

Contamination Reports



**Residential Development on Coventry Road, Hinckley
Leicestershire, LE10 0JR**

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- 1) Executive Summary
- 2) Hinckley Leisure Centre – Phase 2 Site Investigation Report
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Executive Summary

Planning Application No 25/00354/FUL was granted permission for the construction of a new 72 Bed Residential Care Facility on the former leisure centre off Coventry Road, Hinckley, Leicestershire, LE10 0JR.

The following Planning Condition need to be discharged prior to commencement of work on site:

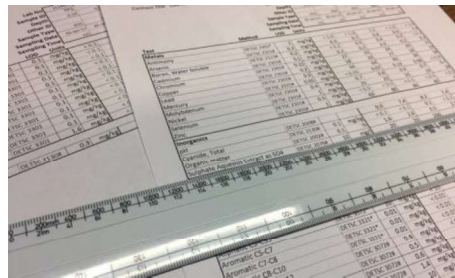
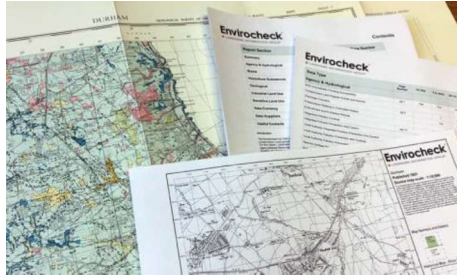
6 - Notwithstanding the submitted Phase 2: Site Investigation no development approved by this permission shall be commenced until a scheme for the investigation of any potential land contamination on the site has been submitted to and agreed in writing by the Local Planning Authority which shall include details of how any contamination shall be dealt with.

b)The approved scheme shall be implemented in accordance with the agreed details and any remediation works so approved shall be carried out prior to the site first being occupied.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised in accordance with Policy DM7 of the adopted Site Allocations and Development Management Policies Development Plan Document (2016).

The document includes two reports prepared by Solmek, Phase 2 Site Investigation Report and Ground Gas Assessment Report which are submitted in respect to discharging Condition 6 stated above.

Hinckley Leisure Centre – Phase 2 Site Investigation Report



Phase 2: Site Investigation

Former Leisure Centre, Hinckley

Green4Planning

M25-040

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PHASE 2 SITE INVESTIGATION REPORT

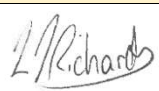
FORMER LEISURE CENTRE, HINCKLEY

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Revision	Date	Prepared By	Signed
Interim	July 2025	A Crane Engineering Geologist	
		Checked By	
		L Richards Associate Director	
		Approved By	
		L Richards Associate Director	

1 EXECUTIVE SUMMARY

Site Address	The Former Hinckley Leisure Centre LE10 0BY
Proposed Development	The site is expected to be developed with new residential units including semidetached housing, apartments and a care home area. All units have associated parking and soft landscaping.
Fieldwork	• 5no small percussive boreholes (BH01 to BH05) drilled to a maximum of 5.45mbgl. • 2no cable percussive boreholes (CP01 & CP02) drilled to a maximum of 20.00mbgl. • 3no monitoring installations installed within BH01, BH03 and CP01.
Ground Conditions	• Made ground was generally uniform across the site and was encountered to a maximum depth of 2.80m bgl within CP01 located centrally within the site. • Proven to underlie the made ground deposits across the site, natural ground generally comprised of interbedded medium dense to very dense sand deposits and stiff to hard sandy to silty medium to high strength clays. • Groundwater was encountered at 4.60m bgl within CP01 and CP02.
Contamination Analysis	• Given the site's proposed residential land use, the levels of contamination recorded on site may not pose a risk to the current and future users of the site. • If any zones of odorous, brightly coloured or suspected contaminated ground or groundwater are encountered then work should cease in that area until the material has been investigated. The results of the investigation will therefore determine whether or not remediation will be required. • Made ground classed as posing a low risk with respect to construction workers. PPE for workers. • Controlled waters unlikely to be at risk. • With respect to utilities pH was elevated; as a minimum all services should be laid in clean trenches. • Sub surface concrete should be designed to DS-1 ACEC (Class AC-1). This assumes mobile groundwater conditions.
Geotechnical Analysis & Foundation Recommendations	• Maximum safe bearing capacity of 200kN/m² for strip foundations 0.60m wide founding on high strength clays at 2.00mbgl. • Locally foundations will need deepening to 3.00m bgl due to made ground depths. • Alternatively, consideration to be given to mini piled foundations. • Normal earthworks plant for excavations.

2 INTRODUCTION

2.1 Authorisation

The site investigation described in this report was carried out by Solmek to the instructions of Green4Planning on The Former Hinckley Leisure Centre LE10 0BY (Figure 1).

Sources of information, including previous work undertaken at the site, are detailed below:

- *Solmek Phase 1 Desk Study Report (S150127) February 2015*
- *Solmek Phase 2 Site Investigation Report (S150127/SI) April 2015*
- *Solmek Ground Gas Assessment Report (S150127/G) May 2015*
- *Solmek Phase 2 Site Investigation Report (S211027) December 2021*
- *Solmek Phase 1 Desk Study Report (M25-040) March 2025*

Reference should be made to the above reports for details of the site's history and environmental setting, the ground conditions encountered, and the results of historical contamination analysis.

2.2 Scope of Works

The site is expected to be developed with new residential units including semidetached housing, apartments and a care home area. All units have associated parking and soft landscaping. The proposed layout is shown as Figure 3.

The following steps may be required in the investigation and remediation of potentially contaminated land:

- Phase 1: Desk Study
- Phase 2: Intrusive Investigation
- Phase 3: Remediation Statement
- Phase 4: Validation Reports

Phases 1 and 2 are generally required in the redevelopment of most sites. Phases 3 and 4 are subject to the findings of the initial stages.

A geotechnical and environmental (Phase 2) investigation including a ground gas risk assessment was requested. The fieldwork and testing was generally carried out according to;

- BS 5930:2015+A1:2020 Code of Practice for Ground Investigations
- BS 10175:2011+A1:2013 Investigation of Potentially Contaminated Sites – Code of Practice.
- CIRIA C665:2007 Assessing Risks Posed by Hazardous Ground Gas to Buildings
- BS 8485:2015+A1:2019 Code of Practice for the Characterization and Remediation from Ground Gas in Affected Developments
- Rock and soil descriptions shall be in accordance with BS EN ISO 14689-1:2003, BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004

This report forms part of a Stage 1 Risk Assessment (Generic Quantitative Risk Assessment) with respect to the Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*.

The information provided in this report is based on the investigation fieldwork and is subject to the comments and approval of the various regulatory authorities. There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Solmek reserve the right to alter conclusions and recommendations should further information be available or provided. Any schematic representation or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

3 SITE DESCRIPTION

A site inspection, as recommended in BS 5930 and BS 10175, was undertaken on the 25th March 2025 as part of a Phase 1 Desk Study. The site is centred at Ordnance Survey Co-ordinates 442350, 293810 and covers approximately 1.13Ha.

The site is irregular in shape, currently disused and derelict. Topography is stepped with three dipping planes across the site all of which are dipping southwards. The largest dipping angle is seen in the south of the site. The ground surface of the site comprises rubble of previously existing building. A section in the west of the site is noticed to be overgrown by shrubs. No trees or buildings were observed across the site.

The perimeter of the site is generally isolated by hedges, brick and metal fence in the east and the north of the site. The site has two entrance - the northeast entrance is pedestrian leading from the public pathway; the northwest is vehicle access from Merchant Road.

4 SUMMARY OF PREVIOUS WORKS

Two previous investigations have been conducted on site by Solmek. The first of which was carried out on the 2nd and 4th of February 2015, before the demolition of the leisure centre, and consisted of the following:

- Two cable percussive boreholes, drilled to a maximum depth of 20.00m below ground level (bgl)
- Five small percussive boreholes, drilled to maximum depths of 5.00m bgl.
- 50mm ground water and gas monitoring standpipes were installed within three of the boreholes.

The site investigation generally found ground conditions across the site to consist of made ground of clay fill in the area of the carpark and granular made ground in the soft landscaping areas, proven to depths of 2.00m bgl. Made ground across the site was found to be underlain by natural superficial deposits of interbedded firm to stiff clays and loose to medium dense sands. Groundwater was encountered between 3.60m and 4.00m bgl.

From contamination analysis, none of the three samples recorded significantly elevated levels of inorganic or organic contamination. Additionally, none of the samples were reported to contain asbestos.

At this stage 0.60m wide strip foundations were recommended; founding at 0.90m bgl on medium strength clays of medium volume change potential. A safe bearing capacity of 85kN/m² was given at this stage.

The subsequent gas monitoring programme returned a risk level of green (based off the NHBC Traffic Light System from CIRIA C665). Meaning no gas protection measures are required for future developments.

The second site investigation was conducted on the 25th and 26th of October 2021 following the demolition of the leisure centre. The investigation consisted of the following:

- Three cable percussive boreholes drilled to maximum depth of 15.00m bgl.
- Seven machine excavated trial pits to a maximum depth of 3.50mbgl.
- 50mm groundwater and gas monitoring standpipes within installed within all three cable percussive boreholes.

Ground conditions across the site were found to generally consist of granular made ground encountered to depths of 5.30m bgl. Made ground was found to be underlain by natural superficial deposits of firm to stiff, medium to high strength clays underlain by medium dense sands.

From the five samples recovered for testing, significantly elevated levels of arsenic and diabenze(a,h)anthracene were recorded across two of the samples. Furthermore, none of the samples were recorded to contain asbestos. At this stage in the investigation a basic clean cover system was recommended.

In terms of foundations, at this stage 0.60m wide strip foundations were recommended; founding on medium strength, medium volume change potential clays at a minimum depth of 0.90m bgl. A safe bearing capacity of 125kN/m² was given at this stage. A piled alternative was also recommended for heavily loaded developments.

5 FIELDWORK

The fieldwork was carried out on 30th June 2025. The extent of the investigation was:

- 2no cable percussive boreholes (CP01 & CP02) to a maximum depth of 20.00m bgl.
- 5no small percussive boreholes (BH01 to BH05 inclusive) to a maximum depth of 5.45m bgl.
- Gas monitoring wells were installed in CP01 and BH's 01 & 03.
- Insitu testing in the exploratory positions as Standard Penetration Tests (SPTs).
- Retrieval of samples for geotechnical and chemical testing.

The boreholes were respectively backfilled with clean arisings and bentonite/installations upon completion.

A plan showing the location of the boreholes and trial pits can be found in Appendix A (Figure 2).

6 GROUND CONDITIONS

A summary of the ground conditions encountered is given below. The exploratory hole logs are presented in Appendix B.

6.1 Made Ground

Made ground was generally uniform across the site and was encountered to a maximum depth of 2.80m bgl within CP01 located centrally within the site.

Made ground generally consisted of granular deposits over clay deposits. Made ground was noted to contain brick, concrete, tile, charcoal, plastic and wood.

6.2 Obstructions

Locally within BH01 and BH03 cobbles of brick and concrete were noted.

Exploratory positions BH's 02, 04 were terminated early due to internal collapse of the borehole. Furthermore, BH05 was terminated early due to the presence of an inferred cobble/boulder.

6.3 Natural Deposits

Proven to underlie the made ground deposits across the site, natural ground generally comprised of interbedded medium dense to very dense sand deposits and stiff to hard sandy to silty medium to high strength clays.

6.4 Groundwater

Groundwater strikes, where encountered, are presented on the exploratory logs (Appendix B) and are summarised below in Table 1:

TABLE 1: SUMMARY OF GROUNDWATER STRIKES

Exploratory Position	Depth Encountered (mbgl)	Depth after 20 minutes (mbgl)	Strata
CP01	4.60	4.60	SAND
CP02	4.60	4.60	SAND

It should be noted the rapid rate of advancement of the exploratory holes may mask minor seepages and it should be borne in mind that water levels fluctuate with a number of influences including season, rainfall, dewatering and pumping activities. Therefore, water levels significantly higher than those found during this investigation may be encountered.