

- 1.3.4 As the remedial requirements of the project are not inherently complex, an Options Appraisal is not considered necessary. The remediation will in brief, involve clean cover of the soils within the gardens/soft landscaping which have been identified as contaminated. Further details are provided in the following sections of this report.

1.4 Aims and Objectives

- 1.4.1 The principal aim of this report is to satisfy the brief outlined above and thereby provide information to facilitate the safe development of the project.

- 1.4.2 The objectives of this report are outlined below:

- i. Provide the context for the development and this report.
- ii. State the relevant pollutant linkages which require remediation.
- iii. Identify a feasible remediation option to break the pollutant linkage(s).
- iv. Set remediation objectives and criteria.
- v. Outline how the remediation will be implemented.
- vi. Identify any monitoring and maintenance requirements.
- vii. Establish a verification plan.
- viii. Recommend any further works.

1.5 Limitations

- 1.5.1 Soiltechnics disclaims any responsibility to our Client and others in respect of any matters outside the scope of this report. This report has been prepared with reasonable skill, care and diligence in accordance with the terms of our contract, taking account of the manpower, resources, investigations and testing devoted to it by agreement with our Client. This report is confidential to our Client and Soiltechnics accepts no responsibility of whatsoever nature to third parties to whom this report or any part thereof is made known. Any such party relies upon the report at their own risk.

2 Site Conditions and Identified Contamination

2.1 Sources of information

2.1.1 Reference has been made to the following sources of information:

Author	Document Title	Date & Document Reference	Report Context
Soiltechnics	Ground Investigation Report	STV6007-R01 Rev A May 2023	Desk based and intrusive investigation

Table 2-1: Summary of previous reports

2.1.2 An exploratory location plan is included in Appendix A; however, the report should be read in full, in conjunction with this remediation strategy.

2.2 Ground Conditions

2.2.1 The following table summarises the ground conditions across the site.

Topsoil	Soft gravelly clay including brick and natural gravels.	Top Depth Range (m bgl)	Thickness (m)
Topsoil	Soft gravelly clay including brick and natural gravels.	GL	0.2
Made Ground	Gravelly clay and sandy gravels including brick, clinker and sandstone	GL to 0.20	0.8 – 1.5
Alluvium	Firm clayey organic PEAT overlying granular sand and gravel deposits	1.0 – 1.7	0.5 - 1.5
Chester Formation	Reddish brown fine to medium grained SANDSTONE	2.0 - 3.0	ND

Table 2-2: Ground conditions summary

2.2.2 During the ground investigation works, no significant visual or olfactory evidence of contamination was noted, except for the presence of anthropogenic materials contained within the Made Ground (brick, concrete, clinker-like material).

2.2.3 Made Ground was recorded in all boreholes with the exception of WS6. Made Ground was noted to be shallowest in WS2 (0.6m) and deepest in WS5 (1.7m) however was largely variable across the site.

2.2.4 Made Ground was generally recorded as gravelly clay or sandy gravel layers with minor proportions of brick, concrete and clinker. Made Ground was noted to be peaty and/or with an organic odour at the base in WS1, WS2, WS3 and WS5 suggesting reworking of natural ground or mixing of underlying Alluvium strata.

3 Relevant Pollutant Linkages and Outline Strategy

3.1 General

- 3.1.1 The final recommendations from the previous land contamination assessments state that remedial measures are required to break relevant pollutant linkages (RPL) within the Made Ground to ensure the safe use of the site.
- 3.1.2 The relevant pollutant linkages for site end users are identified below.
- 3.1.3 No relevant pollutant linkages were identified for adjacent site users, members of the public, or controlled water receptors.

3.2 End users

3.2.1 Relevant Pollutant Linkage

- 3.2.1.1 Exceedances of PAHs have been identified in 4 out of 6 samples in the north-western half of the site in the area of the former agricultural building and proposed new buildings.
- 3.2.1.2 PAHs present within the Made Ground presents a potential risk of exposure to proposed end users of the site.
- Source: PAHs within proposed soft landscaping areas from historical activities on site.
 - Pathway: Ingestion, inhalation and contact with soils, dusts and vapours
Ingestion, inhalation and contact with soils, dusts and vapours.
 - Receptor: Inhaled and or ingested by end users of the site (residential with plant uptake).

3.2.2 Outline Remedial Strategy

- 3.2.2.1 Where present, the provision of hardstanding areas will sever the pathway to end-users of the site, and no action is considered necessary.
- 3.2.2.2 In all soft landscaped areas that fall within the remediation zone, a cover system of chemically and physically suitable imported soils should be placed to sever the pathway between PAH and metal contamination and end-users, thus breaking the pollutant linkage and reducing the risk to acceptable levels.
- 3.2.2.3 No exceedances of any GAC values were recorded in WS05 and WS06 in the proposed southern garden area and therefore the risk to human health receptors is considered low and no clean cover is required in that area. The remedial requirement for a clean cover is required for the northern half of the site only, as indicated in the zoning plan overleaf.
- 3.2.2.4 The delineation of the remedial area is based on a combination of the placement of exploratory boreholes, field observations of the ground conditions and surface materials, and time-lapse aerial imagery between 2003 to the present day showing the use of the site and different vegetation growth patterns.



Figure 3-A: Remediation Zone Plan