



Haigh Huddleston & Associates

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Our Ref: E25/8253/MD/003

Date: 20 April 2026

FAO Daisy Airstone

Redacted

Dear Madam,

Re: Remediation Method Statement for The Priory, Whitechapel Road, Cleckheaton

1. INTRODUCTION

- 1.1 Haigh Huddleston & Associates have been requested by Highstone Group to provide a remediation statement for the proposed development at The Priory, Whitechapel Road, Cleckheaton.
- 1.2 The purpose of the document is to specify the remediation philosophy for the site and to specify the fill materials that are required for the controlled backfilling and capping of the site.
- 1.3 An initial desk top study was undertaken by Rogers Geotechnical Services Ltd and is detailed in their report ref: C4800/24/E/7331 dated January 2025. Following this, intrusive investigation works were undertaken and are discussed in their report ref: 4800/24/E/7331 dated January 2025 with subsequent gas monitoring discussed in their letter report ref: C4800/24/E/GM dated March 2025. These reports have been utilised to compile this Remediation Statement.
- 1.4 It should be noted that for the duration of the investigation work and gas monitoring that The Priory pub was intact and limited the scope of the site investigations in the central and western areas of the site.

2. RESULTS OF THE INVESTIGATION

- 2.1 The site investigation works generally proved a 0.5-1.65m thick layer of made ground consisting of a mix of macadam chippings, sandstone gravels, crushed brick and gravel and ash. This was underlain by completely weathered siltstone, sandstone and mudstone that was recovered as gravels and gravelly clays.
- 2.2 An thin intact 0.09-0.24m thick coal seam was encountered at 2.47-3.10m below existing ground levels and exhibited no signs of being worked. This is considered unlikely to have been worked in the vicinity of the development.
- 2.3 Three of the four samples taken from site proved elevated levels of a combination of Lead (max 450 mg/kg) or Arsenic (max 43 mg/kg).
- 2.4 In addition to the contamination noted on site, remedial action was required regarding the existing cellars to the public house. It was not possible to

investigate these as the building was intact at the time of the intrusive investigation works and further investigation was recommended.

- 2.5 Gas monitoring was undertaken on six occasions between 10th January 2025 and 3rd March 2025. A maximum methane concentration of 0.1% was recorded, with carbon dioxide varying between 0.1 and 1.1%. A maximum flow rate of 0.1 l/hr was recorded. The site has therefore been characterised as CS1 in accordance with BS8485:2015+A1:2019 and no gas protection measures are required.

2.8 REVISED CONCEPTUAL MODEL

- 2.8.1 In the RGS Desk Top Study dated January 2025 it was noted that there was a low-moderate risk to residents and neighbours from made ground associated with the historical use of the site as a pub.
- 2.8.2 Site investigation works have proved the made ground on site to have elevated levels of Arsenic and Lead when compared to the levels for residential use with plant uptake.
- 2.8.3 The development of the site therefore exposes the developers and future site users to the following risks:
- i) Existing cellars affecting proposed foundations.
 - ii) Elevated levels of contaminants within the made ground on site.
- The risk to the developers and future site residents is therefore considered to be low and remediation measures will be required to address there.

2.9 REMEDIATION OBJECTIVES

- 2.9.1 From the above, the remediation works required can be stated as follows:
- Contaminated made ground to be relocated below areas of hardstanding or to be removed from site to accommodate a clean capping layer.
 - Extent of existing cellars to be surveyed prior to backfilling
 - Site to be re-levelled to suit final ground levels
 - Importation of clean topsoil and subsoil to provide a 600mm thick clean growing medium to soft landscaped areas where made ground is retained on site, reducing to 300mm thick clean cover where there is no made ground.

3. REMEDATION PROPOSALS

3.1 REMOVAL OF CONTAMINATED MADE GROUND

- 3.1.1 The made ground on site should be reduced in level to accommodate the proposed 600mm thick clean capping layer or proposed hard standing construction. Where this material cannot be relocated beneath the hardstanding areas, this material should be removed from site.

- 3.1.2 Photographs showing the exposed underlying natural strata and waste transfer tickets confirming the removal of the material from site to a licensed waste transfer facility should be retained for inclusion within a validation report.

3.2 EXISTING CELLARS AND SITE REGRADING

- 3.2.1 The existing building in the western and central area of the site is known to have a cellar. Following demolition works the extent of the cellar should be surveyed to confirm if the foundations to the proposed properties will be affected and further remedial works required.
- 3.2.2 in addition to this, due to the existing steep drop in levels to the north eastern and eastern boundaries of the site, it will be necessary to raise ground levels to form usable garden and parking areas on the site.
- 3.2.3 If there is insufficient suitable site won material to infill the former cellar, If there is insufficient site-won material to achieve this, clean 6F2 will need to be imported to site to raise the ground levels.
- 3.2.4 Site levels should be re-graded to 300mm below proposed final ground where clean imported fill is used to raise levels to accommodate a minimum 300mm thickness of clean topsoils and subsoils. Beneath areas of hardstanding the final levels should be adjusted to accommodate driveway construction.

3.3 CLEAN CAPPING LAYER

- 3.3.1 As there is no clean topsoil on site, clean topsoil will need to be imported to provide a minimum 300mm thick growing medium to soft landscaped areas where there is no made ground present.
- 3.3.2 Where made ground remains on site, a 600mm clean capping layer formed of 300mm of topsoil and 300mm of subsoil will be required. Where there is no underlying made ground, the clean capping layer can be reduced to 300m of topsoil.
- 3.3.3 All imported material to be used for the capping/topsoil layer should be uncontaminated and comply with the specification for Engineering Fill. All imported material should be tested for the full range of contaminants listed to the rear of this report. Only material found to be below published trigger levels should be deemed uncontaminated and accepted for use on site.
- 3.3.4 If the imported material is from a Greenfield site, a minimum of 3 samples or 1 per 250m³ of imported material should be taken for testing, whichever is greater. If it is from a brownfield site, a minimum of 6 samples, or 1 per 100m³ of imported material should be taken for testing, whichever is greater. Material provided by a commercial supplier should be certified to the same level of testing, with the certificate less than two months old.
- 3.3.5 All imported certified material should be placed immediately. If this is not possible, or the material is not certified and sampling is to be carried out prior to

being laid, it should be securely stored on site prior to use to prevent possible contamination from any materials on site.

4. REMEDIATION VALIDATION

- 4.1 Photographic evidence to be recorded of the excavation of all contaminated material and waste transfer tickets provided and submitted to the local authority and warranty provider confirming the completion of the works.
- 4.2 If suspected contaminated material is found during remediation works, the independent consultant must be contacted and the extent of it must be established by further testing. All contaminated material must be relocated beneath the building footprint, or beneath the hardstanding away from buried utilities. Where this is not possible, the material should be removed from site to a licensed waste facility site and replaced by equivalent uncontaminated material.
- 4.3 All imported certified material should be placed immediately. If this is not possible, or the material is not certified and sampling is to be carried out prior to being laid, it should be securely stored on site prior to use to prevent possible contamination from any materials on site.
- 4.4 All site records of material removed from and imported to site should be consolidated into a validation report. The report shall be completed in accordance with 'Yorkshire and Lincolnshire Pollution Advisory Group: Verification Requirements For Cover Systems'.
- 4.5 Trial pits to be undertaken in soft landscaped areas to confirm the depth of clean capping material is in accordance with paragraph 3.3.2.
- 4.6 Clean material imported should be visually inspected to confirm it doesn't contain unsuitable materials (i.e. glass, brick, etc)

We trust that the above is sufficient for your current requirements, however should you need any further information please do not hesitate to contact me direct.

Yours faithfully

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MICHAEL DEAN BSc (Hons) HND

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TIER 1 SOIL GUIDANCE VALUES FOR USE IN DOMESTIC GARDENS
(WITH PLANT UPTAKE)

<u>CONTAMINANT</u>	<u>ICRCL – TTV /</u> <u>DEFRA – SGV</u> <u>MG/KG</u>
Arsenic	37 (4)
Cadmium	22 (4)
Chromium	130 (2)
Lead	200 (4)
Mercury	40 (1,5)
Selenium	250 (1)
Copper	2400 (1)
Nickel	130 (1)
Zinc	3700 (1)
Cyanide (total)	25
Sulphate	0.24% (3)
Sulphide	250
Thiocyanate	50
PAH (Total)	40
TPH (Total)	250
Phenols	280 (1)
PH	6-8
Asbestos	No fibres present

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- (2) DEFRA CLR SGV's withdrawn used for initial comparison
- (3) BS 8110 1985 Table 6.1
- (4) Category 4 Screening Level
- (5) Unless there is considered to be historical site usage that would result in elemental and methylmercury compounds to be present, the inorganic mercury SGV is used as this is the most prevalent form of mercury present in the natural environment.

**TIER 1 SOIL GUIDANCE VALUES FOR USE IN DOMESTIC GARDENS WITH
PLANT UPTAKE (SPECIATED PAH)**

<u>CONTAMINANT</u>	<u>SCREENING CRITERIA FOR PAH (mg/kg)</u>		
	1% SOM	2.5% SOM	6% SOM
Acenaphthlene	210 (1)	510 (1)	1100 (1)
Acenaphthylene	170 (1)	420 (1)	920 (1)
Anthracene	2400 (1)	5400 (1)	11000 (1)
Benzo[a]anthracene	7.2 (1)	11 (1)	13 (1)
Benzo(a)pyrene	5 (2)	5 (2)	5 (2)
Benzo[b]fluoranthene	2.6 (1)	3.3 (1)	3.7 (1)
Benzo[ghi]perylene	320 (1)	340 (1)	350 (1)
Benzo[k]fluoranthene	77 (1)	93 (1)	100 (1)
Chrysene	15 (1)	22 (1)	27 (1)
Dibenzo[ah]anthracene	0.24 (1)	0.28 (1)	0.3 (1)
Fluoranthene	280 (1)	560(1)	890 (1)
Fluorene	170 (1)	400 (1)	860 (1)
Indeno[123-cd]pyrene	27 (1)	36 (1)	41 (1)
Naphthalene	2.3 (1)	5.6 (1)	13 (1)
Phenanthrene	95 (1)	220 (1)	440 (1)
Pyrene	620 (1)	1200 (1)	2000 (1)

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(2) Category 4 Screening Level

LQM S4UL SCREENING VALUES FOR SPECIATED TOTAL TPH
(RESIDENTIAL WITH PLANT UPTAKE 1% SOM)

Petroleum Hydrocarbons	LQM S4UL Screening Values (mg/kg)
Aliphatics	
C5-C6	42
C6-C8	100
C8-C10	27
C10-C12	130 (38)
C12-C16	1100 (24)
C16-C35	65000 (8.48)
Aromatics	
C5-C7	70
C7-C8	130
C8-C10	34
C10-C12	74
C12-C16	140
C16-C21	260
C21-C35	1100

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