

Brownfield Development – Asbestos Remediation

Introduction

When this former hospital site became surplus to the requirements of its owners, the majority of the buildings were demolished. The site remained vacant for several years until it was purchased for residential redevelopment.

We were appointed as Consultants to undertake a Phase 1 Contaminative Uses Desk Study and a Phase II Detailed Geotechnical and Environmental Ground Investigation to support the developers planning application.

Investigation

The initial site walk over survey identified the presence of asbestos containing materials (ACM's) within the construction fabric of the remaining buildings and in pipework. The pipework was contained in a maze of ducts, some of which were intact and others partially collapsed, that were distributed across the site. Fill soils on the site also contained loose asbestos cement and insulation materials.

We investigated a phased investigation. A grid system of shallow trial pits was established to assess the nature and extent of the hazardous materials on site, in particular, there was composite sampling and screening for asbestos. The results of this assessment enabled us to place an approach of the H&S risk during later investigation, risk to ground workers / end users / local community and the implications to with regard to possible remediation costs.

In the next phase of the investigation, deeper trial pits were dug to determine the extent of sub surface structures, better coverage to determine the depth of made ground, zoning of site for foundation design and targeting of former areas of the site with potentially contaminative uses. Boreholes were also required for piling information, groundwater monitoring wells and land gas monitoring.

Remediation & Verification

STL proposed a remediation strategy based on a two phase approach. Phase 1 focused on the careful and systematic removal of “point sources” or “hot spots” of ACM's (such as ducts and lagging). Phase 2 concentrated on measures to safeguard future residents, the general public and ground workers from any risks that existed as a result of the low residual levels of ACM's remaining dispersed throughout the made ground. The recommendation included installing a marker layer and deter-to-dig membrane and clean cover for soft landscaped areas.

A specialist Remediation Contractor was appointed to undertake site works. We managed the project and undertook all validation works to obtain regulatory signoff and allow safe development of the site.



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