



Harlington School

Remediation Strategy and Verification Report Update

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Wates
Construction

1. Introduction

This report has been prepared to support the discharge of Planning Condition (iii) relating to the remediation of contaminated land at Harlington School. A verification report was previously submitted as required under part (iii) of the condition; however, following review, the Local Planning Authority (LPA) requested further clarification regarding deviations from the approved Remediation Strategy prepared by RSK Environment Ltd (Report No. 314963 R01).

This document therefore:

- Summarises the original remediation intent
- Provides a detailed account of site conditions encountered during the works
- Sets out the justification for deviations from the approved methodology where required
- Presents verification evidence for all completed remedial activities

Supporting documents including the Structural Soils Technical Note, photographic records, and relevant design drawings are appended and are listed fully in the appendices section at the end of this report.

2. Original Remediation Intent

The RSK Remediation Strategy (Ref. 314963 R01) identified localised asbestos contamination at two locations: WS102 and WS103.

The strategy specified:

- A 5 m × 5 m excavation to 0.6 m depth at each location
- Removal of asbestos-contaminated soils off-site
- Verification sampling and photographic records following reinstatement

The RSK report also stated that some limitations existed due to the presence of made ground and assumptions regarding the extent of landscaping excavation.

The remediation strategy has been designed to minimise risks to human health from the identified active linkages as follows:

- Delineate the impacted areas around WS102 and WS103 through hand excavated inspection pits and asbestos testing. Alternatively, a 5x5m area should be assumed as impacted around each.
- Removal of made ground in the areas of WS102 and WS03 and replacement with an appropriate alternative. Based on the proposed landscaping layout presented within **Figure 3**, WS102 and WS103 are shown to be beneath an access road and parking which would sever the active linkage. However, given that the made ground in these areas is only 0.55 and 0.60m thick respectively it is likely to be removed to facilitate construction of the hard landscaping. It would therefore be prudent to undertake these works in advance of the general groundworks to minimise the risk of cross contamination with non-impacted soils.
- Import of a chemically and physically suitable material as required by for the access and parking construction.

Extract from The RSK Remediation Strategy (Ref. 314963 R01)

1.2 Limitations

This report should be considered in the light of any changes in legislation, statutory requirement or industry practices that may have occurred subsequent to the date of issue.

The Remediation Strategy is based upon previous investigations designed generally to meet the objectives of a main investigation, as defined by BS10175:2011+A2:2017 Code of Practice for the Investigation of Potentially Contaminated Sites. The remediation strategy is therefore based on the ground conditions encountered during the investigation, the results of field and laboratory testing and interpretation between exploratory holes. The material encountered and samples obtained represent a proportion of the materials present on-site, and therefore other conditions may be encountered during the remediation and ground works, which have not been revealed by these investigations.

The Remediation Strategy contains details of the procedures to be adopted for inspection and validation of the works (Verification Plan). However, it should be noted that responsibility for the correct implementation of the strategy lies with the Principal Contractor. RSK cannot be held responsible for any remedial works that are carried out without the agreed procedures involving either direct supervision by RSK, or inspection and verification of the works by a representative from RSK, or if suspect materials are not notified to RSK.

Extract from The RSK Remediation Strategy (Ref. 314963 R01)

3. WS102 – Summary of Site Constraints

3.1 Existing Landscaping Conditions

As indicated on the approved landscape design drawings, WS102 lies within an existing soft-landscaped area intended for retention in the final layout. The area was not proposed for excavation as part of the build works, and therefore the assumptions made within the original remediation strategy did not align with the final design intent.

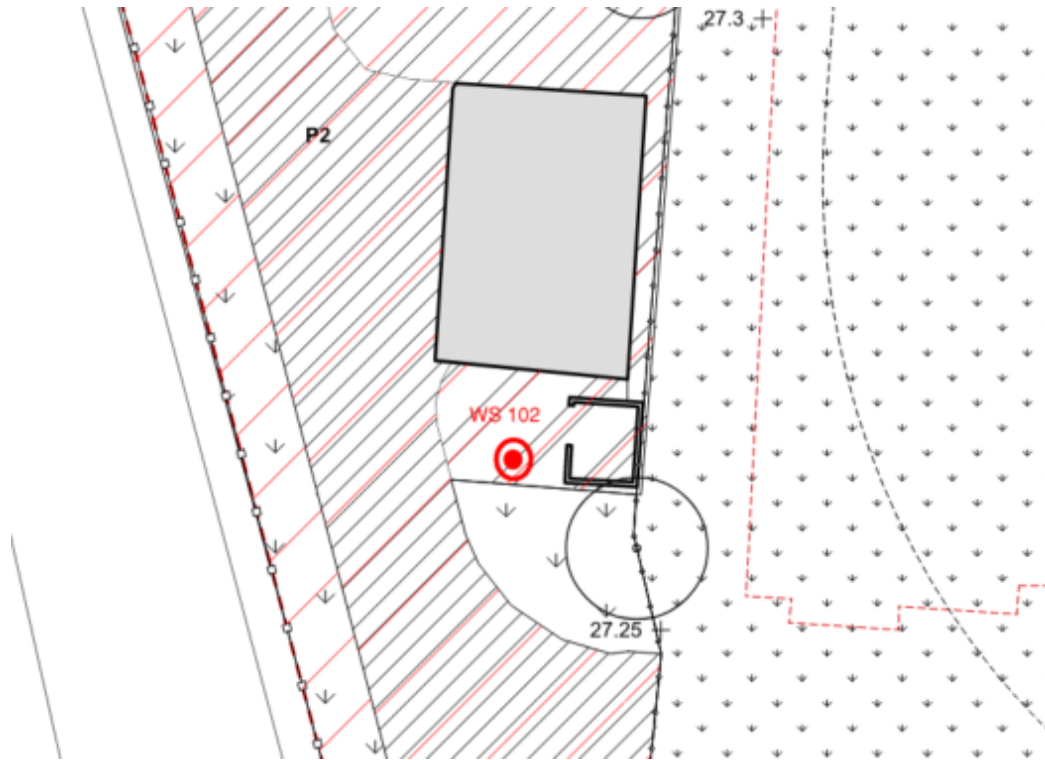


Figure 1 WS102 location in proposed landscaping general arrangement drawing 102451-ALA-00-XX-DR-L-0021



Figure 2 Key extract from propose landscaping general arrangement drawing 102451-ALA-00-XX-DR-L-0021

3.2 Root Protection Area Restrictions

Topographical information confirmed that approximately 30% of the 5 m × 5 m remediation footprint overlapped with the Root Protection Area (RPA) of an established tree. Under BS 5837:2012 – Trees in Relation to Design, Demolition and Construction, excavation

Under HSE HSG47 – Avoiding Danger from Underground Services (2014), intrusive excavation in the vicinity of live services must be minimised and, where unavoidable, undertaken only via carefully controlled methods such as hand digging or vacuum excavation.

However:

- Hand digging within asbestos contaminated soils would conflict with Regulation 11 of the Control of Asbestos Regulations 2012 (CAR 2012), which requires exposure to be prevented or reduced to the lowest practicable level.
- Vacuum excavation is unsuitable due to the risk of fibre contamination of plant and cross-contamination of adjacent ground.

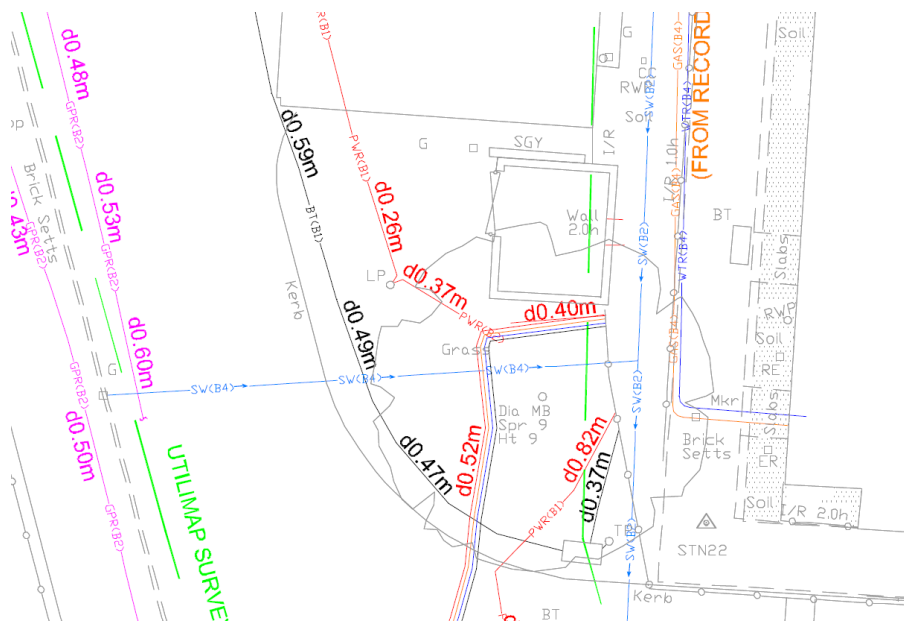


Figure 4 – Extract of GPR existing buried services to remediation zone

3.4 Risk-Based Alternative Remediation Approach

Given the combined constraints—RPZ restrictions, live buried services, and CAR 2012 compliance—the site team concluded that the originally specified excavation was not reasonably practicable.

Following review by Structural Soils Ltd, a risk-based alternative was adopted, this alternative solution which was proposed by Structural Soils and identified in the Appendix 1 – Structural Soils Limited Technical Note 737604-1(00) Preliminary Remediation Validation, was then implemented:

- Capping of the area using a proprietary bonded granular rubber mulch system
- Remediation area increased to approximately 9 m x 12 m, significantly larger than the footprint in the RSK strategy

- Full encapsulation of the impacted soils, consistent with best practice outlined in CIRIA C733 – Asbestos in Soil and Made Ground (2014)

This solution mitigated putting people at risk of asbestos exposure, potential further risk of the extent of asbestos being larger than just the extent of the window sample location and clashing further with the RPZ of the nearby tree, which would then require an encapsulation approach in any case.

Photographs showing the completed encapsulated area are included in Figure 5.



Figure 5 photo of location of WS 102 capped off with proprietary bonded granular rubber mulch

4. WS103 – Remediation Completion

At WS103, the remediation works were carried out in accordance with the approved strategy. The works undertaken are as follows:

- 5 m x 5 m excavation to 0.6 m depth
- Removal of all arisings by a licensed asbestos waste carrier in compliance with the Hazardous Waste Regulations 2005 and the Environmental Protection Act 1990 (Duty of Care)
- Verification samples taken at base and external edges of excavation, to prove extent of contaminated area. Results can be seen in the appendices, confirming no asbestos present.
- Replacement of the excavated area with engineered fill to suit the new road and hard-standing construction
- Photographic verification of excavation, waste arisings, and reinstatement (Figures 6–8)

No soil samples are available because the remediated area was excavated, removed, and subsequently hard-surfaced.



Figure 6 – photo of excavated remedial area of WS 103



Figure 7 – photo of spoil heap / arisings from remediated area of WS 103



Figure 8 - photo of hard surfacing to remediated area of WS 103

5. Verification and Compliance with Planning Condition (iii)

The planning condition requires submission of a comprehensive verification report demonstrating that:

- Approved remediation works have been completed, or
- Where deviations occurred, these were justified and supported by updated risk assessment

This report, together with the appended Structural Soils Technical Note and photographic evidence, demonstrates that:

- WS103 was fully remediated in accordance with the approved methodology
- WS102 required a justified alternative approach due to regulatory, safety, and environmental constraints
- The alternative solution achieves the required level of risk mitigation and complies with CAR 2012, HSG47, BS 5837:2012, and CIRIA C733

6. Summary

This Remediation Strategy Update provides the LPA with a clear and fully evidenced explanation of the remediation works undertaken at Harlington School. Key points are as follows:

- At WS102, regulatory requirements, buried services, and tree protection constraints made invasive excavation unsafe and non-compliant. A larger-area capping solution was implemented, providing long-term encapsulation of the asbestos-contaminated soils.
- At WS103, the works were executed precisely as specified in the approved remediation strategy, with waste removed by licensed carriers and the area reinstated in line with design requirements.
- Verification evidence has been provided for both locations, demonstrating that all risk-based remediation objectives have been met.

On this basis, the remediation works should be considered complete, and Planning Condition (iii) is now capable of full discharge.

Appendices

Appendix 1 – Strucutral Soils Limited Technical Note 737604-1(00) Preliminary Remediation Validation

Appendix 2 – Landscape General Arrangement drawing 102451-ALA-00-XX-DR-L-0021

Appendix 3 – Landscape General Arrangement drawing 102451-ALA-00-XX-DR-L-0024

Appendix 4 - 737604 Harlington School SSL Waste Assessment Letter Report

Appendix 5 - 314963 R01 (00) final RSK remediation strategy