for their reliance for the purposes of valuation, mortgage, insurance, and regulatory approval until all invoices have been settled in full.

Those using this information in subsequent assessments or evaluations do so at their own risk.

TABLE OF CONTENTS

1.	Asbestos Management Plan	3
1.1.	Scope.....	3
1.2.	Previous Reports	3
2.	Risk Assessment of Asbestos-Impacted Soils	6
2.1.	Previous Assessment.....	6
2.2.	Qualitative Assessment.....	6
2.3.	Control Limits	6
2.4.	Quantitative Assessment of Impacted Material- Work Category Assessment	7
2.5.	Quantitative Assessment of Impacted Material – Receptor Risk Assessment.....	7
2.6.	Summary of Risk Assessments	8
3.	Remediation Method Statement	8
3.1.	Proposed Remediation.....	8
3.2.	Asbestos in Soils Roles	9
3.3.	Asbestos Surveyors and Analyst Requirements	9
3.4.	Training & Communication	9
3.5.	Remediation of Impacted Materials	10
3.6.	Asbestos in Soils Action Required	10
3.7.	Emergency Plan.....	10
3.8.	Control Measures.....	11
3.9.	Personal Protective Equipment (PPE), Hygiene and Decontamination.....	12
3.10.	Moving Asbestos Impacted Soils.....	14
3.11.	Waste from Non-Licensed Asbestos Removal Work.....	14
3.12.	Licensed Asbestos Removal Contractors (LARCS)	14
3.13.	Waste from Licensed Asbestos Removal Work	15
3.14.	Inspection.....	15
3.15.	Review.....	15

Appendices

- Appendix A – Asbestos in Soils Risk Register
- Appendix B – Plan showing Location of Asbestos-Impacted Soils
- Appendix C – Typical Methodology for Reassurance Air Monitoring
- Appendix D – The Netherlands Organisation of Applied Scientific Research
- Appendix E – JWG Decision Support Tool
- Appendix F – Example of Risk Assessment & Method Statement
- Appendix G – Example Permit to Work
- Appendix H – Declaration of Understanding
- Appendix I – HSE Information Sheet EM8

1. Asbestos Management Plan

1.1. Scope

1.1.1 Site-specific measures are set out to mitigate risks arising from working with asbestos-impacted soils. They should be implemented to reduce the risk of exposure to airborne asbestos fibres.

1.1.2 This plan has been produced following current UK guidance including:

- Control of Asbestos Regulations (CAR), 2012.
- Asbestos in soil and made ground: a guide to understanding and managing risks, CIRIA C733, 2014.
- CL: AIRE, Control of Asbestos Regulations 2012 - Interpretation for Managing and Working with Asbestos in Soil and Construction and Demolition Materials: Industry guidance, CAR-SOIL™, 2016.
- Hazardous Waste Regulations 2016.
- Asbestos in soil and made ground good practice site guide, CIRIA C765, 2017.

1.1.3 The management plan will be implemented to reduce the risk of exposure to airborne asbestos fibres when working with asbestos-impacted soils.

1.2. Previous Reports

1.2.1 Previous investigations have been undertaken on the site. The following reports should be read in conjunction with this Asbestos Management Plan:

- Ground Investigation Report prepared by Geotechnics, ref PM214280 dated November 2021.
- Ground Investigation Report, Hopwood Hall College, Rochdale, ref TE1880-TE-00-XX-RP-GE-002-V01 dated February 2025.
- Supplementary Soils and Waste Classification Report for Hopwood Hall College, Rochdale, ref TE1880-TE-00-XX-RP-GE-006-V01 dated May 2025

1.2.2 Asbestos was detected in six of the eleven soil samples analysed in the Geotechnics Ground Investigation Report. The following asbestos was identified:

Borehole Location	Depth below the surface (m)	Fibre Type	Quantification Value (%)
CP02	2.4	Chrysotile fibres	0.003
CP04	1.0	Chrysotile fibres	0.002
CP04	2.4	Chrysotile fibres	<0.001
WS03	1.0	Chrysotile present in the microscope, loose fibrous asbestos debris	0.001
WS04	0.5	Chrysotile fibres	0.002
WS04	1.0	Chrysotile fibres	<0.001

Table 1 Summary of asbestos concentrations found in the Geotechnics site investigation

1.2.3 Asbestos was detected ten of the eighteen samples analysed in the Tier Ground Investigation Report (February 2025). The following asbestos was identified:

Borehole Location	Depth below the surface (m)	Fibre Type	Quantification Value (%)
WS103A	0.4	Chrysotile and amosite bundles	<0.001
WS105	0.6	Chrysotile fibre bundles and bitumen products	0.019
WS106	1.0	Chrysotile and amosite fibre bundles	0.03
WS108	0.7	Chrysotile and amosite fibre bundles and AMC debris	0.017
WS113B	0.35	Chrysotile and amosite fibre bundles	<0.001
WS114	0.5	Chrysotile and amosite fibre bundles and AMC debris	0.021
WS115B	0.9	Chrysotile and amosite bundles	0.002
WS116	1.9	Chrysotile fibre bundle	<0.001
WS117	2.2	Amosite fibre bundles	<0.001
WS117	2.4	Chrysotile and amosite fibre bundles	<0.001

Table 2 Summary of asbestos concentrations found in the Tier site investigation

1.2.4 Asbestos was detected in a further 12 samples in the Teir Supplementary Soils Waste Classification Report for Hopwood Hall College, Rochdale (May 2025). The following asbestos was identified:

Borehole Location	Depth below the surface (m)	Fibre Type	Quantification Value (%)
WC204	0.45	Chrysotile and amosite fibre bundles	<0.001
WC206	0.6	Chrysotile free fibres	<0.001
WC207	0.4	Chrysotile and amosite fibre bundles	0.001
WC208	0.4	Chrysotile fibre bundles, amosite free fibres	<0.001
WC209	0.4	Chrysotile fibres and bitumen products (ACM)	0.075
WC212	0.48	Chrysotile fibre bundle	<0.001
WC213	0.35	Chrysotile and amosite fibre bundles	0.004
WC214	0.5	Chrysotile fibre bundles	<0.001
WC216	0.55	Chrysotile fibre bundles	<0.001
WC220	0.55	Chrysotile fibre bundles	<0.001
WC222	0.45	Amosite fibre bundles	<0.001
WC227	0.6	Chrysotile fibre bundles and bitumen products (ACM), amosite fibre bundle	0.023

1.2.5 In addition to the asbestos detected in the soil matrix in the Tier Supplementary Soils Waste Classification Report (as displayed in table 3) identified a damp proof membrane type material (described as black plastic/rubber material) underneath the concrete slab. The membrane was noted to be in generally good condition and was removed intact from the core hole and

generally removable from the base of the concrete. Asbestos quantification testing determined that the material to contain asbestos bitumen.

- 1.2.6 In May 2025 LKR undertook three trial pits to gain a better understanding of the damp proof membrane material. Three trial pits were excavated; the concrete broken out and the membrane was removed by a suitably trained operative. Whilst the works were being undertaken air monitoring for respirable fibres was undertaken in accordance with Control of Asbestos Regulations 2012 and HSG248 Asbestos: The Analysts' Guide for Sampling. Fibre counting was undertaken by Air Tech a UKAS accredited testing laboratory. Results of the reassurance air monitoring showed fibre concentrations <0.01f/ml in all samples indicating that the works have been carried out without presenting any unacceptable risks to human health receptors arising from potential fugitive asbestos fibre release during the works.
- 1.2.7 The asbestos in soils risk register is included in Appendix A. A plan showing the location of the asbestos impacted soils is included in Appendix B.
- 1.2.8 Where possible site-generated materials should be reused on site to promote sustainability, but mitigation measures should be implemented to protect the environment and end-users. On this site, potentially contaminated soils will remain beneath appropriate clean cover or hardstanding where they will be adequately isolated from future end-users.
- 1.2.9 Site personnel may come into contact with asbestos-impacted soils during the proposed remediation works with procedures described in the Risk Assessment and Method Statement. A permit to work should be completed before any work is carried out in areas where more than 0.001% w/w fibres have been detected. Completed forms should be retained and included in the Health and Safety File.

2. Risk Assessment of Asbestos-Impacted Soils

2.1. Previous Assessment

2.1.1 Previous assessment of asbestos-impacted soils at the site, as presented in the Geotechnics and Tier site investigations can be summarised:

- The depths at which positive asbestos results were recorded is shallow so it is considered likely that asbestos fibres and asbestos contaminated material will be disturbed during the proposed works. Quantifications indicate that some of the materials won't be suitable for re-use without prior treatment.
- A damp proof membrane type material (described as black plastic/rubber material) underlying the concrete slab was identified as containing asbestos fibres and/or asbestos contaminated materials and will be disturbed during the proposed works. Quantification testing indicated that the material contained asbestos bitumen and that some of the materials won't be suitable for re-use without prior treatment.
- Future end use of the site consists of the construction of a 4 No. storey college buildings. which will break the pollutant linkage to human health by direct contact, ingestion and inhalation.
- In areas of formal soft landscaping where made ground is present formation level remedial measures will be required to break the pollutant linkage.
- Future end users are considered to be at a moderate risk and further assessment may be required.
- Due to the identification of loose asbestos fibres an asbestos management plan should be put in place during construction works.
- Appropriate PPE and sanitary facilities are required during all groundworks and construction works.

2.2. Qualitative Assessment

2.2.1 The primary risk pathway of asbestos in soil is inhaling fibres if released into the air. Fibre dispersal depends on several factors including, asbestos type, condition, soil type and soil moisture content. The risk to human health also depends on receptor age and exposure levels.

2.2.2 Receptors most exposed to fibres would be site operatives and visitors during the remediation phase of works. General members of the public may also be affected. However, the exposure period is short-duration and sporadic (associated with using local amenities and passing the site). An infant under 5 years of age would be considered the most sensitive off-site receptor. However, given the distance between impacted areas on-site and the site boundary and impacted soils will not be disturbed without appropriate control measures, the risk to this receptor is considered very low.

2.3. Control Limits

2.3.1 CIRIA guidance document "Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks (Ref: C733, dated 2014), notes there are currently no UK Soil Guideline Values (SGVs) for safe concentrations of asbestos fibres in soils. The Hazardous Waste Regulations indicate that any waste or soil material is classified as 'Special Waste' if greater than 0.1 % w/w of asbestos is present. However, this value has not been set with any recourse to human health.

2.3.2 The Control of Asbestos Regulations 2012 control limit for the concentration of asbestos fibres in any localised atmosphere, measured and averaged over a continuous period of four hours is

0.1f/ml. The control limit is not a 'safe' level and work activities involving asbestos should be designed to be as far below the control limit as possible.

- 2.3.3 The UK clearance indicator (UKCI) concentration of 0.01f/ml is used to assess whether it is safe to take down an enclosure after notifiable asbestos removal has been completed. This will be adopted as the threshold value for reassurance air monitoring (see Appendix C). Where the threshold is exceeded, further risk assessment, mitigation and monitoring will be required before work in that area proceeds.
- 2.3.4 Work involving some lower-risk asbestos-containing materials, i.e., litter-picking asbestos cement products, can be carried out if a risk assessment demonstrates that the control limit will not be exceeded. Furthermore, any asbestos exposure must be 'sporadic and of low intensity'. The control limit for this type of non-licensed work is 0.6f/ml, measured over ten minutes. Any work likely to result in exposures at or above this should only be carried out by a licensed contractor.

2.4. Quantitative Assessment of Impacted Material- Work Category Assessment

2.4.1 Version 2.1 (March 2017), of the Joint Industry Working Group (JIWG)/CL:AIRE Decision Support Tool (for the Categorisation of Work Activities Involving Asbestos in Soil and Construction & Demolition Materials), has been used to further assess the risk posed by asbestos impacted materials and the planned work at the site. Classification of the probable licensing status along with risk mitigation measures including recommendations for the type of RPE, dust suppression and hygiene/decontamination are generated for each source of potential asbestos contamination.

2.4.2 The JIWG model inputs were based on the site conditions and available data. In instances where no data was available, reasonable worst-case conditions were adopted. No or minimal deterioration is expected for asbestos cement sheeting. Loose fibres were identified in made ground, this material will eventually be subjected to disturbance, but the condition of the loose fibres is not expected to deteriorate. The risk assessment outputs are included in Appendix E.

2.5. Quantitative Assessment of Impacted Material – Receptor Risk Assessment

2.5.1 Version 2 of the Decision Support Tool for the Qualitative Risk Ranking of Work Activities and Receptors Involved in or Exposed to Asbestos in Soil or Construction & Demolition Materials (February 2017), was used to supplement the qualitative assessment. The hazard and risk ranking approaches are based on scoring systems presented in HSG227 and the R&D66 qualitative risk assessment methods. The tool identifies key hazards and risk factors relevant to management of risk from exposure to asbestos-contaminated soils, made ground or construction & demolition materials. The table below suggests actions to be taken based on risk to receptors using this method of assessment.

Risk Descriptor	Required Primary Action	Secondary Action
Very Low Risk	No mitigating measures required	None
Low Risk	Qualitative risk assessment and possible mitigation measures	None
Medium Risk	Qualitative risk assessment and mandatory mitigation measures	Real-time work area reassurance air monitoring
High Risk	Quantitative risk assessment and mandatory mitigation measures	Real-time work area and personal reassurance air monitoring

Table 3 Responses to Risk

2.5.2 The JIWG model parameters and outputs are included in Appendix E.

2.6. Summary of Risk Assessments

- 2.6.1 There would be an unacceptable level of risk presented by asbestos-impacted soils being left at the surface of the site (at reduced remediated levels, or within soils to be placed in soft landscaping). As such remediation of impacted materials will be carried out under controlled conditions and impacted soils will be placed at depth beneath hardstanding, roadways or clean cover soils. The risk of fibre release upon completion of the proposed development will be negligible. Validation of the remediation works will ensure there are no significant risks to future end-users.
- 2.6.2 During remediation work, uncontrolled excavations would present a risk to workers and off-site receptors through the inhalation of fibres. However, measures will be implemented during the remediation works to mitigate the release of asbestos fibres. With dust suppression being implemented during the remediation work there would be a low risk to site operatives working outside of impacted areas, visitors and offsite receptors.
- 2.6.3 A moderate risk remains where asbestos-impacted soils are retained on site that may be disturbed by construction workers. Construction operatives may be less likely to identify or appropriately manage the risks posed by asbestos fibre release compared to specialist remediation contractors. Construction contractors will need to ensure appropriate mitigation measures are utilised if they need to disturb potentially impacted soils.

3. Remediation Method Statement

3.1. Proposed Remediation

- 3.1.1 Asbestos-impacted soil has been recorded as presented in the risk register in Appendix A.
- 3.1.2 Using the data from both the previous Site investigations LKR, proposed the following works are undertaken:
- Removal of visible fragments of ACMs (if any are found during the works) under appropriate control measures.
 - Reuse suitable site-won materials and soils (including asbestos-impacted soils) as engineered fill beneath the proposed building footprints, roads and clean cover system.
 - Removal of any previously unidentified pockets of buried ACMs to be undertaken by a specialist asbestos removal contractor under appropriate control measures.
- 3.1.3 Arrangements to manage or remove asbestos must be explained to site workers during site inductions and regular 'Toolbox Talks'. The Site Manager will ensure site inductions contain relevant information and are updated to reflect changes in project arrangements and asbestos risks.
- 3.1.4 Example method statements and risk assessment are included in Appendix F. Examples of Permits to Work are included in Appendix G.

3.2. Asbestos in Soils Roles

Role	Company
Site Manager	LK Remediate
Asbestos in Soils Consultant	LK Remediate
Asbestos Surveyor	TBC
Asbestos Analyst	TBC
Licensed Asbestos Removal Contractor	TBC

Table 4 Remedial Works Roles

3.3. Asbestos Surveyors and Analyst Requirements

3.3.1 The Site Manager will check providers of surveys and analytical services have evidence of:

- Surveying personnel must hold the BOHS P402 qualification and have at least 6 months of practical experience in asbestos surveying.
- Laboratory staff analysing samples for asbestos content must hold BOHS P401 qualification or the Certificate of Competence, and the Laboratory are UKAS registered.
- Analysts undertaking air monitoring, fibre counting & four-stage clearance testing must hold the BOHS P403 and P404 qualifications & have had 3 months of demonstrated practical experience in this field.
- Adequate public liability insurance cover.
- Adequate professional indemnity insurance cover.
- Adequate training arrangements for its workforce.
- Health & Safety Policy.
- Methods of work and risk assessments.

3.4. Training & Communication

3.4.1 All operatives will be given a full site induction highlighting the risks associated with asbestos in soils. All LK Remediate operatives working in areas where asbestos-impacted soils have been identified will be trained in the identification of ACM and the risk associated with impacted soils (asbestos awareness training).

3.4.2 Operatives that are required to wear nonstandard PPE/RPE will be trained on how to wear it correctly and how to identify and replace worn or defective parts.

3.4.3 The relevant site-specific details of ACMs and asbestos-impacted soils, including the arrangements made to manage or remove asbestos shall be explained to site workers during site inductions and 'Toolbox Talks'.

3.4.4 The Site Manager will make sure site inductions contain relevant information and are updated to reflect changes in project arrangements and asbestos risks.

3.4.5 For people working on sites where asbestos in soils is an issue, evidence of training is required as below:

Role	Training	Requirements	Role
Where the Site Manager deems it necessary (in line with risk) training should be provided to anyone who may come into contact with ACMs or asbestos-impacted soils	Asbestos awareness – Cat A	Initial session in a classroom then annual refresher	Where the Site Manager deems it necessary (in line with risk) training should be provided to anyone who may come into contact with ACMs or asbestos-impacted soils
Workers who are required to remove or otherwise disturb asbestos-containing materials as a part of their duties	Non-licensed works – Cat B	Initial qualification followed by yearly refresher to maintain qualification	Workers who are required to remove or otherwise disturb asbestos-containing materials as a part of their duties

Table 5 Training Requirements

3.5. Remediation of Impacted Materials

- 3.5.1 The Remediation Strategy will be prepared to reduce off-site disposal, by recovering bricks and concrete etc. In dry conditions, made ground materials will be regularly damped. For prolonged activities, control measures to keep the soils saturated and mitigate the release of fibres will be implemented.
- 3.5.2 As far as reasonably practicable, visible fragments of ACMs will be removed accordingly. Upon receipt of confirmatory chemical analysis, recycled aggregates will be reused as construction materials on site.
- 3.5.3 All excavations and work with potentially impacted materials will be supervised by an experienced brownfield remediation site manager, supervisor and/or geo-environmental engineer. On discovery of unexpected potential ACMs, works will stop and the area will be made safe. Further assessment of the material will be carried out. The Site Manager will assess the planned work and undertake additional risk assessments if required. An updated or alternative remediation strategy may be required pending the outcome of the risk assessment.
- 3.5.4 During remedial work, further laboratory asbestos identification and quantification testing, in line with “Asbestos in soils and made ground: a guide to understanding and managing risks” (CIRIA C733), will be carried out on made ground to determine its suitability for re-use at the site compliant with site-specific assessment criteria for fill beneath hardstanding or any proposed clean cover system.

3.6. Asbestos in Soils Action Required

Location	Initial Risk Category	Actions Required	New Risk Category
All locations in the Asbestos in Soils Register	Medium Risk	Damping down of soils, removal of visible fragments of ACM, woven gaskets and thermoplastic floor tiles under appropriate control measures. Re-use of residual soils as engineering to raise levels as required.	Low Risk

3.7. Emergency Plan

- 3.7.1 Site-specific arrangements for emergencies and the arrangements for decontamination:
- On discovery of potential ACMs works will stop, the area will be made safe and further assessment of the material will be carried out by a suitably qualified asbestos surveyor.

- In case of an emergency, stop all work immediately inform all others to vacate the area and report to the Site Manager. The Site Manager will arrange sampling and analysis of the suspect material by the Asbestos Consultant or Surveyor.
 - Dust control measures should be in place for dealing with known asbestos-impacted soils. Providing appropriately trained personnel are available with the correct types of PPE, control measures should be implemented to minimise the risk of the release of fibres.
- 3.7.2 If the planned work poses a risk of damage to or disturbance of ACMs or the release of loose fibres from the soils, the Site Manager shall arrange for the removal of the ACM (or asbestos-impacted soils) or for an alternative remediation option to be implemented.

3.8. Control Measures

- 3.8.1 The potential for cement-bonded ACMs to degrade and release concentrated fibres from the made ground soil matrix is considered low. AGS interim guidance, based on work by Addison et al, notes that the addition of 10% water to soil decreases the risk of potential fibre release by a factor of between 2% and 10%.
- 3.8.2 The risk of fibre release is low where soils are saturated by perched ground water, rain or other control measures, before any disturbance. In dry conditions, soils will be regularly damped down using water to control the generation of dust. For prolonged activities, control measures to keep the soils saturated and mitigate the release of fibres may comprise low-pressure hosing or misting systems. CIRIA C733 suggests the risk of release of fibres is low where soil moisture content is above 15%. It also suggests the release of fibres decreases exponentially with increased soil moisture content to almost 0% fibre release at 25% soil moisture content.
- 3.8.3 In addition to damp ground conditions and rain, control measures to keep the soils saturated and mitigate the release of fibres may comprise:
- Haul roads, work areas and stockpiles will be damped down with water spray, low-pressure hoses, towed dust suppression or misting systems.
 - The application of water to haul roads, work areas and stockpiles will be monitored by the site manager to ensure that soils are not over-saturated and to prevent run-off.
 - Stockpiles will be sealed by compacting at the surface at regular intervals and the end of the day.
 - Where necessary, stockpiles can be sheeted.
 - A site speed limit of 5mph will be imposed in dry weather to minimise dust creation.
 - Excavations will be managed to minimise the area of contaminated soils exposed at any one time.
 - Damping down of general excavations, breaking out and crushing activities.
 - Where off-site disposal of asbestos-impacted soils is required, only sheeted road wagons will be used to transport soils. If necessary, soils will be damped down during loading.
- 3.8.4 Dust monitoring will be carried out at a minimum of four points around any exclusion zone and the site boundary three times per day. For each round of monitoring the engineer/site manager will keep a record of the activities being undertaken on site and meteorological conditions in the Daily Site Records. A record of wind speed (Calm, Moderate or Strong) wind direction and precipitation will be made. If dust is noticed, the engineer/site manager will immediately stop the process causing dust and implement further control measures before work commences.
- 3.8.5 For low-risk non-licenced activities, excavators used to excavate asbestos-impacted soils must have an enclosed cabin for the operator. The operator must remain in the cab while working

in impacted areas with the reverse cycle air conditioning running and all windows and doors closed. Decontamination of the machine must be carried out at the end of the work as detailed in HSE EM7.

- 3.8.6 Appropriate PPE and RPE should be utilised where risk assessments identify higher risks or for notifiable work, full PPE and RPE must be used by the operator as well as operatives working in the area. This will be determined by the outcome of Joint Industry Working Group (JIWG)/CL:AIRE Decision Support Tool outputs for each site and scenario, included in Appendix E.
- 3.8.7 Reassurance air testing carried out by LKR on recent projects where remediation of similar or higher risk materials were encountered has demonstrated that damping down of soils is an extremely effective control measure. Further inspection of any unexpected potentially impacted soils will be carried out by a suitably qualified (P402) Asbestos Surveyor before any movement of those materials will be allowed.
- 3.8.8 Should background levels be recorded before the start of remediation of impacted soils, or if required upon further inspection by the P402 Asbestos Surveyor, reassurance air testing following HSG 248 will be carried out. A typical methodology that will be used for selecting the frequency and duration of reassurance air testing is presented in Appendix C.
- 3.8.9 If deemed necessary, reassurance air monitoring will be carried out on-site to establish background concentrations of asbestos fibres in the air. Additional real-time air monitoring will be carried out during any significant disturbance of impacted materials. Air monitoring is not considered necessary for a short duration (<1 hour for any one person in a week), low-intensity work such as sampling where no or minimal disturbance and/or deterioration is expected.
- 3.8.10 Background air monitoring of airborne respirable fibres must not exceed the UK clearance indicator concentration of 0.01 f/ml. If the air clearance threshold is exceeded, the analyst will notify the site manager immediately who will stop all excavations and disturbances in the impacted area. Fibre release will be minimised once disturbance has ceased. However, dust suppression and air monitoring will be maintained, and the Asbestos Consultant and/or Surveyor will carry out a situation-specific risk assessment. The risk assessment will determine the work category and RPE/PPE requirements. Additional control measures may be required at this point (such as additional dust suppression, additional suppression additives or enclosures).
- 3.8.11 Given the prevalence of damp ground conditions and the fact that potentially impacted soil will not be disturbed unless it is saturated, it is proposed that full-time air monitoring will not be necessary.
- 3.8.12 If notifiable licenced asbestos removal works are required, a specialist contractor will be utilised to manage and complete these works.

3.9. Personal Protective Equipment (PPE), Hygiene and Decontamination

- 3.9.1 In addition to standard PPE, where the Work Category Risk Assessment requires it, operatives working directly in areas where asbestos-impacted soils are to be disturbed (0m to 10m) will be equipped with the following PPE:
 - Disposable oversize overalls (Type 5 BS EN ISO 13982-1), to prevent ripping at the seams.
 - Tape to seal loose cuffs.
 - Avoid wearing a long-sleeved shirt - these are difficult to cover properly.
 - Wear the overall legs over footwear – tucking them in lets dust into footwear.

- Wear the hood over the RPE straps.
 - Disposable work gloves.
 - Respiratory Protective Equipment (RPE) with an Assigned Protection Factor of 20 or more.
 - One of these suitable types of RPE:
 - Disposable respirator to standard EN149 (type FFP3) or EN1827 (type FMP3).
 - Half mask respirator to standard EN140 with P3 filter (if specified by the Decision Tool).
- 3.9.2 Operatives that are required to wear RPE will be trained on the limitations of the RPE, how to wear it correctly and how to identify and replace worn or defective parts.
- 3.9.3 Failure to correctly use PPE/RPE will result in immediate cessation of work. Work will not be permitted to start until the individual has undergone further training in the use of PPE.
- 3.9.4 Where the Work Category Risk Assessment requires it, localised and basic personal decontamination facilities will be provided for plant and operatives working in areas of asbestos-impacted soils (0m to 10m). At the end of each shift, the excavator and its attachments will be washed down before leaving the impacted area. Any rags used to clean the equipment will be placed into double-sealed asbestos waste bags before being placed in the lockable sealed skip for disposal to a suitably licensed landfill facility. Worn PPE/RPE will be double bagged (red asbestos waste bags), sealed and placed in a lockable sealed skip for disposal to a suitably licensed landfill facility. Washing facilities for site operatives will be provided. The suitability of selected personal hygiene measures may be reviewed on a contamination-specific basis. Decontamination will be carried out following the HSE information sheet EM8, included in Appendix I.
- 3.9.5 With consideration to the type, condition and concentration of asbestos identified in soils at the site and of the receptor risk assessments, the above PPE will not be required for all site personnel during the entire management of these soils.

3.10. Moving Asbestos Impacted Soils

3.10.1 There will be occasions where the supervised movement of potentially asbestos-impacted material and localised stockpiling will be required. Before and during the movement of asbestos-impacted site soils, damping down will be undertaken. Stockpiles will always be kept damp to mitigate the release of potential fibres.

3.11. Waste from Non-Licensed Asbestos Removal Work

3.11.1 Waste arising from non-licensed asbestos removal works shall be packaged following HSE's Asbestos Essentials Task Manual (HSG210), Equipment & Method Sheet EM9. All asbestos waste must be double-wrapped or double-bagged in plastic, with the correct hazard warning label/sign.

3.11.2 If asbestos waste is to be transported within a vehicle for onward disposal, it must be carried within a segregated compartment that is easily cleanable and lockable. All asbestos waste must be accompanied by a completed Hazardous Waste Consignment Note before being transported.

3.11.3 Where asbestos waste is stored at a depot before disposal, the waste shall be stored within a covered lockable container that is in a secure area, labelled as asbestos waste.

3.12. Licensed Asbestos Removal Contractors (LARCS)

3.12.1 Licensed Asbestos Removal Contractor will be appointed to deal with any high-risk, notifiable asbestos materials.

3.12.2 The removal of licensed materials as designated by the Health and Safety Executive (HSE) will be carried out by an HSE-licensed removal contractor. All licensed contractors will be required to show evidence of:

- A valid HSE-issued license to carry out such works.
- All relevant insurance for this type of work.
- Proof of training and health monitoring of all operatives employed by the removal contractor during the removal project on this organisation's site/sites.
- Membership to a recognised trade organisation.

3.12.3 A LARC will deal with notifiable ACMs including Asbestos Insulation Board (AIB), asbestos pipe lagging, asbestos sprayed laggings or coatings etc. Before starting work LARCS must provide evidence of:

- A current HSE licence to undertake asbestos removal work.
- Adequate public liability insurance cover.
- Adequate training arrangements for its workforce.
- Health & Safety policy.

3.13. Waste from Licensed Asbestos Removal Work

- 3.13.1 Where necessary, the LARC's Plan of Work will include the agreed waste disposal arrangements.
- 3.13.2 Where possible asbestos impacted soils (including those with an asbestos content greater than 0.1%) maybe retained on site. In certain instances, asbestos impacted soils that are geotechnical unsuitable would require disposal to a suitable licensed facility under the Hazardous Waste Regulations 2016.
- 3.13.3 All disposed waste will be recorded by volume and content. Transfer notes must be retained in the site records.

3.14. Inspection

- 3.14.1 To ensure non-licensed and licenced asbestos work is being carried out following the approved plan, the Site Manager will inspect the works daily. The content of this plan and the implementation of the plan's arrangements will be updated when necessary.

3.15. Review

- 3.15.1 The AMP will be updated upon the discovery of ACMs outside the scope of the original asbestos surveys.
- 3.15.2 Reviews will be undertaken where there is a change in personnel or a change to the works being undertaken. A record of each review must be made and retained on-site. Following the review, records must be updated.

Appendix A – Asbestos in Soils Risk Register

Sample Location	Previous Site Investigation					
	Sample Date	Depth (m)	ID	ACM Type	Total Asbestos (%wt/wt)	Report
CP02	23/08/21	2.4	Chrysotile	Fibres	0.003	Geotechnics
CP04	23/08/21	1.0	Chrysotile	Fibres	0.002	Geotechnics
CP04	23/08/21	2.4	Chrysotile	Fibres	<0.001	Geotechnics
WS03	23/08/21	1.0	Chrysotile	Fibres/Debris	0.001	Geotechnics
WS04	23/08/21	0.5	Chrysotile	Fibres	0.002	Geotechnics
WS04	23/08/21	1.0	Chrysotile	Fibres	<0.001	Geotechnics
WS103A	19/11/24	0.4	Chrysotile /Amosite	Fibres	<0.001	Tier
WS105	27/11/24	0.6	Chrysotile	Fibres	0.019	Tier
WS106	29/11/24	1.0	Chrysotile /Amosite	Fibres	0.03	Tier
WS108	21/11/24	0.7	Chrysotile /Amosite	Fibres/Debris	0.017	Tier
WS113B	20/11/24	0.35	Chrysotile	Fibres	<0.001	Tier
WS114	29/11/24	0.5	Chrysotile /Amosite	Fibres/Debris	0.021	Tier
WS115B	20/11/24	0.9	Chrysotile /Amosite	Fibres	0.002	Tier
WS116	27/11/24	1.9	Chrysotile	Fibres	<0.001	Tier
WS117	20/11/24	2.2	Chrysotile	Fibres	<0.001	Tier
WS117	20/11/24	2.4	Chrysotile /Amosite	Fibres	<0.001	Tier
WC204	14/04/25	0.45	Chrysotile/Amosite	Fibres	<0.001	Tier
WC206	07/04/25	0.6	Chrysotile	Fibres	<0.001	Tier
WC207	07/04/25	0.4	Chrysotile/ Amosite	Fibres	0.001	Tier
WC208	07/04/25	0.4	Chrysotile/ Amosite	Fibres	<0.001	Tier
WC209	08/04/25	0.4	Chrysotile/Bitumen products	Fibres/Debris	0.075	Tier
WC212	07/04/25	0.48	Chrysotile	Fibres	<0.001	Tier
WC213	14/04/25	0.35	Chrysotile/Amosite	Fibres	0.004	Tier
WC214	10/04/25	0.5	Chrysotile	Fibres	<0.001	Tier
WC216	10/04/25	0.55	Chrysotile	Fibres	<0.001	Tier
WC220	08/04/25	0.55	Chrysotile	Fibres	<0.001	Tier
WC222	14/04/25	0.45	Amosite	Fibres	<0.001	Tier
WC227	11/04/25	0.6	Chrysotile/Bitumen products	Fibres/Debris	0.023	Tier

Appendix B – Plans Showing Locations of Asbestos-Impacted Soils

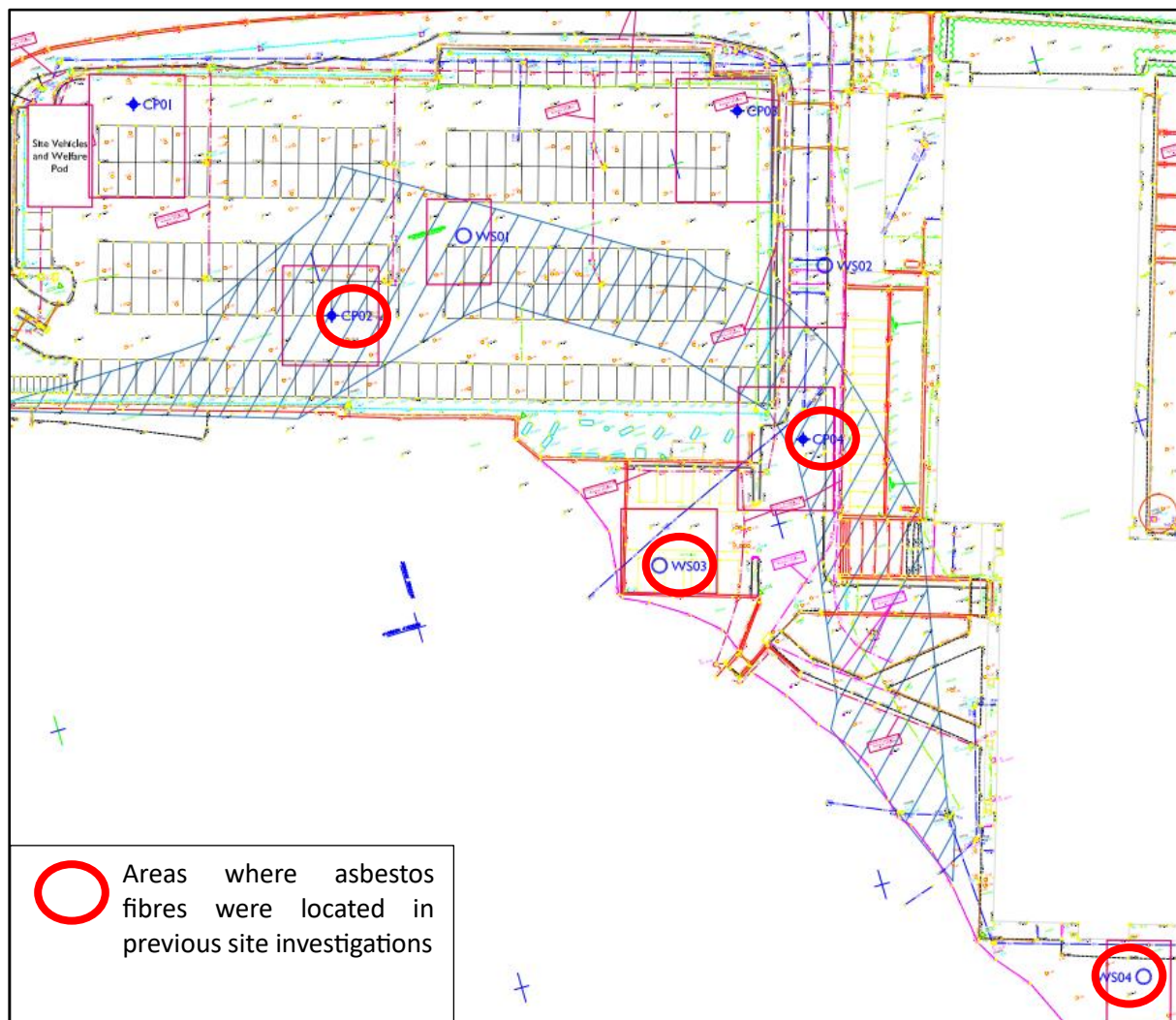


Figure 1 Geotechnics Site Investigation Location Plan

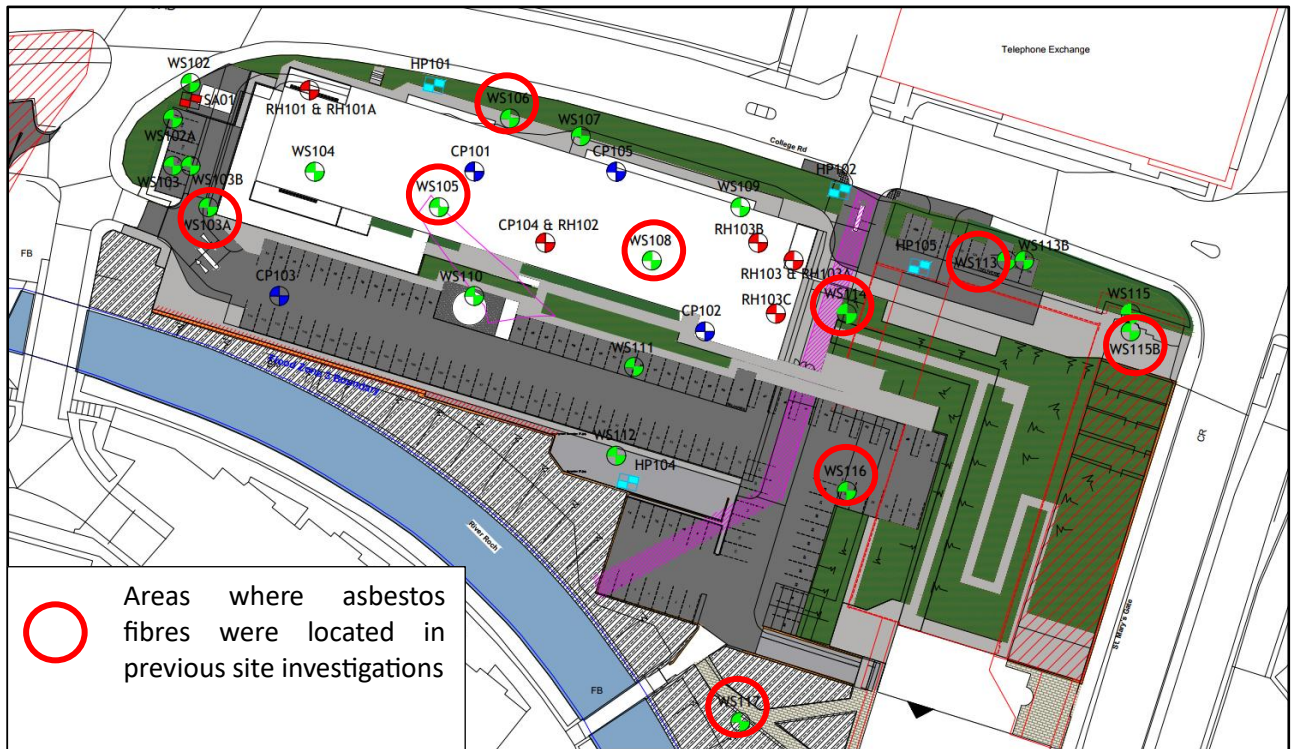


Figure 2 Tier Site Investigation Location Plan – Ground Investigation Report dated February 2025

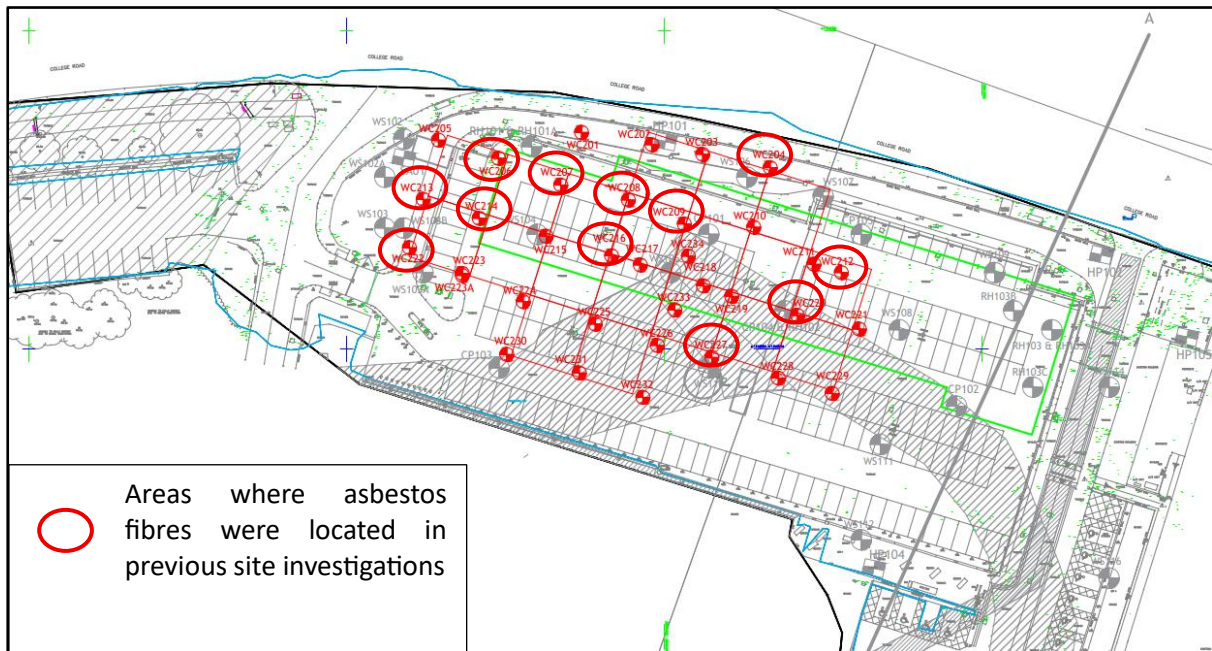


Figure 3 Tier Supplementary Waste Classification Location Plan - Supplementary Waste Classification Report dated May 2025

Appendix C – Typical Methodology for Reassurance Air Monitoring

A site-specific qualitative risk assessment has concluded the asbestos in made ground soils at the site poses a low risk to site operatives and residents. However, there is potential that other sources of asbestos-containing materials (ACMs) could be encountered during the remediation works.

On discovery of other potential ACMs works will stop, the area will be made safe and further assessment of the material will be carried out by a suitably qualified asbestos consultant. Any recommendations made by the asbestos consultant will be recorded in the daily site records and followed accordingly. If the risk from fibres being released increases to moderate risk, work in that area will stop until real-time onsite air monitoring and onsite microscope analysis of airborne fibres can be carried out to assess the dispersal, if any, of fibres.

Until classification analysis can be carried out, it should be assumed that any fibres detected are asbestos fibres. When fibre concentrations exceed the HSE clearance indicator of 0.01f/ml, the analyst will notify the site manager who will immediately stop all excavations and disturbances in the impacted area. Appropriate additional mitigation measures may include but are not limited to extra damping down, use of PVA additives, surfactant or utilisation of misting systems. Where fibres are detected, further laboratory analysis will be carried out to retrospectively classify the types of fibres detected. If unsafe levels of fibres are detected above 0.01f/ml, all work in that area will be stopped until revised mitigation procedures and monitoring procedures are agreed upon with the asbestos consultant, Client and the local authority. Work in these areas will only commence upon further risk assessment and confirmation that real-time monitoring demonstrates control measures are adequate.

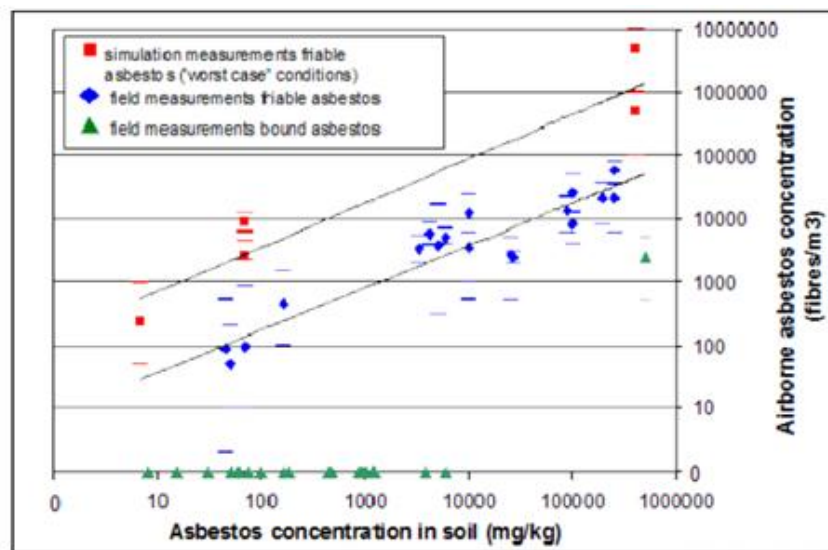
If the risk from fibres being released increases to moderate (based on the findings of air monitoring, additional chemical sampling results being made available or a planned change of work) the JWIG model will be rerun. Additional daily air monitoring will be carried out by an appropriately qualified and accredited asbestos consultant following HSG248 (HSE, 2005). Detailed records will be maintained during and after the works have been completed. For prolonged activities, i.e., where large areas of potentially moderate to high-risk impacted soils are encountered, or upon discovery of unknown materials, the following air monitoring procedures will be adopted:

Situation	Monitoring Frequency	Monitoring Duration	Monitoring Requirements
Discovery of unknown potential ACM or small areas of moderate to high-risk material.	Once	Once before and once during disturbance (only allowed with control measures).	Monitoring to be carried out at the site boundary, and immediately upwind and downwind of the working area. Wind direction to be recorded.
Sporadic small areas of moderate to high-risk material.	Weekly	Once before and during the initial disturbance then once every two weeks.	Immediately downwind to the working area and at the site boundary. Wind direction to be recorded.
Work in a large area of moderate to high-risk material (Stage 1).	Daily	Daily during the first week of disturbance.	Immediately downwind to the working area and at the site boundary. Wind direction to be recorded.
Work in a large area of moderate to high-risk material (Stage 2).	Weekly	Once per week for Weeks 2 and 3 if no fibres above safe levels are detected during Week 1.	Immediately downwind to the working area and at the site boundary. Wind direction to be recorded.
Work in a large area of moderate to high-risk material (Stage 3).	Fortnightly	Once every two weeks from Week 4 onwards 3 if no fibres above safe levels are previously detected.	Immediately downwind to the working area and at the site boundary. Wind direction to be recorded.

This methodology may need to be revised if higher fibre concentrations or other ACMs are identified during the works. Likewise, the above monitoring frequencies may be reduced depending on monitoring results.

Appendix D – The Netherland Organisation of Applied Scientific Research

Research undertaken by The Netherlands Organisation for Applied Scientific Research (TNO), involved testing on 20 sites with varying levels of contamination. Highly friable materials under dry soil conditions were used to maximise asbestos fibre generation. Dispersion modelling and stationary air monitoring were undertaken and a correlation between soil and air concentrations was derived. A correlation plot of the studies is shown below.



Results showing the relationship developed between soil and air concentrations of asbestos (Swartjes & Tromp, 2008; Swartjes *et al.*, 2003).

The plot shows field measurements from 0.1% w/w of friable asbestos in soil gave rise to approximately 0.001f/ml in the air. In comparison, a concentration of 0.03f/ml in the air was detected based on worst-case scenario simulations in the lab. The Netherlands published an interim threshold value for asbestos in soil of 0.01% w/w. This is extrapolated from a negligible risk of respirable fibres in air concentration of 0.001f/ml. It appears to be conservative as the soil value is taken from the mid-point between the field and worst-case trend lines for an airborne concentration of 0.001f/ml.

This method can be used to anticipate the airborne fibre concentrations for known soil concentrations. For example, the mid-point for a soil concentration of 0.1% w/w, would give an anticipated airborne fibre concentration of approximately 0.005f/ml. A soil concentration of 0.3% w/w would correspond to approximately 0.01f/ml.

Even at very low soil concentrations, an initial round of asbestos reassurance air monitoring is always recommended for large excavations and those that are to be left open for more than a short duration. However, ongoing reassurance air monitoring may not be necessary on all sites or where there is only a low risk of fibre release.

Appendix E – JIWG Decision Support Tools

Assessment of material on site (<0.001% wt/wt)

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles	2
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 materials)	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		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.

Stage 2 Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Trace quantities - <0.0001 to <0.001 %wt/wt	0
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Negligible	0
Activity type and effect on deterioration of ACMs	Moderate disturbance, slight deterioration expected	3
Best description of primary host material matrix	Fine Silt and/or Clay	1
Sub-total		4
Exposure ranking		Very Low

Stage 3 Pathway and Receptor Sensitivity		Score
Receptor category	Construction	No score required
Age of Receptor	Adult (>24 and <60)	1
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		4 Low
Combined hazard, exposure and receptor ranking		Low
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance	4
Pathway: Depth to impacted material	Material present near the surface, potential to be disturbed during non-construction/routine use of land	D
Pathway ranking		4D Medium
Overall ranking		Low

Project Reference	LKR241014
Site Name	Hopewood Hall College
Client	Willmott Dixon Construction Ltd
Run by	WF
Date	24-Apr-25
Reviewed by	WF
Characterisation of scenario being evaluated	Geotechnics: CP04 (2.4m <0.001%), WS04 (1.0m <0.001%) (0.35m <0.001%), WS116 (1.9m <0.001%), WS117 (2.2m <0.001%) & WS116 (2.4m <0.001%) Tier: WS103A (0.4m <0.001%), WS113B
Interpretation of scenario ranking by DST	Low risk to future end users, construction workers and members of the public

Assessment of material on site (0.001% wt/wt to 0.01% wt/wt)

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles	2
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 materials)	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		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.

Stage 2 Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Very Low quantities - 0.001 to 0.01 %wt/wt	1
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Negligible	0
Activity type and effect on deterioration of ACMs	Moderate disturbance, slight deterioration expected	3
Best description of primary host material matrix	Fine Silt and/or Clay	1
Sub-total		5
Exposure ranking		Low

Stage 3
Pathway and Receptor Sensitivity

	Score
Receptor category	Construction
Age of Receptor	Adult (>24 and <60)
Duration of exposure/site occupancy	> 1hr <10 hr daily exposure (e.g. part-time to full time occupational exposure or extended daily recreational exposure)
Receptor ranking	4
Combined hazard, exposure and receptor ranking	Low
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance
Pathway: Depth to impacted material	Material present near the surface, potential to be disturbed during non-construction/routine use of land
Pathway ranking	4D
Overall ranking	Low

Project Reference	LKR241014
Site Name	Hopewood Hall College
Client	Willmott Dixon Construction Ltd
Run by	WF
Date	24-Apr-25
Reviewed by	WF
Characterisation of scenario being evaluated	Geotechnics CP02 (2.4m 0.003%), CP04 (1.0m 0.002%), WS03 (1.0m 0.001%), WS04 (0.5m 0.002%), Teir WS115B (0.3m 0.002%)
Interpretation of scenario ranking by DST	Low risk to future end users, construction workers and members of the public

Assessment of material on site (>0.01% wt/wt to <0.05% wt/wt)

Decision Support Tool for Receptor Risk Ranking

Stage 1
Hazard Identification

	Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles 2
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 materials)	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	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.

Stage 2
Emission Factors

	Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Low quantities - >0.01 to <0.05 %wt/wt 2
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Negligible 0
Activity type and effect on deterioration of ACMs	Moderate disturbance, slight deterioration expected 3
Best description of primary host material matrix	Fine Silt and/or Clay 1
Sub-total	6
Exposure ranking	Low

Stage 3
Pathway and Receptor Sensitivity

	Score
Receptor category	Construction No score required
Age of Receptor	Adult (>24 and <60) 1
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	4 Low
Combined hazard, exposure and receptor ranking	Low
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance 4
Pathway: Depth to impacted material	Material present near the surface, potential to be disturbed during non-construction/routine use of land D
Pathway ranking	4D Medium
Overall ranking	Low

Project Reference	LKR241014
Site Name	Hopewood Hall College
Client	Willmott Dixon Construction Ltd
Run by	WF
Date	24-Apr-25
Reviewed by	WF
Characterisation of scenario being evaluated	Tier: WS105 (0.6m 0.019%), WS106 (1.0m 0.03%), WS108 (0.7m 0.017%) & WS114 (0.5m 0.021%)
Interpretation of scenario ranking by DST	Low risk to future end users, construction workers and members of the public

Assessment of material on site (Asbestos Bitumen Product)

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Bonded ACMs: cement, vinyl, composites, textured decorative coatings, bitumen products	0
Extent of degradation of ACMs	Weathered (Slight degradation in ACM; material still retains its basic integrity)	2
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Non-friable ACM or ACM with fibres firmly linked in a matrix	0
Distribution of Visible Asbestos Across Affected Area	Occasional/random occurrences of visible contamination by ACMs	1
Asbestos fibre type	Mainly chrysotile and trace amphibole (no crocidolite)	1
Sub-total		4
Hazard ranking		Very Low

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.

Stage 2 Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Moderate quantities - 0.05 to <0.1 %wt/wt	3
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Negligible	0
Activity type and effect on deterioration of ACMs	Moderate disturbance, slight deterioration expected	3
Best description of primary host material matrix	Made Ground - Recycled Aggregate, Track Ballast	4
Sub-total		10
Exposure ranking		Medium

Stage 3 Pathway and Receptor Sensitivity		Score
Receptor category	Construction	No score required
Age of Receptor	Adult (>24 and <60)	1
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	4	Low
Combined hazard, exposure and receptor ranking		Low
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		Very Low

Project Reference	LKR241014
Site Name	Hopewood Hall College
Client	Willmott Dixon Construction Ltd
Run by	WF
Date	18-Jul-25
Reviewed by	WF
Characterisation of scenario being evaluated	DPM Material
Interpretation of scenario ranking by DST	Very low risks to future end users, construction works and members of the public

Appendix F – Example Risk Assessment & Method Statements

Task		Location		Assessor		Last Reviewed
Potentially Contaminated Soils		All Sites		DM		04/02/24
Risk Matrix		L-Possible Minor Injury	M- Requires Medical	H- Death or serious injury		
H-Very likely and frequently		MODERATE (M)	HIGH (H)	HIGH		
M- Could occur at some time		LOW (L)	MODERATE	HIGH		
LOMay occur by rarely		LOW	LOW	MODERATE		
Hazard	Causes	Likelihood	Severity	Risk	At Risk	
Ill Health	Inhalation of vapours	M	H	H		
Ill Health	Inhalation/ingestion of dust	M	M	M	Workers visitors	
Ill Health	Inhalation of asbestos fibres	L	H	M	General Public	

Irritation	Skin/eye contact with soils	M	M	M	Property
Cancer	Inhalation of asbestos fibres	L	H	M	Plant Equipment
Method Statement					
•Soil contamination occurs through the deliberate or accidental release of chemicals, or by historical events. •Soil contamination does not only result from anthropogenic sources (e.g., industrial activity, road traffic). Many chemicals found in soils come from the underlying geology (e.g. naturally occurring arsenic in Jurassic Ironstones) or from other natural events (e.g., fires or the release of PAH's in the form of Humic Acid from the decaying of vegetation). •It must be ascertained at an early stage whether potential soil contamination in any form is likely to be present on site. The Client should provide Site Investigation Reports that provide details of potential soil contaminants and plans of where they may be encountered. •Commonly occurring soil contamination found on brownfield sites can include heavy metals, hydrocarbons, asbestos and ground gasses such as carbon dioxide and methane. •Impacted soils may be retained within remediated sites although conditions such as placement beneath proposed hard covered areas or beneath clean cover systems usually apply. •Potential contaminants at these concentrations can pose a risk to workers involved in the remediation of brownfield land where they can be inhaled, ingested or absorbed through the skin. •Care should be taken when workers are exposed to soils containing potential contaminants at concentrations above the guidance threshold values for a domestic garden end use.		•Although workers will only be exposed to the potentially contaminated soil for a relatively short time, the contaminants represent a risk, and simple precautionary measures are required for heavy metals, i.e., good personal hygiene and basic personnel protective equipment. •Damping down of soils may be required to mitigate the release of potential airborne contaminants. •In addition to the above, the atmosphere in shored trenches in excess of 1.2m should be monitored for oxygen and hazardous gas (methane & carbon dioxide), prior to personnel entering such excavations. Monitoring should continue whilst personnel are working in deep excavations. •Further reference should be made to the Method Statements and Risk Assessments for Hydrocarbons in Soils and Asbestos in Soils			
Notes					
•A Site-Specific Risk Assessment should be completed should any unusual site features or circumstances be identified. •This Risk Assessment should be reviewed following any accident/incident involving the task. •This Risk Assessment should be reviewed following any change of legislation or equipment.					

Task		Location		Assessor		Last Reviewed		
ASBESTOS CONTAINIG MATERIALS			All Sites		DM		04/02/25	
Risk Matrix		L – Possible minor injury		M – Requires medical attention		H – Death or serious injury		
H – Very likely and frequently		MODERATE (M)		HIGH (H)		HIGH		
M – Could occur at some time		LOW (L)		MODERATE		HIGH		
L – May occur but rarely		LOW		LOW		MODERATE		
Hazard	Causes	Likelihood	Severity	Risk		At Risk		
Cancer	Inhalation of fibres	L	H	M				
Ill Health	Inhalation of fibres	L	H	M		Workers Visitors		
Irritation	Skin/eye contact with fibres	L	M	L		General Public		
						Property		
						Plant		
						Equipment		
Method Statement								

- It must be ascertained at an early stage whether asbestos in any form is likely to be present on site. The Client must provide all known details of asbestos containing materials and any plans of where they may be encountered. - There should be at least one member of site personnel who has an asbestos awareness certificate. Where non-licensed asbestos is found to be present, asbestos awareness courses will be arranged for all site personnel working on the site. - If information provided by the Client is inconclusive, an approved and competent specialist must be contracted to undertake the appropriate kind of survey to determine the type and quantity and location of asbestos, by taking sufficient samples for analysis and produce a full survey report. - The contracted asbestos removal (licensed) subcontractor must supply a written specific risk assessment and method statement, based on the asbestos survey report, for review and approval before works commence. - The planning and organisation for the removal of asbestos will be in accordance with HSE ACOP L143 'Working with Materials containing Asbestos'. - The HSE Area Office must be informed 14 days before the commencement of licensed asbestos removal by a Licensed Asbestos Remover and non-licensed asbestos must be reported to the HSE prior to removal, in accordance with the Control of Asbestos Regulations	- All those working with asbestos must be supervised by a qualified person. - Access to work areas will be strictly controlled as determined in the method statement. - Asbestos products removed will be double bagged or placed in sealed containers for disposal to a licensed tip by a registered carrier and transfer notes obtained to identify disposal as special waste. Asbestos containing materials must never be disposed of in site skips. - Contractors carrying out asbestos removal are to provide a copy of the licence and proof of the competence training of operatives. - All operatives working with asbestos shall be fully trained and competent and conversant with the hazards associated with removal techniques, the method statement and use of PPE/RPE and hygiene requirements. - All site personnel who may come into contact with asbestos must be informed of the locations and type of asbestos and informed and instructed on the necessary control measures. - Ensure that when asbestos removal operations have been completed, no unauthorised person enters the area until final clearance samples have been taken and confirmation received that the results are satisfactory.
Notes - A Site-Specific Risk Assessment should be completed should any unusual site features or circumstances be identified. - This Risk Assessment should be reviewed following any accident/incident involving the task. - This Risk Assessment should be reviewed following any change of legislation or equipment.	

Task		Location		Assessor		Last Reviewed		
ASBESTOS IN SOILS			All Sites		DM		04/02/25	
Risk Matrix		L – Possible minor injury		M – Requires medical attention		H – Death or serious injury		
H – Very likely and frequently		MODERATE (M)		HIGH (H)		HIGH		
M – Could occur at some time		LOW (L)		MODERATE		HIGH		
L – May occur but rarely		LOW		LOW		MODERATE		
Hazard	Causes	Likelihood	Severity		Risk	At Risk		
Cancer	Inhalation of fibres	L	H		M			
Ill health	Inhalation of fibres	L	H		M	Workers Visitors		
Irritation	Skin/eye contact with fibres	L	M		L	General Public		
						Property		
						Plant		
						Equipment		
Method Statement								

•It must be ascertained at an early stage whether asbestos in any form is likely to be present on site. The Client must provide all known details of asbestos containing materials and any plans of where they may be encountered. •There should be at least one member of site personnel who has an asbestos awareness certificate. Where non-licensed asbestos is found to be present, asbestos awareness courses will be arranged for all site personnel working on the site. Asbestos awareness training should cover; the types of asbestos and its hazards; how to wear personal protective equipment (PPE) specific to the risks of asbestos including masks and disposable suits; and how to handle asbestos. •All site personnel who may come into contact with asbestos must be informed of the locations and type of asbestos and informed and instructed on the necessary control measures. •For a small amount of cement bonded chrysotile asbestos, hand sorting of the material to remove asbestos will be undertaken. The asbestos fragments will be segregated into double-lined asbestos bags and soil will be dampened then placed in sealed stockpiles for validation sampling and eventually reuse on site. •If asbestos containing materials are encountered in soils during the earthworks, all personnel working in that area will leave immediately and will not return until wearing the appropriate PPE. The area will be segregated with hazard warning signs prominently displayed. The asbestos contaminated material will be dampened then placed in sealed stockpiles for validation sampling and eventually reuse on site.	•If fibrous asbestos is identified free from the soil matrix, no treatment will be attempted. Only a licensed asbestos contractor can carry out removal, in accordance with the latest HSE asbestos guidance and codes of practice. Where encountered, this material should be covered over and the area fenced off until a licensed contractor can remove the asbestos. •All those working with asbestos must be trained and supervised by a qualified person. •Asbestos products to be removed from site will be double bagged or placed in sealed containers for disposal to a licensed tip by a registered carrier and transfer notes obtained to identify disposal as special waste. Asbestos containing materials must never be disposed of in site skips. •Contractors carrying out asbestos removal are to provide a copy of the licence and proof of the competence training of operatives. •All contractors working with asbestos shall be fully trained and competent and familiar with the hazards associated with removal techniques. They shall provide detailed method statements, use adequate PPE/RPE and comply with hygiene requirements. •When asbestos removal operations have been completed, no unauthorised person enters the area until final clearance samples have been taken and confirmation received that the results are satisfactory. •Further reference should be made to the Method Statements and Risk Assessment for Asbestos Containing Materials.
---	---

Notes

- A Site-Specific Risk Assessment should be completed should any unusual site features or circumstances be identified.
- This Risk Assessment should be reviewed following any accident/incident involving the task.
- This Risk Assessment should be reviewed following any change of legislation or equipment.

Task		Location	Assessor		Last Reviewed
CONTROL OF DUST AND FUMES		All Sites	DM		04/02/25
Hazard	Causes	Likelihood	Severity	Risk	At Risk
Ill Health	Inhalation of dust or fumes	H	M	H	
Ill Health	Ingestion of dust	H	M	H	Workers Visitors
Ill Health	Absorption of dust	L	M	L	General Public
Ill Health	Poor hygiene	H	M	H	Property
Eye Injuries	Dust particles	H	L	M	Plant
Eye Injuries	Chemical burns	M	M	M	Equipment
Asphyxia	Lack of oxygen	L	H	M	
Control Measures					
•Subcontractors must provide site-specific risk assessments/method statements identifying activities/processes that may			•Operatives whose health may be affected by the hazards from dust must be instructed and informed of the hazards to their health		

produce significant dusts that may be considered harmful to health. COSHH assessments will also be required detailing the method of controlling the dust. •Where deemed necessary, operatives may be required to wear face masks and be face fit tested for the type of mask; they must also be trained in the use. •Dust emissions to be eliminated or reduced, so far as is reasonably practicable and contained within the boundaries of the site. •Dust extraction, collection, exhaust-ventilation systems and dampening down techniques shall be employed when using handheld/portable cutting and grinding tools and equipment that creates dust during the working process. For labourers or trades sweeping out and creating dust must wear P3 masks. •Dust created by vehicle traffic and winds are to be reduced by dampening down the road surface and reducing the speed of vehicles in such areas. •Adequate and suitable dampening down systems to employed, during demolition or earth works activities. •Washing facilities, appropriate to the assessed dust hazards must be provided on site and may require showers to be provided.	and necessary control measures required, which will include correct use of PPE, personal hygiene requirements and prohibition of smoking and eating in dust atmospheres. •Appropriate respiratory protective equipment i.e. Face fit tested/recorded, the correct P3 dust masks provided, eye protection shall be provided and worn correctly, as required by the work activity risk assessment/method statement. In addition to the sites mandatory PPE consisting of safety helmets, safety footwear, Hi Vis vests and appropriate gloves. •Where health risks from dust remain significant, arrangements will be made to carry out appropriate measuring of dust against work exposure levels (WEL).
Notes	
•A Site-Specific Risk Assessment should be completed should any unusual site features or circumstances be identified. •This Risk Assessment should be reviewed following any accident/incident involving the task. •This Risk Assessment should be reviewed following any change of legislation or equipment.	

Appendix G – Example Permit to Work

Site Name	Job Number	Site Manager	
Operative Company Name	Operative Name	Work Supervisor	
Permit Valid From	Permit Valid To	Permit Cancelled	
Location of Work and Work Area			
Description of Work and Work Area			
Pre-Commencement Checklist	Yes	No	Action Required
A) Has the building, structure or area where the work is planned been inspected or surveyed for Asbestos Containing Materials (ACM)			If Yes – Go to B
B) Is the proposed work being carried out on or within building, structure or area identified in the survey/ inspection report as containing ACM's			If No an inspections or survey must be carried out prior to the work commencing
C) Has the operative or supervisor viewed the asbestos report covering the working area?			If Yes – Go to C
D) Does the asbestos survey report identify any asbestos containing materials within this area?			If No – The proposed work may be carried out
E) Is the proposed work liable to disturb this material?			If Yes – Go to D
F) Can the asbestos containing material be protected from the work so that any damage/disturbance will be prevented			If No – the named Operative/Supervisor must view the asbestos survey report. After reading the report go to D)
G) Are the asbestos containing materials classed as HSE licensed materials?			If Yes – Go to E
H) Will or is the damage/disturbance of the non-licensed ACM's likely to produce debris or give rise to airborne asbestos fibres			If No – The proposed work may be carried out.
I) If Yes – Has the operative received guidance on working with these types of material, including methods of dust suppression, use of Personal Protective Equipment (PPE) & Respiratory Protective Equipment (RPE) and the disposal of Hazardous waste materials.			If Yes – Go to F
Supervisor Signature	Site Manager Signature	Date	

Appendix H – Declaration of Understanding

By signing below, you are confirming you have had a Site Induction, understand the Site Rules, Risk Assessments and Method Statements and that you are trained and competent for the tasks you will carry out.

[illegible]

Appendix I – HSE Information Sheet EM8



Health and Safety
Executive



Personal decontamination

Equipment and method sheet

Non-licensed tasks

This information will help employers and the self-employed to comply with the Control of Asbestos Regulations 2012.

It is also useful for trade union and employee safety representatives.

Only carry out work if you are properly trained and have the right equipment.

Remember:

- Asbestos fibres can cause fatal lung disease and lung cancer.
- Check what you're working on before you start.
- Read the safety checklist and sheet a0.
- You must be trained to work safely with asbestos materials.

What this sheet covers

This sheet describes how to decontaminate yourself after work with asbestos materials.

Personal decontamination is easier when you wear the correct personal protective equipment (PPE).

You need to decontaminate yourself properly, otherwise you may take asbestos fibres home on your clothing and expose your family and friends.

Procedures

Removing and decontaminating PPE

- Clean your boots with damp rags – see sheet em7.
- Where available, clean your overalls with the brush attachment on a Class H vacuum cleaner. Vacuum off the brush.
- Otherwise, use damp rags in a gentle 'patting' action. Rubbing can disturb fibres.
- Where there are two workers, they can help to clean each other.
- Peel off disposable overalls. They should be inside out when they have been removed. Put them in a suitable asbestos waste bag.
- Bag up reusable overalls for a specialist laundry.
- Finally, remove your respiratory protective equipment (RPE) in accordance with em6.
- Tape the bag closed.



'Buddy' cleaning using a Class H vacuum cleaner



Make sure you restrict access



Cleaning with damp rag using patting action

Personal decontamination

- A suitable location for personal decontamination should be considered as part of the planning before the job commences.
- Can you use site washing facilities? If so, they must be for your use only.
- Keep other people out during personal decontamination, and until you have cleaned the facilities.
- Wash every time you leave the work area.
- Use damp rags to clean the washing facilities at the end of the job.
- Clean the facilities daily if the job lasts more than one day.
- Inspect the facilities visually once the job is finished.
- Clearance air sampling is not normally needed for washing facilities.
- See sheet em9 for disposal of asbestos waste.

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

This document is available at: www.hse.gov.uk/asbestos/essentials/

© Crown copyright. If you wish to reuse this information visit www.hse.gov.uk/copyright.htm for details.

First published as part of *Asbestos essentials task manual* 2001.

Published by the Health and Safety Executive 09/17

2 of 2 pages

Based across the UK with
offices in Manchester, Liverpool,
Swindon and Glasgow.

Manchester (Head Office)

Unit 29
Eton Business Park
Eton Hill Rd, Radcliffe
M26 2ZS

0161 763 7200
info@thelkgroup.com

Manchester (Ancoats Office)

84 Silk Street
Ancoats
Manchester
M4 6BJ

0161 763 7200
info@thelkgroup.com

Glasgow

Wright Business Centre
1 Lonmay Road
Glasgow
G33 4EL

0141 773 6269
info@thelkgroup.com

Swindon

39 Bowman House Business Centre
Bowman Court
Whitehill Lane
Royal Wootton Bassett
Swindon
SN4 7DB

01793 987390
info@thelkgroup.com



LK GROUP