



Client:

JC Brennan Developments Limited
74 Dickenson Road
Rusholme
Manchester
M14 5HF.

Architect/Consultant

Remediation Strategy & Deployment Plan

Church Avenue, Middleton

June 2026

Site Ref: 6192/VCA-RSDP v1.00

Unit 4
Sheffield Street
Heaton Norris
Stockport
Cheshire
SK4 1RU
Telephone : 0161 480 8885
e-mail : info@geoassist.co.uk

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Appendices

- A1. Site Plan & Exploratory Hole Locations
- A2. Proposed Remediation Plan Extents

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Remediation Strategy and Deployment Plan

1. Introduction

This report contains the details of the Remediation Strategy and Deployment Plan to be undertaken across the site at Church Avenue, Middleton. The work was commissioned following acceptance of the quotation and an instruction to proceed issued by the Client JC Brennan Developments Limited.

The purpose of this report is to provide adequate detail to ensure that the Site is remediated to an appropriate level for the intended land use following the conclusions of a Phase II Contaminated Land Risk Assessment report and Addendum.

The approximate grid reference for the centre of the site is E388570, N408810 and the total area of the site is approximately 1,600m². The approximate area of the Site is outlined with a solid red line on the Site plan in Appendix A1. The positions of exploratory holes are also indicated on the plan.

2. Description of the Site

2.1 Present

See Phase II Report

2.2 Proposed

It is understood that the proposed development incorporates:

- It is understood that the proposed development incorporates the erection of five detached residential dwelling houses with associated private gardens, off road parking and a shared access road.

3. Review Of Previous Reports

The following site investigation reports and advice notes are known to have been produced for this site and have been referenced where considered appropriate. A brief description of the information contained within is also provided.

Author	Date	Ref	Title / description
Oakshire Limited	June 2025	-	Phase I Preliminary Risk Assessment
GeoAssist Ltd	Sept 2025	6192/VCA CLRA v1.00	Phase II Contaminated Land Risk Assessment.
GeoAssist Ltd	June 2026	6192/VCA A-CLRA v1.00	Phase II Contaminated Land Risk Assessment. ADDENDUM Additional sampling around WS4 (elevated Lead)

4. Conceptual Model

The conceptual model as originally presented within the GeoAssist Ltd Phase II Report Referenced 6161/VGH CLRA v1.00 and dated Nov 2023 is presented in table 1.0 below:

Table Conceptual Site Model.

Potential Source /Hazard	Nature of Hazard (Risk Level to site given a Residential end use	Contaminants Associated with Source	Potential Pathway	Potential Receptor
Previous & Present ON SITE Land uses:				
1. Allotment Gardens	Ground contamination Low to Moderate Risk	Lead in WS4 only	Dermal Contact Ingestion Inhalation	Site End Users Construction workers Controlled Waters
	Gas from in-filled ground / natural organic deposits Low Risk NHBC Green & Ciria C665 CS1	Carbon Dioxide <3% Methane = Nil	Vertical and Lateral Migration	Site Users Future Buildings & Services
Previous OFF SITE land uses within 250m as indicated by Historical Plans Including:				
3. Coal Workings & Brine Extraction	Geotechnical Hazard	None	Ground Collapse Subsidence	Humans (site users) Future Buildings & Services
	Ground contamination Low Risk	None	None	Site Users Services
	Mine Gas Low Risk	None	None	Humans (site users) Future Buildings

5. Remediation Strategy

5.1 Objectives

The Phase II Contaminated Land Risk Assessment and Ground Gas Risk Assessment have identified potentially unacceptable risks to human health associated with an elevated level of Lead found to be present within ground at the location of WS4 and additional TP3 at the site. Elsewhere across the site laboratory analysis has demonstrated that the soils do not pose a risk to the environment or site users. The geographical extent of the exceedances are limited to a localised area and indicate that the source is not likely to be from a significant spill or pollution incident

and most probably represents a hotspot in the upper topsoil/made ground and does not appear to represent a wider issue.

The soils risks were identified using the C4SLs “minimum or tolerable” risk generic assessment criteria approach for residential with home grown produce with plant uptake. Where samples were found to exceed the assessment criteria and a potential pollutant linkage identified, a decision to manage the risk through appropriate remedial measures has been taken.

The objective of the proposed remediation strategy is to ensure that unacceptable risks associated with the identified elevated contaminants are mitigated to a negligible level or managed to an acceptable level post development. The type and nature of the contamination can thus be summarized as follows.

Occurrence of an elevated level of Lead exceeding the Assessment Criteria for Residential with home grown produce uptake within the upper 0.30m in the area of WS4 and the immediate surrounds.

5.2 Details of Proposed Works

5.2.1 Soils & Capping in Landscaped Areas

The site specific remediation methodology selected for this site is based on the most effective, practicable and durable solution available not entailing excessive cost and also takes account of the current position on site and proposed construction program for the site moving forward. The remediation methodology to be used is one of a simple engineered approach by restricting access to the source of the contaminants of concern by utilizing a clean capping layer in affected gardens and soft landscaped areas. This will be achieved through the groundworks phase of the construction as a simple controlled earthworks operation and will remove the top 600mm of made ground from the affected soft landscaped areas of the site and replace to a minimum depth of 600mm with a suitable subsoil and topsoil material. This approach will also prevent end user access to the contaminants of concern by means of capping with a suitable clean inert material. The clean soils for soft landscaped areas can be a combination of 1st generation aggregate used as a capillary break layer topped with a suitably clean subsoil and capped with a topsoil growth medium. The proposed remediation treatment needs to be applied to the landscaped areas of the site highlighted in magenta hatching in the plan which forms appendix A2 to this report. It should be noted that if the proposed plans for the site significantly change then the remediation proposals will need to be reviewed to confirm that they are still applicable. The area of the site covered by the proposed soils remedial treatment is approximately 80m² to 85m² and covers the soft landscaped area to the rear garden aspect of Plot 3 only. Remediation will be achieved using standard 360 backhoe excavation plant. Deposits will be excavated and loaded into 8 wheel tippers with dust covers and taken off site to an appropriate materials handling facility. Any Foundation arisings in made ground will be treated in the same manner as the earthworks for remediation and should not be reused on site. The disposal operation will be conducted under a subcontract with a registered waste carrier and all documentation regarding both the removal of waste soils from site and importation of inert capping materials to site should be retained by the developer. The remediation treatment is not required within the road area or beneath hardstanding. Although there is likely to be coincidental excavation of upper deposits and replacement with MOT sub base in these areas anyway.

5.3 Details of Type and Form of Contamination to be Remediated

The elevated levels of contamination identified were found to be present in the relatively shallow mixed zone between the topsoil and upper clay strata typically within the top 0.40m. The type and nature of the contamination can thus be summarized as such;

Table Summary of Type and form of contamination to be remediated.

Determinand	GAC (mg/kg) Res	Total No. of tests / No. of tests in impacted strata (Made Ground)	No of samples exceeding SGV/GAC/C4SL	Max Value (mg/kg)	Locations and depths of exceeding samples (m)	Soil Type	Further action required
Lead	200	14/2	2	430	WS4 TPC 0.30	Mixed Topsoil and Upper Clay Deposits	Yes – See Remediation Plan Details

Full details of the present ground conditions on the site are provided in the exploratory hole logs within the Phase II risk assessment as referenced in section 3.0 of this report.

6. Site Management Procedures

6.1 Details of Consents & Licenses

All contractors engaged by client in relation to remediation will have appropriate licenses in place where required.

At present contracts have not been let:

WASTE PRODUCER			WASTE CARRIER			DISPOSAL SITE		
Contractor	Waste Stream (Generated)	(Permitted) EWC Code (s)	Name	Registration No.	Registration Expiry Date	Disposer Name	Licence No.	Disposal Facility (Transfer / Recycling / Landfill / Exempt Site)
Principal Contractor	<u>General Waste</u> <u>Skip</u> (Mixed Construction Waste)	15 01 06/ 17 01 07/ 17 02 01/ 17 02 02/ 17 02 03/ 17 04 07/ 17 05 04/ 17 06 04/ 17 08 02/ 17 09 04/		TBC			TBC	
Principal Contractor	<u>General Waste</u> <u>Soils</u>	17 02 01/ 17 02 02/ 17 02 03/ 17 04 07/ 17 05 04/ 17 06 04/ 17 08 02/ 17 09 04/		TBC			TBC	

6.2 Site Waste Management Plan

A range of measures will be adhered to during the construction process to mitigate against commonly encountered risks on construction sites. These mitigation measures centre on the standard requirements for construction contractors with regard to the protection of site operatives, the general public and wider environment when developing sites.

A single source (mixed zone topsoil and Clay) of potential contamination has been identified by the ground investigation that could have an impact on human receptors. Impacts are likely to be restricted to direct contact only with a low risk to the wider environment and off-site receptors as a consequence of the limited volume of the identified source material, the marginal nature of the exceedances and the limited mobility of the contaminants identified.

Standard measures, which are typically applied on construction sites, will be employed during construction to prevent and minimise the release of potentially contaminated materials into the environment from their original source location.

Such measures will include the following:

- The use of personal protective equipment and respiratory protective equipment for construction workers where necessary.
- Dust suppression measures where necessary, in order to prevent the generation of dust on, and migration of dust off-site. This is likely to take the form of damping down using road sweeping plant or hoses.
- Bunded containment of fuel for construction plant if on site and appropriately controlled refuelling areas with drip mats / trays where applicable
- The provision of emergency spill kits for fuel and oils
- The provision of environmental awareness training for site workers including awareness of the findings of the Phase II ground investigation and this remediation strategy, in the form of onsite “tool box talks”

6.3 Watching Brief

Careful observations should be made during foundation and landscaping works and the developer must keep a photographic record as the site progresses to confirm the current assessment of site conditions. Any evidence of additional contamination not previously identified and reported will be brought to the attention of the LPA as soon as is practicably possible.

6.4 Variations/Deviations from the Deployment Plan

Any variation from the approved remediation strategy shall be reported in writing to the LPA as soon as is practicably possible, by an appropriately qualified person detailing what, if any, actions have been taken along with a justification for the decisions taken. Where actions have not yet been taken a method to deal with the variation will be provided. Where appropriate, photographic and or written evidence supporting such decisions should be provided within the verification report.

7. Validation & Verification of Remedial Measures

7.1 Objectives

To provide evidence to demonstrate that the remediation deployment plan has been implemented as per the methods of the remediation strategy and deployment plan and thereby the remediation has been successful, and the risks managed to the desired level or mitigated in the whole.

7.2 Sampling Strategy & Lines of Evidence

In this instance, a soil sampling strategy will be required to demonstrate that the objectives of the remediation strategy have been met and that soils remaining on site are suitable for use. Waste Transfer Notes for all soils waste leaving site will be included within the verification report and will be retained in accordance with the law. Elsewhere the use of site notes and photographs from the site engineer and watching brief site visits during the earthworks and foundation installation will be utilised where appropriate.

7.3 Post Remediation Analysis and Targets

Across the affected areas of the site, areas of landscaping will need to conform to the specification indicated in Figure 7.0.

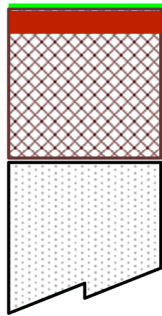
Imported none 1st generation materials must be tested at a rate of not less than 1 sample per 50m³, a minimum of 3 samples per source will be tested to ensure they meet assessment criteria provided in Table 7.0.

For the most part the “Clean Up” criteria is based on EA Soil Guideline Values (SGVs), The Category 4 Screening Levels (C4SL) and Suitable for Use (S4U) assessment criteria published by Land Quality Management. These are considered to be appropriately protective of human health for the residential land use with home grown produce. The values are based on a sandy loam soil with a 6% soil organic matter (6%SOM) content. Soil Organic Matter content will be confirmed for the imported soils and where significant deviation from the 6% SOM occurs then GAC may be adjusted if the analysis is pertinent to the assessment ie levels are at, or very close to the upper limits and likely to impact the outcome.

Where LQM criteria are not available other equally health protective criteria derived using the UK methodology have been utilised from sources as indicated within Table 7.0.

Capping Material Specifications

 **Formation Level - Required Remediation Specification for Soft Landscaped Areas / Residential Garden**



0.60 Suitable 1st Gen (untested) or Recycle Agg (tested)
Shall include 100mm of topsoil (certified and tested)
Rate of Testing: 1 test result per 50m³ imported.

Natural Soils (Clay)

A minimum of three samples per source of imported non first generation soils is required

Figure 7.0 Material Import Specifications

Delivery notes for imported soil materials must be retained and incorporated into the verification and validation report. Photographic evidence of the insitu soils must also be provided clearly showing the depth of removal and depth of placement of imported materials.

Table 7.0 Material Import “Clean Up” Criteria

i2 Reference Customer Sample Ref:	Residential HGP C4SL / S4UL SOM 6% GAC LQM II
Determinand	
Arsenic	27
Boron (water-soluble)	290
Cadmium	22
Chromium*	910
Chromium VI	21
Copper	2400
Cyanide(Total)	-
Cyanide(free)**	34
Lead	200
Mercury	1.2
Nickel	130
pH	-
Phenols(Mono)	1100
Selenium	250
SO4(Total)	-
Sulphide	-
Sulphur(Free)	-
Thiocyanate	-
Zinc	3700
Acenaphthene	1100
Acenaphthylene	920
Anthracene	11000
Benzo(a)Anthracene	-
Benzo(a)Pyrene SM	5
Benzo(b)Fluoranthene	-
Benzo(ghi)Perylene	-
Benzo(k)Fluoranthene	-
Chrysene	-
Dibenzo(ah)Anthracene	-
Fluoranthene	890
Fluorene	860
Indeno(123-cd)Pyrene	-
Naphthalene	13
Phenanthrene	440
Pyrene	2000
PAH(total)	500
Asbestos	Not-detected
SOM	-

*Criteria Assumes Chromium III

**Criteria is derived considering acute effects on 1-2yo Female Receptor ingesting a single dose of 3g of soil

7.4 Verification Report

Upon substantial completion of the project a verification report containing the lines of evidence and test results discussed in Section 7.2 and 7.3 herein, shall be submitted to the LPA along with a completion statement confirming that the development has been subjected to the remediation strategy detailed herein and has met the stated objectives. It is the duty of the developer to maintain adequate lines of evidence that work has been completed in accordance with this remediation strategy and failure to provide the necessary evidential information such as waste transfer notes, photographs, delivery notes for imported soils and specialist membrane installation certification will lead to planning delays and cost increases in the final completion stages of the development for which the developer will be responsible.



Matthew Benson MSc GMICE
Geotechnical/Environmental Engineer



Mark Richardson MSc CEng MICE
Technical Director

Field investigations have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions are, and can be, variable and have only been tested at isolated locations across the Site. Therefore the potential exists for ground conditions to be encountered which are different to those considered in this report. Chemical analysis was conducted for a number of parameters based on an expert understanding of the historical and operational data available at the time and it should not be inferred or otherwise, that other chemical species are not present.

This report has been prepared by GeoAssist Limited with all reasonable professional skill and care within the terms of the contract with JC Brennan Developments Limited. The report is confidential to JC Brennan Developments Limited, their/the named persons advisors and bankers, and GeoAssist Limited accepts no responsibility of whatever nature to third parties to whom this report may be divulged. GeoAssist Limited owns the copyright in this report. All rights are reserved, and unauthorised use is prohibited. JC Brennan Developments Limited may use the report for their/her/his own purposes.



A1 Site Plan

Site Name	Silo and Outloader Development
Location	Albion Flour Mills, Stockport
GeoAssist Ref	6191VOS
Client	Wm Nelstrop and Co Ltd
	Albion Flour Mills Lancashire Hill Stockport Cheshire SK4 1TZ
Planning Consultant	Scarus Engineering Consultancy Limited
NGR (centre of site)	389335,391130
Production Date	June 2026
Survey Method	
Surveyor	Others
Status	Final v1.00
Base Survey	OSGB36

Do Not Scale

p6191GALv1.00



A2 REM Plan

Site Name	Silo and Outloader Development
Location	Albion Flour Mills, Stockport
GeoAssist Ref	6191VOS
Client	Wm Nelstrop and Co Ltd
	Albion Flour Mills Lancashire Hill Stockport Cheshire SK4 1TZ
Planning Consultant	Scarus Engineering Consultancy Limited
NGR (centre of site)	389335,391130
Production Date	June 2026
Survey Method	
Surveyor	Others
Status	Final v1.00
Base Survey	OSGB36

Do Not Scale