

Remediation Summary  
for  
The Seam, Barnsley



## Proposed Site Enabling and Remediation Phase

The proposed site enabling works and remediation are summarised below:

- Production of a detailed Remediation Strategy and an MMP.
- Production of an Asbestos in Soils Management Plan.
- Management by a suitably qualified remediation manager.
- Watching brief by a geoenvironmental consultant.
- Site clearance, demolition and excavation of slabs and hardstanding.
- Breaking out and excavating relic foundations and other below-ground structures.
- Control of water.
- Excavation and further assessment/treatment of contaminated soils.
- Breaking down and crushing rubble to produce reusable aggregates.
- Disposal of below-ground waste and asbestos-containing materials.
- Earthworks, cut and fill, trimming and compacting surfaces.
- Disposal of surplus soils.
- Placement of site-generated recycled aggregates in capping and piling mats.
- Provision of a Verification Report including laboratory results and as-built drawings.

Following the site clearance, hardstanding will be broken out and stockpiled. Potentially contaminated soils will be excavated under the supervision of the geoenvironmental consultant who will advise of any further treatment before re-use.

Made ground and obstructions will be broken out to 2m below formation levels and surveyed so foundations can be designed accordingly. Existing below-ground structures on the site boundary will be removed where doing so will not undermine adjacent land. Rubble will be crushed, and the resulting aggregates will be stockpiled to construct working platforms.

Following the removal of potentially contaminated soils, soft spots, and obstructions, suitable site-generated soils will be reused as re-engineered fill under an MMP as part of the cut-and-fill exercise. The suitability of fill materials will be assessed following Table 6/1 of the Highways Specification and criteria detailed in the Remediation Strategy. Method compaction shall be undertaken using the plant and methods appropriate to the compaction requirements listed in Table 6/4 (Specification for Highways Works) for the Class of material being compacted. This will achieve a 10% CBR value at the agreed formation levels.

The risk that the residual made ground presents to human health will be mitigated by placing a clean soil cover system or hardstanding, gas and or vapour measures in buildings where recommended. It is assumed existing ground conditions and the proposed works will not pose a risk to controlled waters, therefore, there is no requirement for the treatment of underlying natural strata and groundwater.

### Proposed Construction Phase Remediation Requirements:

- Following the enabling and remediation phase of works an environmental cover system will be required in soft landscaping areas.
- Once the location and depth of potable water pipes are determined, a Water Pipeline Assessment should be conducted. It is likely that a barrier pipe will be required.

- Potential risks associated with future construction works will be mitigated through effective environmental management and the adoption of health and safety precautions in line with HSE guidance by all workers involved in the construction activities.
- If a piled foundation is being considered, it may create a preferential pathway for contaminants to reach the underlying aquifer. Therefore, a piling risk assessment may be necessary. It is crucial to follow best practices for drilling piles on contaminated sites, such as those outlined by the Environment Agency.
- Chemical validation should be conducted for all imported and site-won soils intended for use in soft landscaping areas. Imported soils must be accompanied by a certificate of analysis and detailed source information.
- All remediation and validation work should be documented in a Site Completion Report. The Site Completion Report will allow the discharge of relevant planning conditions.

### **Proposed MMP Verification.**

To finalise the MMP and material reuse process under the CL:AIRE COP, a verification report will be produced. This report will provide an audit trail demonstrating that materials have been reused following the MMP and that unsuitable waste materials have been removed to appropriately licensed facilities.

The verification report will document any changes that may have been made to the MMP resulting from alterations to the project or any contingency arrangements that need to be implemented.

The following information will be included in the verification report:

- Experience and qualifications of the person preparing the report.
- Reference to ground investigation and remediation strategy and suitability for use criteria.
- Site plans, project description and contingency measures.
- Actual reuse/disposal volumes compared to the volumetric estimates.
- Any revisions to the MMP.
- As-built drawings including site surveys of excavation and filling operations (on site of origin).
- Copies of materials tracking forms with volumes of materials used and placement locations.
- Chemical and geotechnical test data for site-won materials that are reused.
- Chemical and geotechnical test data for imported materials.
- Details of how any out-of-specification material was identified and dealt with (if applicable).
- Any amendments to the acceptability criteria and any correspondence with the Environment Agency or the local authority.
- Records of waste soil disposal (e.g., waste transfer notes).
- A plan showing the location of soil chemical test samples (if applicable) with details of any assessment or observation.
- Copies of the Declaration by the Qualified Person.