

EARTH ENVIRONMENTAL & GEOTECHNICAL
A Technics Group Company

Phase 1 GeoEnvironmental Desk Study

119 Withington Road

Whalley Range

Manchester

April 2026

On behalf of

Range Pharmacy Limited

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PHASE I GEOENVIRONMENTAL DESK STUDY

119 WITHINGTON ROAD

WHALLEY RANGE

MANCHESTER

FOR

RANGE PHARMACY LIMITED

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Report No. A7641/26/FDS **APRIL 2026**

Report Title:	**Phase I GeoEnvironmental Desk Study 119 Withington Road, Whalley Range, Manchester**
Report Reference:	**A7641/26/FDS**
Client:	**Range Pharmacy Limited**
Issue Date:	**22nd April 2026**
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1.0 INTRODUCTION

Appointment

1.1 Britannia Group has commissioned Earth Environmental & Geotechnical Ltd on behalf of Range Pharmacy Limited (the Client) to undertake a Phase I GeoEnvironmental Desk Study for a proposed development on land at 119 Withington Road, Whalley Range, Manchester.

1.2 It is understood that the client intends to redevelop and extend the existing building to provide a pharmacy on the ground floor with residential accommodation above.

1.3 A proposed development plan is presented in Figure 1, overleaf.

Objective

1.4 The purpose of the Desk Study is to collate available geological and environmental data for the site (and its environment) and provide a preliminary geotechnical and geo-environmental appraisal, with a site-specific conceptual model. This enables a preliminary assessment of geo-environmental risks to be undertaken and, if necessary, provides information for the design of a Phase 2 Ground Investigation.

Scope

1.5 The Phase I Geo Environmental Desk Study comprises a site reconnaissance visit and a review of the following information sources, some of which were provided by the client.

- British Geological Survey online maps.
- Google Earth imagery.
- Environment Agency online mapping data.
- Historical Ordnance Survey maps.
- The site and surrounding areas' environmental, geological, and mining data are presented in the site-specific GroundSure Reports (Appendix 1).
- Coal Authority Interactive Viewer.
- Zetica UXO Online Interactive Viewer
- Manchester City Council planning portal.

Figure 1: Proposed Development Plan



2.0 SITE LOCATION AND DESCRIPTION

2.1 The site (0.04 hectares) is developed land at 119 Withington Road, Whalley Range, Manchester, approximately 2.5km south of Deansgate train station.

2.2 The approximate National Grid Reference for the centre of the site is SJ 83028 95198(X: 383028, Y: 395198 and postcode M16 8EB.

2.3 The surface topography of the site is generally level, with the site itself being relatively flat. The surrounding area is also typically level. The site is situated within an established residential and commercial area of Whalley Range, on the southeastern edge of Old Trafford, and lies within the floodplain. A derelict building currently occupies the western part of the site.

2.4 The majority of the site (approximately 98%) is surfaced with hardstanding, with a small, landscaped area containing vegetation located along the southern and northeastern ends of the site, and localised overgrown vegetation present within cracks in the asphalt surfacing. Mature trees are present along the immediate eastern boundary of the site.

2.5 Drain covers, a gas cover and broadband cabinets are located along the immediate northern boundary of the site, together with a light pole positioned at the northwestern boundary.

2.6 Access to the site is gained via Yarburgh Street off Withington Road along the northern boundary. A medium-sized steel gate is at the northern entrance, and a further steel gate is at the western entrance along the southern boundary.

2.7 The site is not formally bounded along the western boundary, with small sections of the northwestern and southwestern boundaries also lacking formal demarcation. A derelict concrete panel fencing bounds the site to the south and most of the eastern boundary, while a brick wall forms the boundary to the north and northeast.

2.8 Yarburgh Street borders the site to the immediate north, Withington Road lies immediately to the west, a medical centre is located to the south, and a commercial property adjoins the eastern boundary.

Site Utility Services

2.9 Site service plans have not been obtained for the site on behalf of the client. The status of all services should be checked before any development (including site investigation) commences.

Figure 2: Site Location Plan



Figure 3: Site Photograph



3.0 ENVIRONMENTAL SETTING

3.1 The geology of the site is covered by British Geological Survey (BGS) online data and the site-specific GroundSure Enviro+Geo Insight report (Appendix 1).

3.2 Environmental conditions are covered by the Environment Agency (EA) and British Geological Survey (BGS) online data, and the site-specific GroundSure Enviro+Geo Insight report (Appendix 1).

Geology

3.3 BGS records indicate that artificial deposits do not underlie the site.

3.4 BGS records indicate that the site is underlain by the Glaciofluvial Sheet Deposits, Devensian-Sand and Gravel, generally comprising '*Sand and gravel, locally with lenses of silt, clay or organic material.'*

3.5 The bedrock geology beneath the site is shown to be of the Wilmslow Sandstone Formation-Sandstone, generally comprising '*red brown to brick-red, fine- to medium-grained, generally pebble-free, cross-bedded sandstones, with sporadic siltstones*.'

3.6 There are 2no. records of linear features within 500m of the site boundary. The closest record refers to a geological fault located 11m northeast of the site.

3.7 There are no records of landslips within 500m of the site.

3.8 There is 1no. borehole record identified within 250m of the site. The record is for borehole SJ89NW4216, located 96m south of the site. The borehole indicates made ground from ground level to a depth of 1.00m. Firm grey clay with a fuel/oil odour was encountered from 1.00m to 1.50m. Grey sand with occasional gravel was encountered at 1.50m to 2.50m, and moist medium clay from 2.50m to 3.00m. Moist medium-brown coarse sand and gravel with a slight odour of fuel was recorded from 3.00m to 4.00m, and, finally, very stiff clay was recorded from 4.00m to 5.00m.

3.9 The following hazard ratings apply to the site and land within 50m and are presented in the Enviro + Geo Insight Report

- Shrink / swell clays: Negligible
- Running sands: Very Low
- Compressible deposits: Negligible
- Collapsible deposits: Very Low
- Landslides: Very Low
- Ground dissolution of soluble rocks: Negligible

Hydrogeology and Hydrology

3.10 The site is underlain by superficial Glaciofluvial sheet deposits, Devensian, which is classified by the Environment Agency (EA) as a Secondary 'A' Aquifer, with an intergranular flow type and a very high to high permeability.

Secondary A *'Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.'*

3.11 The Wilmslow Sandstone Formation-Sandstone is classified by the Environment Agency (EA) as a Principal Aquifer with an intergranular flow type and high permeability. The BGS states the following:

Principal *'Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally, principal aquifers were previously major aquifers.'*

3.12 The groundwater vulnerability of the site has been classified as high for the superficial aquifers and low for the bedrock aquifer. The site's soil leaching potential is classified as high. The BGS states:

'High' *- Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low-permeability superficial deposits.*

'Low' *- Areas that provide the best protection from pollution. They are likely to be characterised by low-leaching soils and/or superficial deposits with low permeability.*

3.13 The site is not located within an area vulnerable to soluble rock.

3.14 There are 18no. groundwater abstraction license records within 2km of the site. The closest record is a historical record of general cooling, dated 1966, located 666m north of the site.

3.15 There are no surface water abstraction license records within 2km of the site.

3.16 There are no potable water abstraction license records within 2km of the site.

3.17 The site is not located within a Source Protection Zone.

3.18 The site is not located within 500m of a Source Protection Zone within a confined aquifer.

3.19 There are no records of water network entries within 250m of the site.

3.20 There are no surface water features records identified within 250m of the site.

3.21 There is 1no. record of a Water Framework Directive (WFD) surface water bodies located onsite. The record refers to the Irwell/Manchester Ship Canal (from Irk to the confluence with the Upper Mersey River), which is within the Irwell management catchment and the Croal Irwell operational catchment. The EA assigned a 'fail' chemical and a moderate ecological rating in 2019.

3.22 There is 1no. record of a Water Framework Directive (WFD) groundwater body located on-site. The record refers to the Manchester and East Cheshire Permo-Triassic Sandstone Aquifers, which had a poor chemical rating in 2019.

Ground Workings, Mining and Other Underground Workings

3.23 There is 1no. record of historical surface ground working features, identified within 250m of the site boundary. The record refers to a pond mapped in 1849, located 185m south of the site.

3.24 According to the BGS, there are no records of a British Pit within 500m of the site.

Mining and Other Underground Workings

3.25 The site is not within the Coal Mining Reported Area.

3.26 There are no records of historical mineral planning areas within 500m of the site.

3.27 There are no records for historical underground working features identified within 1km of the site.

3.28 There are no records of a non-coal mining area located within 1km of the site.

3.29 There are no records of researched mining, brine areas, gypsum extraction, tin mining, or clay mining on the site.

3.30 There are no records of natural cavities within 500m of the site.

3.31 There are no records for mining cavities identified within 1km of the site.

Radon Potential

3.32 The site is in a Radon Affected Area, where less than 1% of residential properties are above the Action Level. Therefore, no radon protection measures are required in any new structures.

Landfill & Waste Management Activity

3.33 There are no records for the current Environment Agency landfill records within 500m of the site.

3.34 There are no records of BGS/DoE non-operational landfill sites within 500m of the site.

3.35 There are no records of a historical landfill from the Local Authority and Historical Mapping records within 500m of the site.

3.36 There are no records of historic Environment Agency landfill sites within 500m of the site.

3.37 There are no records of historical waste sites within 500m of the site.

3.38 There are no records of current Environment Agency licensed waste sites within 500m of the site.

3.39 There are 11no. records of a waste treatment, transfer, or disposal site, within 500m of the site. The closest record refers to sorting and denaturing of controlled drugs for disposal located 22m northwest of the site.

Industrial Land Use Information

3.40 There are 12no. records of potentially contaminative historical land uses identified within 500m of the site. The closest record refers to a police station dated 1988 located 29m west of the site. The remaining records include unspecified works, hospitals and unspecified tanks.

3.41 There are no records of a historical tank identified within 500m of the site.

3.42 There are 30no. records of historical energy features, identified within 500m of the site. The closest record refers to an electricity substation dated 1995 located 85m southeast of the site.

3.43 There are no records of historical petrol stations within 500m of the site.

3.44 There are 2no. records for current petrol or fuel sites within 500m of the site. The closest record refers to a obsolete unbranded petrol station located 78m south of the site.

3.45 There are 14no. records of historical garage and motor vehicle repair sites identified within 500m of the site. The closest record refers to a garage dated 1960 located 40m northwest of the site.

3.46 There are 8no. records of recent industrial land uses within 250m of the site. The closest record refers to a vehicle hire and rental company located 25m northwest of the site.

3.47 There are no records for current or recent tanks within 250m of the site.

3.48 There are no historical military land use records within 500m of the site.

3.49 There are no National Grid high voltage underground electricity transmission cables within 500m of the site.

3.50 There are no National Grid high-pressure gas transmission pipelines within 500m of the site.

3.51 There are 5no. historical railway and tunnel features identified within 250m of the site. The closest record refers to tramway sidings mapped between 1889, located 41m south of the site.

3.52 There are no records for historical railway lines identified within 250m of the site.

3.53 There are no current active railway line records identified within 250m of the site.

3.54 There are no underground railway lines or tunnels identified within 250m of the site.

3.55 The site is not within 500m of the route of the High Speed 2 rail project.

Environmental Permits, Incidents, and Registers

3.56 The Groundsure Report includes records of environmental permits, incidents, and registers within 500m of the site, which are summarised in Table 1 below.

Table 1: Environmental Permits, Incidents, and Registers within 500m of the Site

Permit/Incident/Register	Number
Sites Determined as Contaminated Land under Part 2a EPA 1990	0
Dangerous or Hazardous (COMAH and NIHHS) Sites	0
Regulated Explosive Sites	0
Hazardous Substance Storage/Usage	0
Historical Licensed Industrial Activities (IPC)	0
Part A (1) and IPPC Authorised Activities	0
Part A (2) and Part B Activities and Enforcements	**3**
Category 3 or 4 Radioactive Substance Authorisations	**1**

Permit/Incident/Register	Number
Licensed Discharge Consents to Controlled Waters	0
Pollutant Release to Surface Waters (Red List)	0
Pollutant Release to Public Sewer	0
List 1 Dangerous Substances Inventory Sites	0
List 2 Dangerous Substances Inventory Sites	0
Substantiated Pollution Incidents	**6**
Pollution Inventory Substances	0
Pollution Inventory Waste Transfer	0
Pollution Radioactive Wastes	0

3.57 There are 3no. records of a Licensed pollutant release (Part A(2)/B) located within 500m of the site. The closest record refers to the unloading of petrol into storage at service stations with a historical permit and a Part B type located 80m south of the site.

3.58 There is 1no. record of Radioactive Substance Authorisations located within 500m of the site. The record refers to the disposal of radioactive waste, with revoked status, located 428m west of the site.

3.59 There are 6no. records of Pollution Incidents (EA/NRW) located within 500m of the site. The closest record refers to an oil and fuel pollutant incident dated 2006, which had no impact on the water, a significant impact on the land and a minor impact on the air, located 80m south of the site.

Environmentally Sensitive Sites

3.60 There are no records for a Site of Specific Scientific Interest (SSSI) located within 2km.

3.61 There are no records of Conserved wetland sites (Ramsar Sites) within 2km of the site.

3.62 There are no records of Special Areas of Conservation (SAC) and Special Protection Areas (SPA) within 2km of the site.

3.63 There are no records of National Nature Reserves (NNR) within 2km of the site.

3.64 There are no records of Local Nature Reserves (LNR) within 2km of the site.

3.65 There are 2no. records of a Designated Ancient Woodland within 2km of the site. The records refer to the Hough End Clough located 1583 m south of the site.

3.66 There are no records of a Biosphere Reserves, Forest Parks, or Marine Conservation Zones within 2km of the site.

3.67 The site is not within the green belt.

3.68 The site is not within a Nitrate Sensitive Area or Nitrate Vulnerable Zone.

3.69 The site is located within an SSI impact Risk Zone.

Ecology

3.70 An ecological assessment of the site falls outside the brief of this report. Where necessary, advice should be sought from an ecological specialist.

3.71 The land on the site is classified as Urban, non-agricultural land /no quality assigned.

3.72 There are no further records for agricultural or habitat designation on the site.

Archaeology

3.73 An archaeological assessment falls outside the scope of this report. Where considered necessary, advice should be sought from an archaeological specialist in this respect.

3.74 There is 1no. record of conservation areas within 250m of the site. The record refers to Whalley Range designated in 1991, located on the site.

3.75 There are no world heritage sites, areas of outstanding natural beauty, listed buildings, schedule of ancient monuments, national parks, or registered parks and gardens within 250m of the site.

Potential Flood Risks

3.76 Detailed assessment of flood risks is outside the scope of this report. However, the site lies within an Environment Agency Zone 2 and Zone 3 floodplain.

3.77 There are 3no. records of risk of flooding from rivers and sea (RoFRaS) within 50m of the site. The onsite record is low.

3.78 There are no records of a historical flood event within 250m of the site.

3.79 There are no records of flood defences within 250m of the site.

3.80 There are no records for areas benefitting from flood defences within 250m of the site.

3.81 There are no flood storage areas within 250m of the site.

3.82 The highest risk of surface water flooding occurring onsite for a 1 in 30-year return event is 0.3m-1.0m.

3.83 The highest risk of groundwater flooding occurring on-site is high.

Unexploded Ordnance

3.84 The online Zetica UXO map shows the site within a moderate-risk zone.

4.0 SITE HISTORY

4.1 The historical development of the site has been determined by reference to historical plans and Google Earth imagery. Information in the historical mapping study has been predominantly limited to the site or within 100m of the site to focus on the most directly relevant information. Beyond this radius, only information deemed relevant will be referenced. Each map or photograph represents a snapshot of the site and its environment at the date of the survey. Any changes that occur at other times may not have been recorded on the maps and could represent an unidentified hazard to the site.

4.2 Only selected maps with a clear view of the site and surrounding area have been used; the information reported might not represent all pertinent information that could be obtained. The interpretation of the maps and/or other data commented on in this report is subjective.

4.3 The earliest available historical mapping covering the site dates back to 1848. The site history is summarised in Tables 2 and 3, below, followed by selected extracts from maps and aerial photographs in Figures 4 to 7.

Table 2: Summary of Site History

Date	Scale	On-Site History	Surrounding Land Use History
1848-1849	1:10,560	The site is an undeveloped land.	The surrounding area is undeveloped land. Moss House approximately 150m south. Brook Villa is approximately 150m west, and Elm House is approximately 200m north. Withington Road at the western boundary of the site.
1881	1:2,500	A building occupied the western end of the site.	Residential properties surround the site to the immediate eastern and southwestern boundaries of the site. Yarburgh Street is at the immediate northern boundary of the site
1889	1:2,500	There is no significant change compared to the previous map.	A tramway is at the northern boundary of the site, which is a part of Yarburgh Street.
1896	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1905	1:10,560	The site within the Whalley Range Area.	There is no significant change compared to the previous map.
1907-1908	1:2,500	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1911	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1916	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1922	1:2,500	A small structure at the northeastern end of the site.	More residential development approximately 25m west of the site.

Date	Scale	On-Site History	Surrounding Land Use History
1923	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1932-1933	1:2,500	No indication of a small structure to the northeast.	Structure to the immediate southeastern boundary of the site. A large building approximately 25m northwest. Laundry and Nursery approximately 50m south of the site.
1932-1934	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1938	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1949-1950	1:1,250	A small, detached structure at the southwestern end of the site.	Engineering works approximately 100m northeast. A garage and an ice cream factory are approximately 50m south. The tramway has been dismantled and probably razed.
1955-1956	1:10,560	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1960	1:1,250	There is no significant change compared to the previous map.	A garage is approximately 25m northwest of the site.
1972	1:10,000	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
1973	1:1,250	No indication of a small structure at the southwest end of the site.	Carpet cleaners, welding engineers and shopfitters approximately 50m south. An electricity substation is approximately 100m southeast.
1980-1981	1:10,000	There is no significant change compared to the previous map.	Residential properties at the immediate southern boundary of the site and approximately 25m northeast have been demolished.
1981-1986	1:1,250	There is no significant change compared to the previous map.	Residential properties approximately 25m northeast have been reconstructed. A public house is approximately 10m south of the site. Warehouse approximately 100m south.
1987-1992	1:1,250	There is no significant change compared to the previous map.	No indication of a garage approximately 25m northwest.
1991-1995	1:1,250	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
2001	1:10,000	There is no significant change compared to the previous map.	The public house, approximately 10m south, has been demolished.
2003	1:1,250	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.

Date	Scale	On-Site History	Surrounding Land Use History
2010	1:10,000	There is no significant change compared to the previous map.	A large building is approximately 10m southwest of the site.
2015	1:10,000	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.
2025	1:10,000	There is no significant change compared to the previous map.	There is no significant change compared to the previous map.

Table 3: Summary of Site History from Aerial Photographs

Date	On-Site History	Surrounding Land Use History
2000	A building occupied the western end of the site.	Residential properties surround the site. Yarburgh Road is the immediate northern boundary of the site. Withington Road is the immediate western boundary of the site.
2009	There is no significant change compared to the previous photograph	A commercial building at the immediate southwest boundary of the site. The area to the immediate southern boundary of the site is used as a car park.
2015	There is no significant change compared to the previous photograph.	There is no significant change compared to the previous photograph.
2022	There is no significant change compared to the previous photograph.	There is no significant change compared to the previous photograph.
2023	There is no significant change compared to the previous photograph.	There is no significant change compared to the previous photograph.

4.4 The earliest available mapping from 1848 indicates that the site and its surrounding area were undeveloped land, with Withington Road at the immediate western boundary of the site.

4.5 By 1881, a residential building occupied the western end of the site, with residential properties located immediately to the eastern and southwestern boundaries of the site. Yarburgh Street formed the northern boundary of the site.

4.6 Historical mapping from 1889 shows the presence of a tramway along the immediate northwestern boundary of the site; however, the tramway had been dismantled by 1949 and subsequently removed. The 1922 map indicates a small structure at the northeastern end of the site, which was no longer present by 1932. Additionally, the 1949 map identified a small, detached structure at the southwestern end of the site, though this feature was not shown on the 1993 mapping.

4.7 Presently, a building occupies the western end of the site. Residential properties surround the site, with Yarburgh Road forming the immediate northern boundary and Withington Road forming the immediate western boundary. A commercial building is located immediately to the southwest, and the land adjoining the southern boundary is currently used as a car park.

Figure 4 OS Map Extract 1881

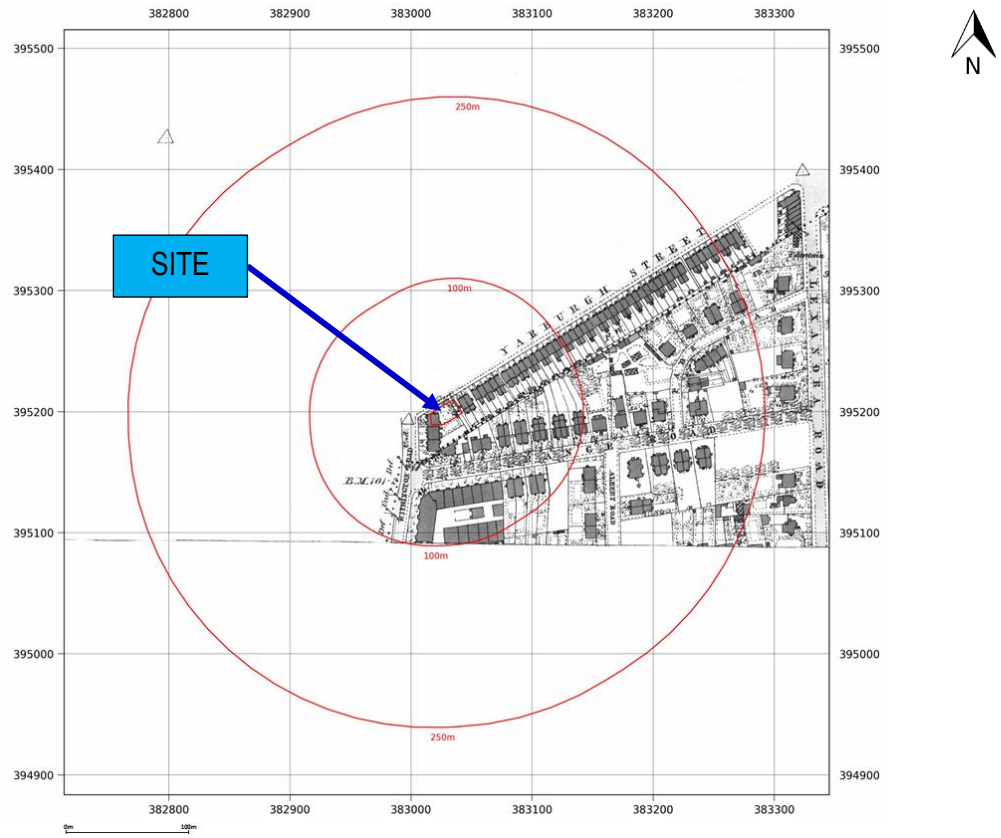


Figure 5 OS Map Extract 1922

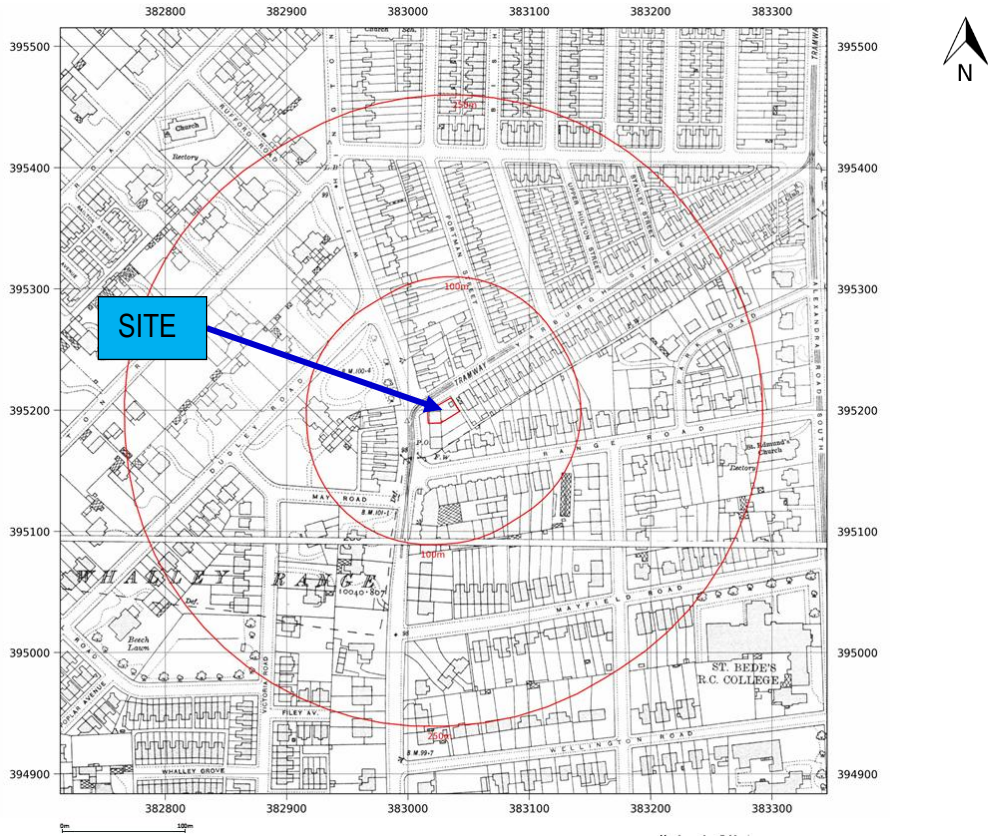


Figure 6 OS Map Extract 2025

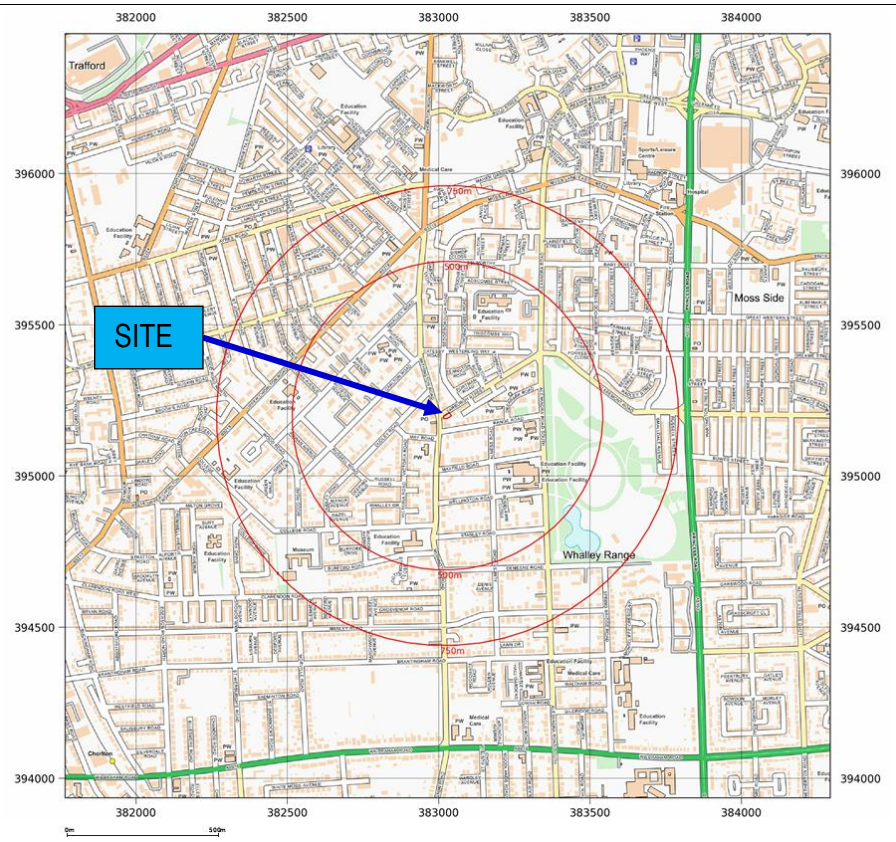
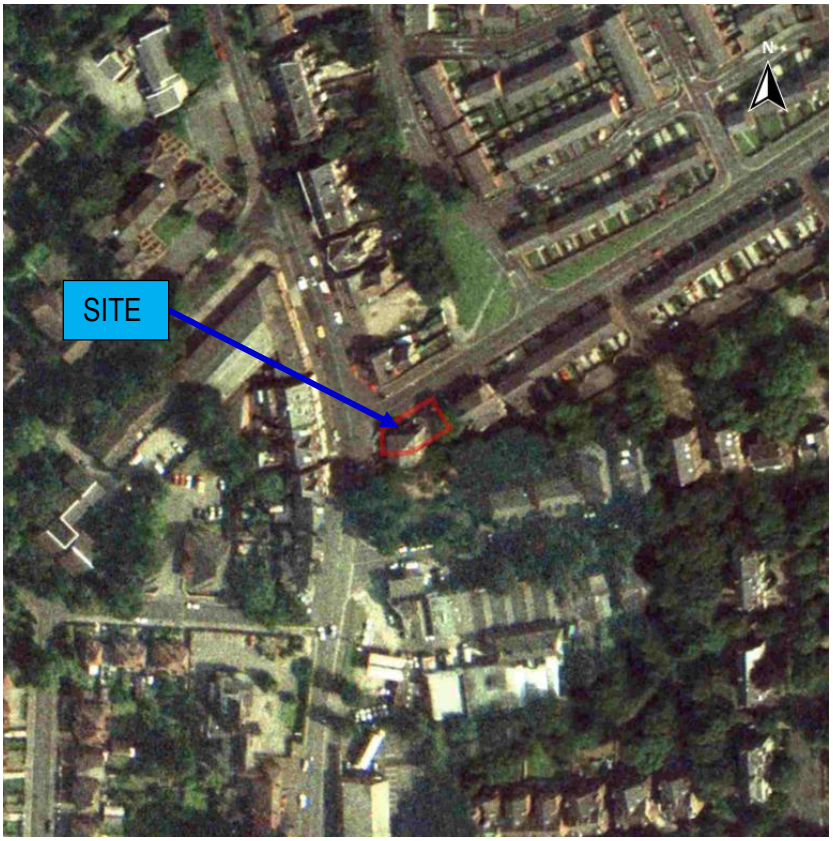


Figure 7 Aerial Photograph 2000



5.0 SITE WALKOVER SURVEY

5.1 A walkover survey was completed on the 8th April 2026.

5.2 The photographs and notes from this survey are appended to this report as Appendix 2 and Appendix 3, respectively. The site is understood to comprise the area of the proposed development, which is located within a residential/commercial development area. A plan of key features is shown in Figure 8.

5.3 The surface topography of the site is generally level, with the site itself being relatively flat. The surrounding area is also typically level. The site is situated within an established residential and commercial area of Whalley Range, on the southeastern edge of Old Trafford, and lies within the floodplain. A derelict building currently occupies the western part of the site.

5.4 The majority of the site (approximately 98%) is surfaced with hardstanding, with a small, landscaped area containing vegetation located along the southern and northeastern ends of the site, and localised overgrown vegetation present within cracks in the asphalt surfacing. Mature trees are present along the immediate eastern boundary of the site.

5.5 Drain covers, a gas cover and broadband cabinets are located along the immediate northern boundary of the site, together with a light pole positioned at the northwestern boundary.

5.6 Access to the site is gained via Yarburgh Street off Withington Road along the northern boundary. A medium-sized steel gate is present at the northern entrance, with a further steel gate located at the western entrance along the southern boundary.

5.7 The site is not formally bounded along the western boundary, with small sections of the northwestern and southwestern boundaries also lacking formal demarcation. A derelict concrete panel fencing bounds the site to the south and most of the eastern boundary, while a brick wall forms the boundary to the north and northeast.

5.8 Yarburgh Street borders the site to the immediate north, Withington Road lies immediately to the west, a medical centre is located to the south, and a commercial property adjoins the eastern boundary.

Figure 8 Site Features Plan



6.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

6.1 The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site based on the above desk study information as defined by the Land Contamination Risk Management Environment Agency, July 2023.

6.2 Table 6 provides a Preliminary Conceptual Model (PCM) which considers the source-pathway-receptor linkages present alongside the likelihood, severity, and risk level as defined within Table 4 and Table 5 below. The assessment of probability, the modified risk table, and the specific consequence definitions are based on CIRIA C552 and the Land Contamination Risk Management Environment Agency (July 2023).

6.3 Table 6 considers whether a pollution linkage is potentially present and provides a preliminary qualitative assessment of risk based on the information currently available. Where a possible linkage is identified, it does not necessarily indicate a significant risk, but rather that further information is required through appropriate site investigation to substantiate the conceptual model.

6.4 The PCM/PRA is based on a residential/commercial end use.

Table 4: Consequence, Probability and Risk

Probability	Consequence,	Risk
High Likelihood- There is a pollution linkage, and an event either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution	Very High – acute risk to human health, likely to result in significant harm. Risk of severe or irreversible effects on ground/surface water quality. Catastrophic damage to buildings/property.	Very High – there is a high potential that the source-pathway-receptor scenarios may result in harm to human health or the environment, and remedial action is likely to be required.
Likely – there is a pollution linkage, and all the elements are present, which means that it is probable that an event will occur. Circumstances are such that an event is possible in the short term and likely over the long term.	High – Severe or irreversible effect on human health. Temporary severe or irreversible effect on ground/surface water quality. Reduction of water quality rendering groundwater or surface water unfit to drink and/or a substantial adverse impact on groundwater-dependent environmental receptors.	High – it is likely that the source-pathway-receptor scenarios may affect human health or the environment, requiring remediation and/or control measures to mitigate risks.
Low likelihood– there is a pollutant linkage, and circumstances are possible for an event to occur. However, it is by no means certain that, even over a longer period, such an event would take place, and it is less likely in the short term.	Moderate – Long-term or short-term moderate effect on human health. Moderate impact on ground/surface water quality, reversible with time. Reduced reliability of a supply at a groundwater or surface water abstraction source	Moderate – it is possible that the source-pathway-receptor scenarios may have an impact on human health or the environment; however, it is either relatively unlikely that such impacts would be severe, or, if any harm were to occur, it is more likely to be mild.
Unlikely – there is a pollution linkage, but circumstances are such that it is doubtful that an event would occur even in the very long term.	Low – non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc.) Slight impact on ground/surface water quality, reversible with time. Marginal reduced reliability of a supply at a groundwater or surface water abstraction source.	Low – it is possible that harm could arise at the source; however, this would likely, at worst, be mild.
		Very Low – It is unlikely that the source-pathway-receptor scenarios will affect human health or the environment.

Table 5: Estimation of the Level of Risk by Comparison of Consequence and Probability

		Consequence			
		High	**Moderate**	**Low**	**Very low**
Probability	**High Likelihood**	Very High	High risk	Moderate risk	Moderate to low risk
	Likely	High risk	Moderate risk	Moderate to low risk	Low risk
	Low Likelihood	Moderate risk	Moderate to low risk	Low risk	Very low risk
	Unlikely	Moderate to low risk	Low risk	Very low risk	Very low risk

Potential Sources

6.5 There are no potential sources of contamination on the site or in the local area.

Potential Receptors

6.6 The following receptors have been considered for the construction and operational stages of the proposed redevelopment.

- Current site users;
- Adjacent land users;
- Future land users;
- Construction workers during site development works;
- Surface water features (No nearby surface water features)

Potential Pathways

6.7 The following pathways have been considered for the construction and operational stages of the proposed redevelopment.

- Dermal contact, ingestion, and inhalation pathways of potentially contaminated soils.
- Downward vertical migration of leachate to shallow groundwater.
- Vertical or lateral migration of ground gas.

Table 6: Preliminary Conceptual Model

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
Made Ground (Heavy Metals, PAH, TPH, BTEX)	Dermal contact, ingestion, and inhalation of soil dust	Current Site Users	Unlikely	Moderate	Low	The site is currently derelict. There is limited potential for direct contact between contaminated soils and receptors. The risk is thus considered to be **LOW.**
		Adjacent land users	Unlikely	Moderate	Low	The potential for lateral migration of significant contamination is unlikely due to the site's topography. However, during construction, materials will become airborne. The risk to off-site land users is considered **LOW.** Usual dust control measures should be implemented as part of good site working practices during construction to reduce dust generation.
		Future land users	Unlikely	Moderate	Low	There is limited soil contamination on the site. There might be contamination due to historical onsite activities. Given that the site will be covered in hardstanding, residential end users' contact with soil is unlikely. The risk to future site users via direct exposure is considered to be **LOW.**
		Construction Workers	Unlikely	Moderate	Low	Construction workers may be exposed to potentially contaminated materials during construction; however, the exposure will be short-term only. Assuming appropriate health and safety measures are adopted (in line with CDM and other relevant health and safety guidance), a **LOW** risk to construction workers is anticipated.
	Downward vertical migration of leachate to shallow groundwater	Groundwater within the Underlying Aquifer	Unlikely	Moderate	Low	A limited on-site source of mobile contaminants has been identified. The groundwater vulnerability is high. However, there are no groundwater abstraction licenses in the vicinity. The risk to groundwater is therefore considered **LOW.**
	Lateral migration in surface waters	Nearby Surface water features	Unlikely	Moderate	Low	There is potential for contaminants on the site. There are no nearby surface water features. Therefore, the risk to surface waters is considered **LOW.**
	Vertical or lateral migration of ground gas	Current Site Users	Unlikely	Moderate	Low	The site is currently derelict. The risk to current site users from ground gas is therefore considered to be **LOW.**
		Adjacent land users	Unlikely	Moderate	Low	The site is not a significant source of ground gas. The risk to adjacent site users from ground gas is considered **LOW.**
		Future land users	Unlikely	Moderate	Low	There are no records of significant ground gas sources within 250m of the site. The risk from ground gas to future site users is considered **LOW**.
		Construction Workers	Unlikely	Moderate	Low	Given the site's history, deep-made ground is not anticipated. Construction workers will not be exposed to ground gas/depleted-oxygen conditions in excavations; however, the exposure will be short-term. The risk to construction

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
						workers from ground gas is considered **LOW.**
Asbestos Containing Material (ACM)		Current Site Users	Unlikely	Moderate	Low	Given the site history, there is potential for asbestos to be present within the materials of the building. Asbestos is only harmful when disturbed. The risk to current site users is **LOW**.
		Adjacent land users	Low Likelihood	Moderate	Moderate to Low	There is potential for ACM within the building. Disturbance of ACM during the construction phase may allow fibres to become airborne. The risk is considered to be **MODERATE to LOW.**
		Future land users	Unlikely	Moderate	Low	ACM will be unlikely to be in the soil if protection measures are carried out. Given the residential end use, the risk is considered **LOW**.
		Construction Workers	Low Likelihood	Moderate	Moderate to Low	Construction workers will likely be exposed to potential asbestos in the building and soil during the demolition/construction phase. The risk is considered **MODERATE to LOW.**

7.0 GEOTECHNICAL HAZARDS ASSOCIATED WITH THE DEVELOPMENT

7.1 In addition to the environmental hazards, there are also geotechnical hazards associated with the stability of the ground, including load bearing capacity, slope stability and effects of ground mining activities. Local Authorities follow the NPPF (2021), which requires that a site be suitable for its new use, taking into account ground conditions and land instability, including from natural hazards and from former activities such as mining. A summary of the geotechnical hazards and geotechnical considerations is provided below in Tables 7 and 8, respectively.

Table 7: Summary of Geotechnical Hazards

Geohazards:	
Highly Compressible Ground	Negligible
Collapsible Soils	Very Low
Swelling Clay	Negligible
Running Sand	Very Low
Ground Dissolution	Negligible
Landslip	Very low
Mining & Quarrying	The site does not lie within a Coal Authority Development High Risk Area.

Table 8: Summary of Geotechnical Considerations

Geotechnical Design Considerations	
Site Clearance	Site clearance may be required to allow for the extension of the on-site building.
Trees	There are no trees within the site boundary. However, there are trees to the immediate boundary of the site.
Existing Buildings/Obstructions	There is a building within the development area. However, the proposed development is to refurbish and extend the existing building. The asphalt covering will need to be removed to allow extension of the building.
Foundations	The depth and type of proposed foundations would depend on the site's ground conditions. There are no artificial deposit records underlying the proposed development area. The Glaciofluvial Sheet Deposits and the Wilmslow Sandstone Formation underlie the proposed development. Shallow foundations may be possible.
Floor Slabs	A ground-bearing floor slab is anticipated to be suitable on the prepared formation level. However, verification of the ground would be required.
Groundwater	Groundwater conditions are not known at this stage. For more detailed knowledge of the groundwater regime, an intrusive geotechnical investigation would be needed. However, the site is underlain by [Secondary 'A' aquifer]. The risk of groundwater flooding on the site is recorded as high.

Geotechnical Design Considerations	
Soakaways	Soakaways may be feasible on the site due to the presence of sand and gravel.
Earthworks	Enabling works are required to remove existing onsite hardstanding to allow an extension of the building.
Slopes	The site is relatively flat.
Retaining Walls	It is unlikely that retaining walls will be required.
Chemically aggressive ground conditions	Chemically aggressive ground conditions are not expected at this site. However, an intrusive geotechnical investigation would be necessary to confirm this at the specified development location.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

8.1 The earliest available mapping from 1848 indicates that the site and its surrounding area were undeveloped land, with Withington Road at the immediate western boundary of the site. By 1881, a residential building occupied the western end of the site, with residential properties located immediately to the eastern and southwestern boundaries of the site. Yarburgh Street formed the northern boundary of the site.

8.2 The site is underlain by Glaciofluvial Sheet Deposits (Secondary 'A' Aquifer).

8.3 The bedrock geology beneath the site is shown to be of the Wilmslow Sandstone Formation (Principal Aquifer).

8.4 The risk from asbestos-containing materials to residential users is considered to be **LOW**, and construction workers are considered to be **MODERATE to LOW**.

8.5 The overall risk from soil contamination to residential/commercial end users is concluded to be **LOW,** and to construction workers is concluded to be **LOW**.

8.6 The risk to controlled waters is concluded to be **LOW**.

8.7 There are no landfills or other significant sources of ground gas within 250m of the site, and the risk from ground gas to end users is considered to be **LOW**.

8.8 The site does not lie within a radon-affected area, and therefore radon protection measures are not required for any new structures.

8.9 The site lies within a flood plain with **HIGH RISK**.

8.10 The site lies within an area of **MODERATE RISK** of UXOs.

8.11 Foundation loadings of shallow foundations may be suitable, but further investigation will be required to confirm site conditions.

8.12 Ground bearing slabs may be feasible but will need to be examined further.

8.13 Soakaways may be feasible on the site.

Recommendations

8.14 Before any refurbishment, an asbestos survey should be conducted.

8.15 A further intrusive investigation should be undertaken to establish geotechnical parameters for the design of foundations, floor slabs, and pavement construction for the proposed new structures and the surrounding area.

APPENDIX 1

GROUNDSURE REPORTS

APPENDIX 2

SITE PHOTOGRAPHS

Earth Environmental & Geotechnical Ltd **Tel:** 0161 975 6088 **Email**: info@earthenvironmental.co.uk **Web**: www.earthenvironmental.co.uk	**SITE PHOTOGRAPHS** EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company
Job No.: A7641	**Site:** 119 Withington Road, Whalley Range, Manchester
Plate 1: View facing northeast showing site access	**Plate 2: View facing east showing the building and entrance with an area of soft landscaping to the south**
	
Date: 8th April 2026	**Date:** 8th April 2026
Plate 3: View facing south showing the steel gate onsite	**Plate 4: View facing west, showing the other steel gate to the southwest and the building**
	
Date: 8th April 2026	**Date:** 8th April 2026

Earth Environmental & Geotechnical Ltd

Tel: 0161 975 6088
Email: info@earthenvironmental.co.uk
Web: www.earthenvironmental.co.uk

SITE PHOTOGRAPHS

EARTH ENVIRONMENTAL & GEOTECHNICAL
A Technics Group Company

Job No.: A7641

Site: 119 Withington Road, Whalley Range, Manchester

Plate 5: View showing the western site boundary



Date: 8th April 2026

Plate 6: View showing eastern site boundary with soft landscaping



Date: 8th April 2026

Plate 7: View showing the southern boundary



Date: 8th April 2026

Plate 8: View showing the northern boundary



Date: 8th April 2026

Earth Environmental & Geotechnical Ltd

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SITE PHOTOGRAPHS

EARTH ENVIRONMENTAL & GEOTECHNICAL
A Technics Group Company

Job No.: A7641

Site: 119 Withington Road, Whalley Range, Manchester

Plate 9: View facing south showing gas cover to the northern boundary of the site



Plate 10: View facing northwest showing drain covers



Date: 8th April 2026

Date: 8th April 2026

Plate 11: View facing southwest showing the paint spillage and vegetation within the hardstanding cracks



Plate 12: View facing southwest showing the back of the building and the unoccupied area to the eastern end.



Date: 8th April 2026

Date: 8th April 2026

Figure 9: Site Walkover Photograph Locations



APPENDIX 3

SITE WALKOVER NOTES

WALK OVER SURVEY REPORT

Site: 119 Withington Road, Whalley Range **Date:** 8/04/2026

Job No: A7641 **Undertaken By:** Rose Sarnoe

Purpose of Site Walkover:
1) Provide further information for the Desk Study Report.
2) Identify potential contamination sources, pathways, and receptors;
3) Identify geotechnical features and potential geohazards;
4) Determine locations for exploratory boreholes.

Desk Study features checked during site visit.	**Feature and Information required**	**Present**	**Description / Comments**
Site Setting	Description required for: ~~Town/Country/~~Suburb Setting ~~Industrial/~~Residential/Retail Usage Current Site use (if undertaking security and access to the site)		The site is located within a large residential/commercial area. A derelict building currently occupies the site to the west.
Evidence of Past Activities	Are there: Any relevant street names in the area? Features or relics which indicate history?	 Yes Yes	Yarburgh Street to the immediate north and Withington Road to the immediate west. The surroundings and site features indicate residential/commercial activities over the years.
Geographic Setting	Description required for: Low-lying flood plain/dry valley/rolling hills, etc.		The site is in Whalley Range, on the southeastern edge of Old Trafford, within the floodplain.
Ground Conditions	Is there any evidence of: Mining, Mine entries Subsidence Landslip/slope erosion Former investigation works	 No No No	

Desk Study features checked during site visit.	Feature and Information required	Present	Description / Comments
Topography	Description required for: Are there apparent differences between the site and the surrounding area? (If yes, describe the presence of retaining walls and slopes. Is there evidence of Made Ground / Fill on site?	 No Yes	The site is relatively flat. Due to the site being predominantly covered in hardstanding and its history, ground is expected to be made.
Site Boundaries and Neighbours	Description required for: Type of boundary demarcation (if any) on each side of the site, usage of adjacent land and name of industrial/commercial occupiers. Note any adjacent features such as water course and other potentially environmentally sensitive uses (residential, school, infirmary, SSSI, etc.)		The site is not formally bounded to the west, a small portion of the northwest, and the southwest. Concrete panels fence the site to the south and along the majority of the east side. A brick fence to the north and northeast bounds the site. Yarburgh Street borders the site to the immediate north. Withington Road to the immediate west, a medical centre to the immediate south, and a commercial property to the immediate east. There are residential properties surrounding the site, including a medical centre immediately south of the site.
Vegetation	Are there any vegetation/trees on or close to the site (if yes, describe locations, type, maturity, etc) Is there any evidence of poor health/distress?	Yes No	A small portion of the site to the south and northeast is covered in vegetation—no trees on the site. There are mature trees to the immediate eastern boundary of the site.
Ground Surface	Are there any areas of hardstanding, and can you estimate the split between hard and soft cover? (If yes, describe locations, types, and conditions. Is there any evidence of any spillages or staining?	Yes Yes	The vegetated area is at the southern and northeastern ends of the site. The site is predominantly hardcover, approximately 98%. There is a small spillage of paint on the northern side of the building.

Desk Study features checked during site visit.	Feature and Information required	Present	Description / Comments
Site Drainage	Are there any drain covers/soakaways (if yes, describe locations) Are there any outfalls/water courses on site? (Note the condition of water courses in open water courses.) discolouration, odour, eutrophication, oily sheen, gas bubbling in water, clear or cloudy) Where a watercourse runs alongside or crosses a site, are there any differences in visible water quality upstream and downstream of the site?	Yes No No	There are drain covers to the immediate northern boundary of the site.
Electrical Equipment	Are there any electricity substations on or adjacent to the site? Are there any electrical transformers, capacitors, pylons, etc., on site?	Yes	There are broadband cabinets to the immediate northern boundary of the site. There is also a light pole to the immediate northwestern boundary.
Buildings	Is there any evidence of asbestos construction materials, e.g. roofing, insulation materials? Do any buildings have basements? Do any buildings have a boiler room (if yes, describe fuel type and storage arrangements)?	No Yes No	No ACM observed.

Desk Study features checked during site visit.	Feature and Information required	Present	Description / Comments
Landfilling	Is there any evidence of gas protection measures (gas membrane, gravel-filled trenches, venting pipes, etc)?	No	
Process Air Emissions	Point Source: Are there any stacks/vents / cooling towers/abatement equipment? Fugitive Source: Is there any stockpiled material / windblown dust/vapour process?	No No	
Storage of fuels & Chemicals	Are there any drums/containers (if yes, describe quantity, full /empty, stored on hard standing / soft landscaping, bunding)? Are there any above-ground fuel tanks (if yes, describe locations, volumes, how many, bunding, used / disused, condition) Is there any evidence of underground fuel tanks (fuel pumps, covers, vent pipes, how many and how large, fill point, used / disused, and condition)?	No No Yes	There is a gas cover to the immediate northern boundary of the site.
Accidents	In the event of a large spillage, would runoff affect any vulnerable watercourse/culverts? Are emergency procedures/equipment in place?	No No	

Desk Study features checked during site visit.	Feature and Information required	Present	Description / Comments
Waste	Are there any waste skips present on site? Are waste storage facilities adequate? Is there any litter/fly-tipped material?	No No Yes	 There is a waste container at the back of the building at the eastern end of the street. There are littered all over the eastern part of the site.
Atmospheric	Are there any fumes or odours originating from the site or affecting the site from neighbouring sites?	No	
Access / Further Investigations	If a Phase 2 Investigation is likely to be required, describe any access problems, including headroom where relevant, services, overhead cables, restricted access areas, confined spaces, trafficked areas, etc, that are likely to affect the investigation scope/techniques. Identify possible site office and storage locations. Identify possible water supply.		The on-site buildings will restrict access during a PHASE 2 investigation, and the hardstanding may need to be removed from the site. The site office is suitable for use anywhere on the site once site clearance is complete. The water supply can be accessed from the building to the south.
Site Environs	Are there any local features that could have a harmful influence, e.g. landfill, industrial processes, or railway land? Are there any sensitive water features/courses near the site?	No No	
Local Knowledge / Anecdotal Evidence			N/A

APPENDIX 5

REPORT LIMITATIONS

LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd, based on a defined programme, scope of works, and terms and conditions agreed with the client. This report was compiled with all reasonable skill and care, bearing in mind the project objectives, the agreed scope of works, the prevailing site conditions, the budget, and staff resources allocated to the project.

Other than that, expressly contained in the above paragraph, Earth Environmental & Geotechnical Ltd provides no other representation or warranty, whether express or implied, in relation to the services. Unless otherwise agreed, this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Earth Environmental & Geotechnical Ltd.

If a third party relies on this report, it does so wholly at its own and sole risk and Earth Environmental & Geotechnical Ltd disclaims any liability to such parties.

It is Earth Environmental & Geotechnical Ltd's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was an important factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report will no longer be valid, and any further use of, or reliance upon the report in those circumstances by the client without Earth Environmental & Geotechnical Ltd review and advice shall be at the client's sole and own risk.

The report was written in 2026 and should be read in light of any subsequent changes in legislation, statutory requirements, and industry best practices. Ground conditions can also change over time, and further investigations or assessments should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Earth Environmental & Geotechnical Ltd. In the absence of such written advice from Earth Environmental & Geotechnical Ltd, reliance on the report in the future shall be at the client's own and sole risk. Should Earth Environmental & Geotechnical Ltd be requested to review the report in the future, Earth Environmental & Geotechnical Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Earth Environmental & Geotechnical Ltd and the client.

The observations and conclusions described in this report are based solely upon the services that were provided pursuant to the agreement between the client and Earth Environmental & Geotechnical Ltd. Earth Environmental & Geotechnical Ltd has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report.

Earth Environmental & Geotechnical Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Earth Environmental & Geotechnical Ltd did not seek to evaluate the presence on or off the site of electromagnetic fields, lead paint, radon gas, or other radioactive materials.

The services are based on Earth Environmental & Geotechnical Ltd's observations of existing physical conditions at the site, gained from a walkover survey, together with Earth Environmental & Geotechnical Ltd's interpretation of information, including documentation, obtained from third parties and the client, regarding the history and use of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst Earth Environmental & Geotechnical Ltd have no reason to doubt the accuracy of that information, which has been provided in full from those it was requested from, the items relied on have not been verified.

No responsibility can be accepted for errors within third-party items presented in this report. Further Earth Environmental & Geotechnical Ltd was not authorised and did not independently verify the accuracy or completeness of information, documentation, or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Earth Environmental & Geotechnical Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Earth Environmental & Geotechnical Ltd and including the doing of any independent investigation of the information provided to Earth Environmental & Geotechnical Ltd save as otherwise provided in the terms of the contract between the client and Earth Environmental & Geotechnical Ltd.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable, and investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered that differ from those considered in this report. The extent of the limited area depends on soil and groundwater conditions, the positions of any existing structures and underground facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd], based on an assessment of available operational and historical information; this should not be taken to imply that other chemical species are absent.

The groundwater conditions recorded in the exploratory hole logs are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, groundwater levels are subject to seasonal variation and to changes in local drainage conditions, and higher groundwater levels may occur at times of the year other than those recorded during this investigation.

Any site drawing(s) provided in this report are not meant to be an accurate base plan but are used to present the general relative locations of features on and surrounding the site.