

Land at Oldham Road, Newton Heath - Phase Containing 28 Houses and 6 Apartments

Asbestos Management Plan





GEO-ENVIRONMENTAL CONSULTING

Project Quality Assurance Information Sheet

Site	Land at Oldham Road, Newton Heath – Phase containing 28 houses and 6 apartments
Report Title	Asbestos Management Plan
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GEO-ENVIRONMENTAL CONSULTING

LAND AT OLDHAM ROAD, NEWTON HEATH – PHASE CONTAINING 28 HOUSES AND 6 APARTMENTS

Remediation Verification Report

PROJECT NO: 23007

REPORT REF: BEK-23007-4

DATE: December 2024

REVISION STATUS / HISTORY

Rev	Date	Issue / Comment	Prepared	Checked

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1. GLOSSARY

1.1 Glossary of terms

1.1.1 The following are definitions of abbreviations and terms are used within this report:

PM - Project Manager

LARC - Licensed Asbestos Removal Contractor

AC - Asbestos/Analytical Consultant

PD - Principal Designer

ACM - Asbestos Containing Material

Competent Person - Someone with the requisite skill, qualification, experience and training to carry out a task

Qualified Person - A Qualified Person as defined by CL:AIRE

HSE - Health & Safety Executive

EA - Environment Agency

UKAS - United Kingdom Accreditation Service

PAS - Publicly Available Specification

CAR - Control of Asbestos Regulations 2012

CDM - The Construction (Design and Management) Regulations 2015

1.1.2 This document has been compiled to specify a strategy for the management and remediation of land / made ground / soil and other materials that are known to be affected by contamination from asbestos and asbestos-containing materials.

1.1.3 The strategy relates to specifically asbestos and should be used to support any other remediation strategies / statements / specifications that may have been compiled to cover more general requirements for the site as required by current planning legislation and processes.



2. INTRODUCTION

2.1 Appointment & Proposed Development

- 2.1.1 BEK Enviro (BEK) has been commissioned by Casey Group Limited to prepare an Asbestos Management Plan to describe how to safely manage (or work with) land / made ground / soil and other materials affected by asbestos or asbestos-containing materials at the proposed at the residential site at the Land at Oldham Road, Newton Heath – Phase containing 28 houses and 6 apartments (hereafter referred to as ‘the site’).
- 2.1.2 The Earthworks Contractor (yet to be selected) will be on the site during the pre-construction remediation works. It should be noted that a Licensed Asbestos Removal Contractor (LARC) should be instructed by the Client if any licensable aspects of the remediation works come to light. It is important that all parties working at the site are made aware of the hazards/risks from asbestos prior to commencement of works.
- 2.1.3 Development proposals for the site include the construction of 28No. residential houses and 6No. apartments, together with associated garden areas, car parking facilities and access. (see Figure 1).
- 2.1.4 The development layout is presented on TP Bennett Architecture and Design drawing entitled ‘Proposed Site Plan’ (Drawing No.T8170-G-0-020-T1, dated November 2023), a copy of which is presented in Appendix A and an extract of which can be seen below.
- 2.1.5 Note the development of the site is to be completed in two phases. The Asbestos Management Plan strategy presented herein applies to the ‘Phase containing 28 houses and 6 apartments Development Area’ only (as illustrated in Figure 1).



Figure 1: Proposed Development Layout

2.2 Involved Parties

Function	Company & Address	Main Contact
Client	THE CASEY GROUP LIMITED Rydings Road Rochdale OL12 9PS	Mark Barnes 07815 498651
Geo-technical/Geo-environmental Consultancy	BEK ENVIRO No 2 Landwick Court Altham Business Park BB5 5GY	Michael Buckley 01254 377622 07906 753583

Table 1: Summary of Involved Parties

2.3 Previous Reports

2.3.1 The proposed development plan is appended in Appendix A. Information within this document has been compiled from the sources listed below which should be read in conjunction with this report.

- Curtins 'Phase 1 Preliminary Risk Assessment – Oldham Road, Newton Heath, Manchester', Report Ref: 074031-CUR-00-XX-RP-GE-001, dated November 2019.
- Curtins 'Ground Investigation Report for Oldham Road, Newton Heath, Manchester' Report Ref: 074031-CUR-00-XX-RP-GE-002, dated January 2023.



- BEK – Remediation Method Statement – Land at Oldham Road, Newton Heath Ref: BEK-23007-3, dated December 2024

- 2.3.2 The above reports were prepared for a development comprising of 100 apartments and associated hardstanding/soft landscaped areas. BEK understand that the development layout has now changed to contain 28 houses and 6 apartments shown in Figure 1 above.
- 2.3.3 The above assessments form the basis for the asbestos management plan required at the site for the phase containing 28 houses and 6 apartments and should be read in conjunction with this report. This report assumes that all previous reports/assessments have been approved by the regulator.
- 2.3.4 The ‘Ground Investigation Report for Oldham Road, Newton Heath, Manchester’ by Curtins (Ref: 074031-CUR-00-XX-RP-GE-002, dated January 2023), which includes a Ground Gas Risk Assessment, forms the basis for the subsequent works required at the site.

Curtins – Ground Investigation (January 2023)

- 2.3.5 The Curtins Ground Investigation was designed to provide indicative information for the ground conditions across the site with respect to the quantitative assessment for the potential risks associated with contamination and ground gas, as identified in the Phase 1 Preliminary Risk Assessment.
- 2.3.6 The Ground Investigation was undertaken in two stages. The first initial site investigation was undertaken in between 30th September and 3rd October 2019 which consisted of the drilling of 13No. window sample boreholes (WS01, WS02, WS02a, WS02b, WS02c, WS03, WS04, WS04a, WS04b, WS04c, WS05, WS06 and WS07) advancing to a maximum depth of 3.45 m bgl or refusal. In-situ testing including Standard Penetration Tests (SPTs) were undertaken at 1 m intervals within the superficial soils.
- 2.3.7 Supplementary ground investigation for the development site was undertaken between 27th October and 2nd November 2020. The additional works consisted of the drilling of 6No. window sample boreholes (WS021, WS022, WS023, WS024 and (WS024a) to a maximum depth of 5.45 m bgl or refusal and three Cable Percussive Boreholes (CP101, CP102 and CP103) that were drilled to a maximum depth of 25.95 m.
- 2.3.8 The ground conditions at the site comprised of varying depths of made ground in the form of topsoil/asphalt or concrete overlying predominantly granular made ground material to maximum depth of 3.5 m.
- 2.3.9 Natural superficial deposits were encountered in all locations underlying the made ground in the form of glacial till.
- 2.3.10 Olfactory and visual indicators of contamination were present in the majority of the made ground strata at the site in the form of inclusions of ash and clinker. A slight hydrocarbon odour was noted in Borehole WS205 between 0.72 m and 2 m.

2.3.11 A summary of groundwater encountered during the site investigation is presented in Table 2 below:

Location	Depth to Water (m) bgl	Comment
WS02	0.6	Borehole wet
WS02a	0.55	Borehole wet
WS02c	0.45	Borehole wet
WS03	0.2	Borehole wet
WS04b	0.2	Borehole wet

Table 2: Summary of Groundwater Encountered During Site Investigation

2.3.12 Bedrock was not encountered within any of the exploratory locations on site.

2.3.13 Curtins selected a number of made ground samples for chemical testing. Analysis was undertaken to assess the contamination risk presented to site end users and construction works in this area of the site.

2.3.14 Curtins split the site into three zones according to the proposed-end users and assigned a specific for the generic assessment criteria screening plan to each location. These includes Zone 1 'Residential without home grown produce', Zone 2 'Residential with home grown produce' and Zone 3 'Public Open Space near residential housing'. See Figure 2 below for the generic assessment criteria screening plan.

2.3.15 The information relating to the Phase containing 28 houses and 6 apartments (Zone 1 and Zone 3) are to be included within this report.



Figure 2: The Generic Assessment Criteria Screening Plan for the Site.



Contamination Assessment

- 2.3.16 The chemical test results were compared to relevant generic assessment criteria to identify potential contaminants of concern. Based on the contamination assessment carried out by Curtins for the phase containing 28 houses and 6 apartments, a number of contaminants were identified when compared to the generic assessment criteria used within Zone 1 and Zone 3.
- 2.3.17 In Zone 1, with respect to the proposed end-use of the site, Tier 1 thresholds for Lead, PAHs and Aromatic TPHs were exceeded in Boreholes WS04C, WS06 and Cable Percussive Borehole CP101.
- 2.3.18 In Zone 3, with respect to the proposed end-use of the site, Tier 1 thresholds for PAHs and Aromatic TPHs were exceeded within Borehole WS01. It is likely the exceedances relate to a localised spill (likely diesel given the heavier TPH fractions encountered) in the existing car park.
- 2.3.19 Asbestos was identified within Borehole WS02b (0.45 m) located within Zone 3. Laboratory screening identified the asbestos containing material (ACM) as asbestos chrysotile cement with a percent soil composition of 0.959% w/w.

Ground Gas Risk Assessment

- 2.3.20 The ground gas risk assessment by Curtins concluded that the site is classified as Characteristic Situation 2 (CS2) and gas mitigation measures in accordance with CS2 should be installed in the apartment buildings at the site. However, Curtins concluded that no gas mitigation measures would be required in low rise residential dwellings as these were classified as NHBC Green classification.

BEK Comments

- 2.3.21 Due to the presence of residential housing BEK considers it necessary to re-assess the available site investigation data against residential with home grown produce assessment criteria.

Previous Site Investigation within the Phase containing 28 houses and 6 apartments (Zone 1 and Zone 3)

- 2.3.22 A review of the Curtins Ground Investigation identifies a total of 17no intrusive locations within the phase containing 28 houses and 6 apartments (Zone 1 and Zone 3) area. These comprised of 14no window sample boreholes and 3no cable percussive boreholes. Additionally, it is noted that 2no window sample boreholes (WS01 and WS02B) were drilled in close proximity to Zone 3 however correspondence with the developer indicates that these boreholes are confirmed to be outside the site boundary. A copy of the Exploratory Investigation plan undertaken by Curtins is shown in the figure below:

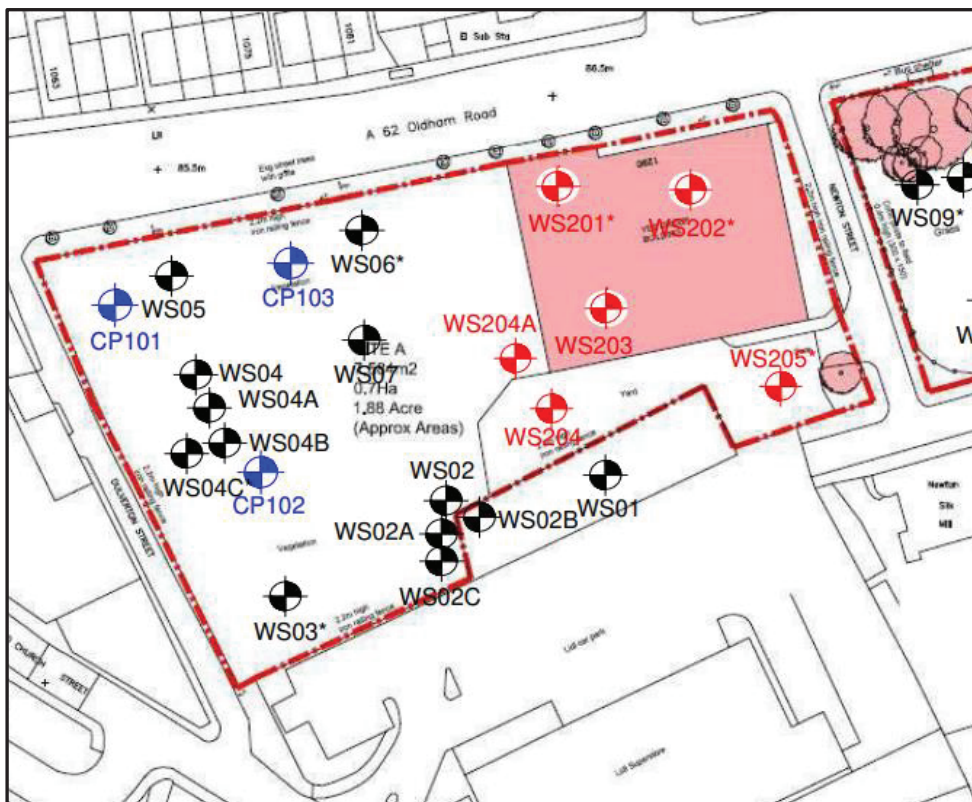


Figure 3: Exploratory Investigation Plan (from Curtins Ground Investigation Report)

- 2.3.23 As part of their site investigation, Curtins recovered 10 no made ground samples from the Phase containing 28 houses and 6 apartments (Zone 1 and Zone 3) area for chemical testing including asbestos ID and 2 no samples from the boreholes located off-site close to Zone 3. The exploratory locations within the Phase containing 28 houses and 6 apartments (Zone 1 and Zone 3) area are WS02, WS02A, WS02C, WS03, WS04, WS04A, WS04B, WS04C, WS05, WS06, WS07, WS203, WS204, WS204A, CP101, CP102 and CP103).
- 2.3.24 Analysis was undertaken to assess the contamination risk presented to site end users and construction works in this area of the site. Asbestos was encountered in one sample and subsequent quantification testing undertaken on the samples. The Asbestos encountered during chemical testing was found in WS02B and identified Chrysotile cement (0.959% w/w).
- 2.3.25 The chemical test results for the site were compared to relevant generic assessment criteria to identify potential contaminants of concern. Based on the contamination assessment herein and with respect to the redevelopment of the site for residential with home grown produce, there were elevated concentrations of lead, several PAH compounds and Aliphatic and Aromatic Hydrocarbons identified in or in close proximity to the Phase containing 28 houses and 6 apartments area of the site
- 2.3.26 Table 3 below provides a summary of the locations of the positive samples, inclusive of previous reports, type of asbestos identified and the quantification result.



Location/Depth	Asbestos Type/Matrix Description	Quantification Result (% w/w)
WS2B (0.45 m) Outside of site boundary	Chrysotile cement	0.959

Table 3: Summary of Asbestos Quantification Testing in Positive Samples

2.4 Limitations

- 2.4.1 Information contained within third party information has been taken as a true and accurate representation of the existing site and ground conditions. BEK has not undertaken any works to check the validity of these data.
- 2.4.2 This document shall be read in full by all interested parties and it is recommended that a copy be kept on site. This Asbestos Management Plan should be read in conjunction with the Site Investigation & Contamination Assessment. Other document and strategies may exist that will define how to deal with other aspects of ground contamination and should also be read in conjunction with this document.



3. GENERAL STRATEGY FOR COMPLIANCE WITH CAR 2012

3.1 Control of Asbestos Regulations 2012

3.1.1 This section of the document details the general requirements of this Asbestos Management Plan, following these requirements should ensure that compliance under The Control of Asbestos Regulation 2012 is achieved and that risks to human health are minimised. The generally accepted methods of controlling work with asbestos are to prevent exposure and prevent the spread of asbestos.

3.1.2 Before any work is undertaken where there is the potential for employees or local stakeholders to be exposed to asbestos it is important that all parties undertake a risk assessment. It is the responsibility of each employer to make their own assessments of the risks involved, however the information contained within this document is likely to support individual risk assessments.

3.1.3 This section of the document is structured to follow the numerical order of the Control of Asbestos Regulations 2012 where a regulation number is not included this is deliberate and is because that particular Regulation has no significant bearing on the management or remediation of land / made ground or soil affected by asbestos or asbestos-containing materials.

3.2 Interpretation (Regulation 2)

3.2.1 The main point of consideration under Regulation 2 is to determine whether or not the work proposed under the remediation strategy is licensable work or not, if the work is deemed licensable then the earthworks needs to be supervised by a LARC. In deciding whether work is licensable or not the CL:AIRE and Joint Industry Working Group (JIWG) CAR-SOIL guidance 2016 provides flowcharts (shown below) to determine if work is non-licensed (NLW), notifiable non licensed (NNLW) or licensed (LW). Please note that the Control Limit is 0.1 f cm^{-3} when measured over a four hour period and the sporadic and low intensity (or short term exposure limit) is a peak exposure that may occur of 0.6 f cm^{-3} when measured over a 10 minute period.

3.2.2 If the work is deemed licensable this will require a fourteen day statutory notification to the enforcing authority before any work is undertaken unless a waiver has been requested and granted.

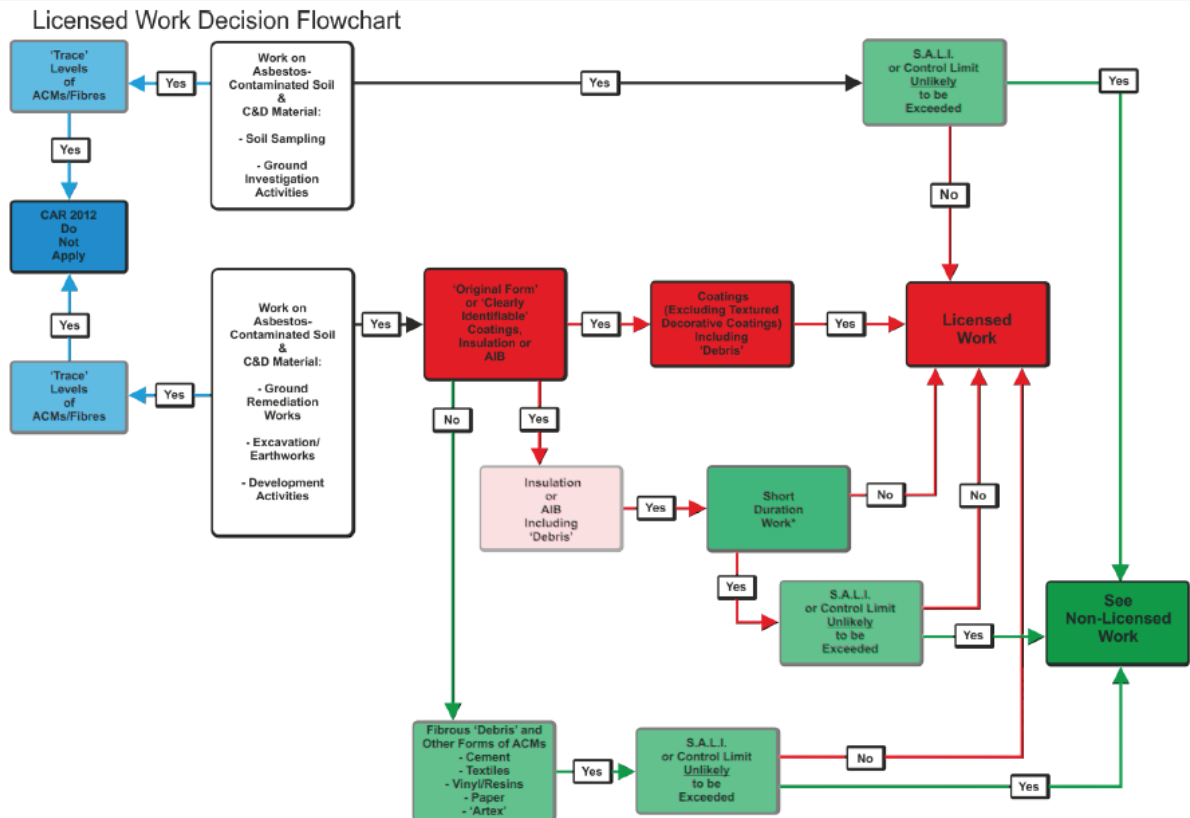


Figure 4: Licensed Work Decision Flow Chart

3.3 Application of These Regulations (Regulation 3)

3.3.1 The main point of consideration under Regulation 3 is to decide whether work that has been deemed not to be licensable is considered notifiable or not i.e. is the work non-licensed work (NLW) or notifiable non-licensed work (NNLW). If, after the work is deemed not to be licensable, the work is also deemed not to be notifiable then the following requirements do not apply to the work:

- Notify the work (Regulation 9)
- Demarcate a designated area (Regulation 18 (1) (a))
- Maintain Health records (Regulation 22)

3.3.2 In deciding whether work is notifiable or not in this situation it is useful to follow the decision process flow chart below, please note in the assessment under Regulation 3 remediation of soils will not be classed as maintenance work but as removal work.

Non-Licensed Work Decision Flowchart

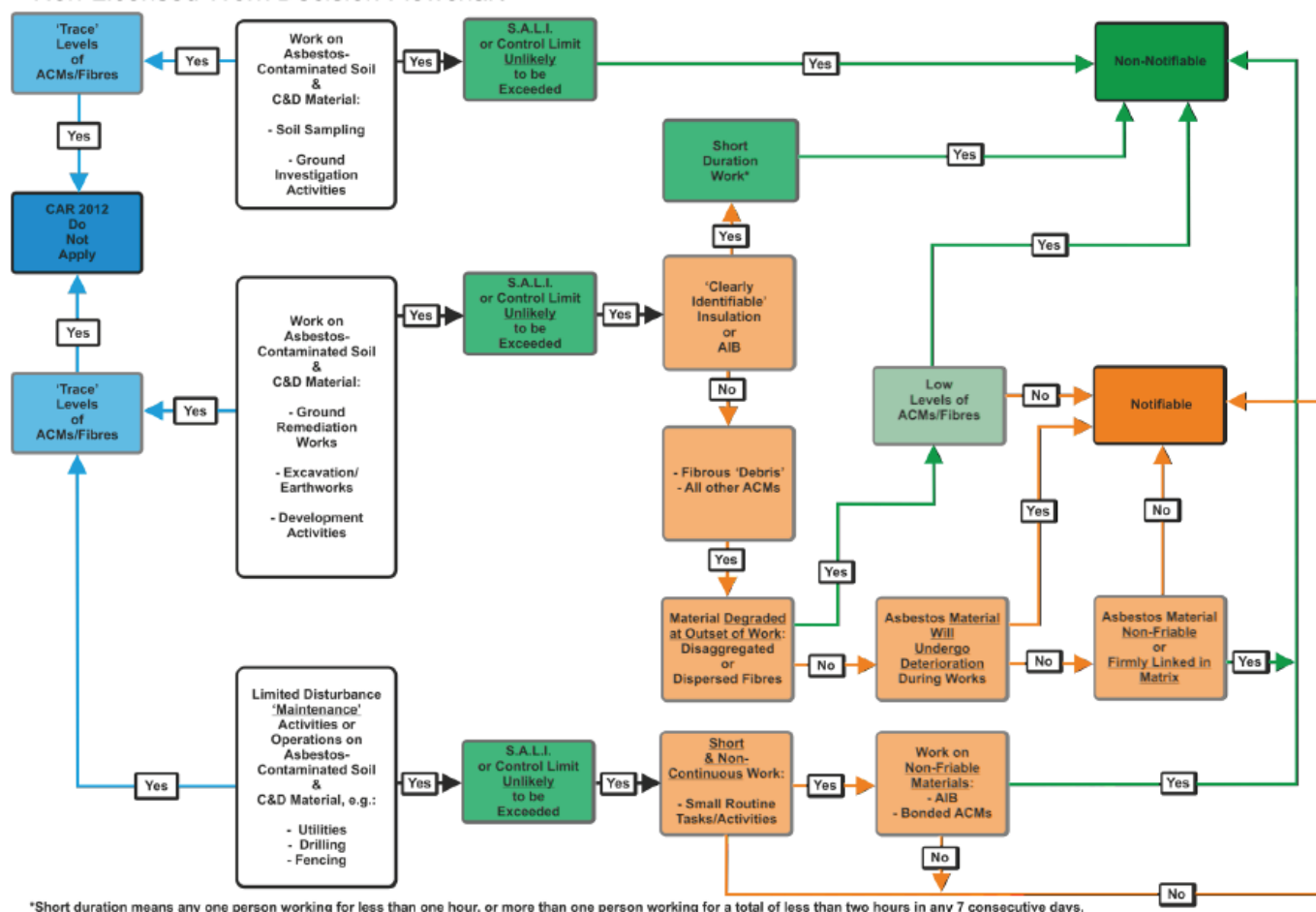


Figure 5: Non-Licensed Work Decision Flow Chart

3.4 Identification of the Presence of Asbestos (Regulation 5)

3.4.1 Regulation 5 requires any employer to identify the presence of asbestos, its type and condition before any work is undertaken. For the purposes of this strategy the summary of asbestos and asbestos-containing materials described in Section 1.3 has been referred to from the sources defined in Section 1.1.4. It is important to remember that the assessments made by employers should be revised should the situation on site change at all during the course of any remediation work.

3.5 Assessment of Work Which Exposes Employees to Asbestos (Regulation 6)

3.5.1 Regulation 6 requires a **suitable and sufficient** risk assessment of potential exposure to asbestos to be made by the employers of the people involved in undertaking the remediation work i.e. LARC / earthworks contractor / analyst. This risk assessment needs to be:

- Carried out in time to enable appropriate precautions to be taken before work begins



- Be specific to the task being undertaken
- Establish the extent of the potential risk and who could be affected
- Identify the steps taken to remove the risks or where this is not possible reduce to the lowest level reasonably practicable
- Record the findings of the assessment and communicate the findings to employees and anyone else who could be affected in an understandable way
- Reviewed regularly or when considered no longer valid i.e. if the scope of the work changes or the type of asbestos-containing material being worked with alters.

3.5.2 Employers must make sure that whoever carries out the risk assessment and provides advice on the prevention and control of exposure is competent to do so, a competent person would be considered as being a person who has the ability and skills described below:

- Have adequate knowledge, training and expertise in understanding the risks from asbestos and be able to make informed and appropriate decisions about the risks and precautions needed;
- Know how the work activity may disturb asbestos
- Be familiar with and understand the requirements of CAR 2012
- Have the ability and authority to collate all the necessary and relevant information
- Be able to assess other non-asbestos risks on site
- Be able to estimate the expected level of exposure to decide whether or not the control limit is likely to be exceeded.

3.5.3 To be considered suitable and sufficient the risk assessment needs to include:

- For non-licensable work, a statement of why the work meets the criteria for non-licensable rather than licensable work, and whether it is>NNLW
- A description of the work being carried out and the expected scale and duration
- A description of the type(s) of asbestos and results of any survey or analysis or a statement that the assumption is that the asbestos is not chrysotile alone
- A description of the quantity, form, size, means of attachment (if any), extent and condition of the ACMs present

3.5.4 The details of the expected exposure should be recorded and include:

- Data on the concentrations of asbestos fibre likely to be present
- Whether the control limit is likely to be exceeded
- The number of people who could be affected
- The level of expected exposure so that suitable respiratory protective equipment (RPE) and personal protective equipment (PPE) can be selected
- Whether anyone other than the organisations own employees may be exposed
- Whether intermittent higher exposures may arise and their frequency and duration
- Any results from air monitoring available in similar circumstances

3.5.5 The steps taken to control exposure to the lowest level reasonably practicable should be recorded e.g.:



- The type of controlled wetting and method of application
- Using local exhaust ventilation (LEV)
- Wrap and cut techniques (for pipes lagged with asbestos materials that may be identified during future excavations)
- Shadow vacuuming

3.5.6 For licensable work with asbestos there are additional requirements on the risk assessment and these are:

- The reasons for the chosen work methods
- The method or arrangements required to ensure that the work area will be left clean for reoccupation

3.5.7 For the proposed project it will be important for representatives of the Principal Contractor to ensure that risk assessments completed by any contractors engaged are inclusive of the requirements of this section of the strategy and in doing this this will ensure compliance with Regulation 6 of CAR 2012.

3.6 Plans of Work (Regulation 7)

3.6.1 Regulation 7 requires that any employer engaged in the project must prepare a written plan of work (method statement) before works on asbestos is carried out and that a copy of this plan of work is kept at the site where the remediation is being undertaken. The employers must also ensure that the work is adequately supervised to ensure that the plan of work is being followed.

3.6.2 It is likely that the plan of work will contain elements of the risk assessments undertaken in accordance with Section 2.5 and again it is important that these plans are reviewed should they be considered no longer valid i.e. if the scope of the work changes or the type of asbestos-containing material being worked with alters. In addition and where necessary the plan of work should include a site layout drawing, a description of the location and nature of the asbestos present and which asbestos-containing materials will be affected by the work. It is also important that the contents of the plan of work are communicated to any employees undertaking the work.

3.6.3 The plan of work **must** contain the following information:

- The nature and probable duration of the work
- The number of people involved in the work
- The address and location where the work is to be carried out
- The methods to be used to prevent or reduce exposure to asbestos, e.g. prevention and control measures, arrangements for keeping premises and plant clean and arrangements for the handling and disposal of asbestos waste;
- The type of equipment, including PPE and RPE, used for:
- Protecting and decontaminating those carrying out the work;
- Protecting other people present at or near the worksite.



3.6.4 For the proposed project it will be important for representatives of the Principal Contractor to ensure that plans of work completed by any contractors engaged are inclusive of the requirements of this section of the strategy and in doing this this will ensure compliance with Regulation 7 of CAR 2012.

3.7 Notification of Work with Asbestos (Regulation 9)

3.7.1 Regulation 9 may require that the appropriate enforcing authority is notified before any work is undertaken on asbestos.

3.7.2 If the work is deemed licensable following the assessment under Regulation 2 the required notification period will be a statutory 14 days and this notification will be made by the licensed contractor using an on-line ASB5 form.

3.7.3 If the work is deemed not to be licensed under assessment following Regulation 2 but is deemed to be notifiable non-licensed work under assessment following Regulation 3 then the notification must be submitted by the contractor undertaking the work before the work starts (no timescale) and this notification should be submitted on line using form>NNLW1.

3.7.4 Notification is not required for work that is deemed non-licensed work.

3.7.5 The work on the proposed project will be undertaken on a civil engineering / construction site and therefore the relevant enforcing authority will be the Health and Safety Executive (HSE).

3.8 Information, Instruction and Training (Regulation 10)

3.8.1 Regulation 10 requires that anybody who is liable to disturb asbestos in their work or those that supervise such employees receives the correct level of information instruction and training.

3.8.2 As a minimum anyone engaged in working on the site should receive an asbestos awareness course that should include:

- The properties of asbestos and its effects on health, including the increased risk of lung cancer for asbestos workers who smoke
- The types, uses and likely occurrence of asbestos and ACMs in buildings and plant and on the site being worked on.
- The general procedures to be followed to deal with an emergency, e.g. an uncontrolled release of asbestos dust into the workplace
- How to avoid the risks from asbestos

3.8.3 CAR-SOIL 2016, states that asbestos-contaminated sites may be complex in terms of the operations being carried out with various parties involved. Therefore, it is recognised that a LARC may not carry out all connected activities themselves, especially where specialist training skills or other licenses are required for the operation of heavy plant and / or equipment.



- 3.8.4 CAR-SOIL 2016, states with respect to the management of the remediation of land affected by asbestos contamination, competence may be measured by different means. Typically, this will be taken to mean having at least three years demonstrated practical experience in the specific relevant land remediation field.
- 3.8.5 Anyone engaged in non-licensed work or notifiable non-licensed work should undergo additional training and this training should be task specific and related to the project in hand. This training should be refreshed on an annual basis.
- 3.8.6 Licensed contractors engaged in licensed work activities should undergo additional training and this also should include the items detailed in paragraph 251 of CAR 2012. This training should be refreshed on an annual basis.
- 3.8.7 Information provided to the employees undertaking the work and should include the risk assessments and plans of work detailed in Sections 2.5 and 2.6 as well as the results of any air monitoring.
- 3.8.8 For the proposed project it will be important for representatives of the Principal Contractor to ensure that the training required by Regulation 10 is held by those individuals undertaking the work. Ensuring this will ensure compliance with Regulation 10 of CAR 2012.

3.9 Prevention or Reduction of Exposure to Asbestos (Regulation 11)

- 3.9.1 Regulation 11 requires that any exposure to asbestos is prevented so far as is reasonably practicable. For the proposed project work with asbestos will be required and therefore prevention is not possible, it is therefore the duty of any employers engaged in working with the asbestos to ensure that this exposure is as low as is reasonably practicable. Work with asbestos should only be carried out when it is unavoidable.
- 3.9.2 Where it is not reasonably practicable to prevent exposure to asbestos the levels of airborne asbestos fibres must be reduced to the lowest level reasonably practicable by means other than Respiratory Protective Equipment (RPE) in usual circumstance this will mean the use of other methods of control e.g. controlled wetting will be required. These control measures must be documented in the risk assessments or plans of work described in Section 2.5 and 2.6 above.
- 3.9.3 Any employers engaged in undertaking asbestos work should ensure that those people involved and who might be exposed to asbestos as low as is reasonably practicable.
- 3.9.4 Reduction of exposure to asbestos is likely to include the provision of personal protective equipment (PPE) and possibly respiratory protective equipment (RPE). In particular it is important that this RPE is matched to:
- The job
 - The environment



- The anticipated maximum exposure
- The wearer (taking into account facial hair and glasses)
- Compatible with other PPE

3.9.5 It is important that RPE with tight fitting face-pieces i.e. disposable masks, half face or nasal respirators and full face respirators are initially provided with a face fit test by a competent organisation. The fit test should be repeated whenever changing to a different model of RPE or where the characteristics of the wearer significantly change e.g. significant weight gain or loss.

3.10 Use of Control Measures (Regulation 12)

3.10.1 Regulation 12 requires that any equipment used as a form of control measure is effective and this should include regular checks which should be at least at the start of every shift. If a problem is identified with the control measure it is important that prompt action is taken to rectify the problem.

3.10.2 A record of inspections should be kept on site for inspection by the enforcing authorities.

3.10.3 Further information pertaining to each particular type of control measure is detailed within CAR 2012.

3.11 Arrangement to Deal with Accidents, Incidents and Emergencies (Regulation 15)

3.11.1 Regulation 15 requires that any employer who is undertaking work with asbestos to prepare procedures on what to do if there is an accidental, unplanned or uncontrolled release of asbestos fibre.

3.11.2 In all cases where there has been an uncontrolled release of asbestos materials the employer should take steps to:

- Warn people who may be affected
- Exclude people from the area, who are not needed to deal with the release
- Identify the cause of the uncontrolled release
- Regain adequate control as soon as possible

3.11.3 In particular, employers must make sure that:

- Anyone in the work area affected who is not wearing PPE, including RPE, leaves that area immediately
- Arrangements are made to decontaminate anyone who is contaminated with dust and debris
- Any clothing or PPE is decontaminated or disposed of as contaminated waste;
- Measures are taken to contain and reduce fibre release.



3.12 Duty to Prevent the Spread of Asbestos (Regulation 16)

- 3.12.1 Regulation 16 requires that any employer who is undertaking work with asbestos to prevent or where this is not possible reduce to the lowest level reasonably practicable the spread of asbestos. This will involve using control measure and safe systems of work that facilitate this.
- 3.12.2 Preventing spread usually includes the construction of an asbestos enclosure however in projects that involve the movement and excavation of large volumes of earth and land using heavy plant and equipment the use of an enclosure is likely not to be reasonably practicable, for this reason it is imperative that suitable control measures as required by Regulation 13 (see section 2.10) and validation of the control measures being used by utilising an appropriate reassurance and personal air monitoring strategy are included in the working method.
- 3.12.3 Even though an enclosure is not being used to prevent the spread of asbestos it is important that boundaries of any work areas are clearly defined using physical obstructions such as ropes, barriers or fencing. It is also important that these work areas are suitably signed.
- 3.12.4 In order to further prevent the spread of asbestos it is essential that suitable primary and full decontamination procedures are used as applicable in order to avoid further spread and that hygiene facilities are used correctly where appropriate.
- 3.12.5 In particular for licensable work in open air where it is not practicable to enclose the work area the risk assessment should establish what will be required to ensure that, as far as is reasonably practicable the spread of asbestos is prevented and the work area cleaned and in addition air monitoring will be required to ensure that asbestos fibres are not being spread from the work area.

3.13 Cleanliness of Premises and Plant (Regulation 17)

- 3.13.1 Regulation 17 requires that any employer who is undertaking work with asbestos ensures that any asbestos dust or debris is regularly cleaned up. In particular procedures will need to be set up to clean:
- Work areas including transit and waste routes
 - Plant and equipment
 - Hygiene facilities
- 3.13.2 A site validation procedure will be required particularly for licensable work with asbestos this will need to be proposed and agreed with the regulator and will make reference to the Remediation Method Statement provided by others (if applicable). It is likely that this validation procedure will require inspections by geotechnical consultants, accredited asbestos consultants and will also involve some form of sampling. It is important that the Remediation Method Statement are read in conjunction with this report.



3.14 Prevention or Reduction of Exposure to Asbestos (Regulation 18)

- 3.14.1 Regulation 18 requires that any employer who is undertaking work with asbestos-containing materials are separated and clearly and restricted to only those people required to work in the area. Food and drink must not be consumed in areas where asbestos work is being undertaken.
- 3.14.2 All areas where asbestos work is being undertaken should be segregated and demarcated as asbestos areas except from those areas where the work is completely defined under Regulation 3 (2) as being non-licensed work.
- 3.14.3 For the planned project it is unlikely that asbestos enclosures will be used, however suitable provisions must be made for putting physical barriers in place to prevent people from inadvertently entering and asbestos area.
- 3.14.4 Any area where an employee may be exposed to level of asbestos in the air that would exceed the control limit or the sporadic and low intensity limit must also be as a Respirator Zone and these zones must be marked with suitable warning notices and appropriate PPE and RPE worn.
- 3.14.5 All licensable work with asbestos should be carried out in an area designated as a respirator zone and an asbestos area.
- 3.14.6 Where it is not necessary to segregate an asbestos area or to designate a respirator zone (because the control limit will not be exceeded, or is not liable to be exceeded), RPE will still be required unless it is not reasonably practicable.

3.15 Washing and Changing Facilities (Regulation 23)

- 3.15.1 Regulation 23 requires that adequate washing, changing and storage facilities are provided for employees who are undertaking work with asbestos.
- 3.15.2 Suitable facilities should be provided including:
- Toilet facilities
 - Facilities for washing and changing for non-licensable work
 - Full hygiene facilities for licensable work
 - An area to eat and drink (for licensable work these should be located as close as is reasonably practicable to the hygiene facilities).
 - Hygiene facilities must meet the requirement of Paragraph 523 of CAR 2012.



4. SPECIFIC RISK ASSESSMENT & STRATEGY FOR ASBESTOS MANAGEMENT

4.0.1 This section of the document outlines the specific requirements for the management and remediation of asbestos at the site.

4.1 Control of Asbestos Regulations 2012

4.1.1 All employees who will be working on the site should have received suitable training. It is recommended that the training delivered is as detailed below:

- Principal Contractor and Site Managers - Asbestos awareness with additional module to cover personal decontamination procedures and the ACM's present on site and proposed work methodology
- Earthworks contractor - Asbestos awareness training
- Licensed contractor - Training for licensed work with asbestos, ensure refreshed within the past year

4.2 Plan of Work

4.2.1 Any organisation involved in excavating, moving or removal of material that is affected by asbestos contamination should prepare a plan of work and a risk assessment in accordance with Regulations 7 and 6 of CAR 2012 respectively.

4.3 Site Specific Risk Assessment

4.3.1 One of the samples tested by Curtins as part of site investigation works proved positive for the presence of asbestos.

4.3.2 To further assess potential risks associated with asbestos, asbestos quantification testing was carried out on the one sample by Curtins.

4.3.3 The location of the positive asbestos sample, the type of asbestos contained within the positive sample, the quantification result, and the work category (see below) for each sample is provided within the table below:

Consultancy	Location	Asbestos Type/Matrix Description	Quantification Result
Curtins	WS2B (0.45 m) Outside of site boundary	Chrysotile cement	0.959%

Table 4: Summary of Asbestos Quantification Testing in Positive Samples

4.3.4 Based on all data relating to the presence of asbestos in soils, BEK considers that asbestos is generally absent across the majority of the site. However, Chrysotile – Cement asbestos was locally present in WS2B (0.45 m). Furthermore, this location is located outside of the site boundary. BEK cannot rule out the further localised presence of asbestos across the remainder of the site.



- 4.3.5 Additional testing confirmed that the asbestos concentrations within the sample (WS2B – 0.45m) was 0.959%.

Assignment of Work Category

- 4.3.6 Specific precautions will be required to protect the end user from the asbestos contaminated made ground at the site. These precautions are outlined within the BEK, Remediation & Enabling Works Strategy for the site which should be read in conjunction with this report.
- 4.3.7 In order to assign the appropriate work category to any future groundworks with the asbestos containing soils at the site, BEK has input site specific information for each positive soil sample into the 'Joint Industry and Working Group' (JIWG) risk scoring algorithm for work categories. Where parameters were unknown, the most conservative data was input into the algorithm.

Location, Depth & Strata	Asbestos Type/Matrix Description	Quantification Result (% w/w)	Work Category
WS2B (0.45 m)	Chrysotile Cement	0.959	Non-Licensed Works

Table 5: Summary of Work Categories works with Asbestos Containing Soils at the site

- 4.3.8 In order to assign the appropriate work category to any future groundworks with the asbestos containing soils at the site, BEK has input site specific information for each positive soil sample into the 'Joint Industry and Working Group' (JIWG) risk scoring algorithm for work categories. Where parameters were unknown, the most conservative data was input into the algorithm.
- 4.3.9 Further consideration should be given to the presence of an asbestos cement piece within WS2B (0.45 m).
- 4.3.10 Based on the asbestos type, quantity (as % of host material), level of deterioration present and works to be carried out, BEK considers works with the chrysotile cement encountered within WS2B (0.45 m) encountered at a concentration of 0.959 % should be regarded as non-notifiable non-licensed works providing that the works are to be low intensity where minimal deterioration is expected (i.e disposal off-site/careful re-location on site under working method statements).
- 4.3.11 Should there be a requirement (not anticipated) to carry out high intensity works (where significant deterioration is expected i.e crushing/screening of C& D materials) on the soils recovered from in the vicinity of the chrysotile asbestos cement encountered within the borehole location of WS2B (0.45 m) then consideration should be given to revision of the work category to notifiable non-licensed works. If this is the case, the contractor will need to carry out all actions required for notifiable non-licensed works.



- 4.3.12 The CAR-SOIL Control of Asbestos Regulations 2012 indicates that a common-sense approach to decide whether work can be low intensity work should be taken. For example, this type of work could include mechanical excavation of soils, but would almost certainly not include mechanical crushing and/or screening of C&D materials.
- 4.3.13 It will be the responsibility of the earthworks contractor to produce a working method statement which ensure works are of low intensity (with minimal deterioration expected) when dealing with asbestos containing soils. For the purpose of this assessment, it has been assumed that the mechanical removal of the asbestos containing soils will result in no or minimal deterioration of the asbestos containing material. However, if the groundworks are likely to result in significant deterioration of asbestos containing soils then this management plan should be subject to review.
- 4.3.14 If significant quantities of degraded asbestos cement are encountered within the vicinity of WS2B (0.45 m) or if evidence of asbestos containing materials not anticipated to be present at the site (based on sampling to date) is encountered, it will be prudent to re-review this AMP to ensure that UK guidance and legislation is adhered to throughout the duration of the works.

Summary

- 4.3.15 Based on the testing carried out the majority of the site soils is devoid of asbestos. However, Chrysotile – Cement asbestos was locally present in WS2B (0.45 m).
- 4.3.16 Based on the currently available information BEK cannot rule out the further localised presence of low-level asbestos across the remainder of the site. Based on site investigation data and the assessment herein, BEK recommends works with all site soils should be regarded as non-notifiable and non-licensed.

4.4 Recommendations

- 4.4.1 Taking the above into consideration, BEK recommends the following works are carried out:
- Based on the testing carried out, CAR Regulations do not apply to the majority of the made ground across of the site.
 - Works with made ground in the locations encompassing WS2B should be regarded as non-licensed. A EN149 type FFP3 disposable mask, dust suppression measures and basic decontamination facilities is recommended to be provided by the contractor for non-licensed work activities at the site.
 - Should there be a requirement (not anticipated) to carry out high intensity works (where significant deterioration is expected) in the vicinity of WS2B (0.45 m) or any possible future area regarded as non-licensed then the contractor will need to stop works immediately, inform BEK and this management plan should be subject to review.



- We would recommend that the contractor produces working method statements which ensure works are of low intensity (with minimal deterioration expected) where these are intended to be carried out.
- During the movement of / or work with any material affected by asbestos or the excavation of any area where asbestos is expected it will be important in order to prevent exposure to (and the spread of) asbestos that the material is kept adequately wet using a suitable dust suppression system. It is important to note the term adequately wet and ensure that dampening down the work area does not result in the soils and other material becoming an unmanageable slurry.
- Consideration may also need to be given to general arrangements for the management of the site such as management of stockpiles, segregation areas, road wetting and road cleaning as appropriate.
- Groundworkers should remain vigilant to the presence of asbestos. If evidence of (suspected) asbestos containing materials is encountered during the earthworks, works should cease and specialist advice should be sought. If significant quantities of asbestos-containing materials are identified during works it may be prudent to ensure that these are covered over using polythene in order to prevent the spread of asbestos, this will be of particular importance if material is to be left at the end of a working shift on dry days.
- All employees who will be working on the site should have received suitable training which as a minimum should include asbestos awareness training.
- Any organisation involved in excavating, moving or removal of material that is affected by asbestos contamination should prepare a plan of work and a risk assessment in accordance with Regulations 7 and 6 of CAR 2012 respectively.
- It may also be necessary to utilise a “watching brief” during future excavation works in areas where asbestos-containing materials are suspected. This will be with the view to identify any potential asbestos-containing materials.
- All remediation works should be carried out in accordance with the BEK Remediation Strategy
- If evidence of asbestos containing materials not anticipated to be present at the site (based on sampling to date) is encountered, it will be prudent to re-review this AMP to ensure that UK guidance and legislation is adhered to throughout the duration of the works.



5. GENERAL STRATEGY RELATING TO WASTE/RE-USE OF MATERIALS

5.1 Material Re-use

5.1.1 It is the desire of all stakeholders to re-use some of the excavated and stockpiled material on site. In considering whether this is possible or not the client has instructed a Remediation Method Statement to be written to cover contaminants other than asbestos. The strategy for re-use and potential disposal of material as waste including the specific requirements for asbestos will be developed by a multidisciplinary team consisting of representatives from the Principal Contractor, the Geo-environmental Consultancy and Asbestos Consultancy.

5.1.2 The proposed reuse of materials may follow the guidance detailed in:

- The Hazardous Waste Regulations 2005
- Guidance on the classification and assessment of waste (1st Edition 2015), Technical guidance WM3
- CL:AIRE, The Definition of Waste: Development Industry Code of Practice

5.1.3 Depending on the sites involved and the nature of the projects other options may be more appropriate than using this Code of Practice in excavating and reusing those materials, for example:

- Waste Exemptions
- Standard Rules Environmental
- Bespoke Environmental Permit
- WRAP Aggregates Quality Protocol

5.1.4 Any material intended not to be re-used on site will be assessed using multiple lines of evidence and removed from site appropriately.

APPENDIX A

Drawings

