



Earth Environmental
& Geotechnical

Phase 1 GeoEnvironmental Assessment

Claremont Road

Rusholme

January 2022

On behalf of

RS Drylining MCR

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**CLAREMONT ROAD
RUSHOLME
PHASE I
ENVIRONMENTAL DESK STUDY
FOR
RS DRYLINING MCR**

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Report No. A2212/17

January 2022

Report Title:	Claremont Road, Rusholme Phase I Environmental Desk Study
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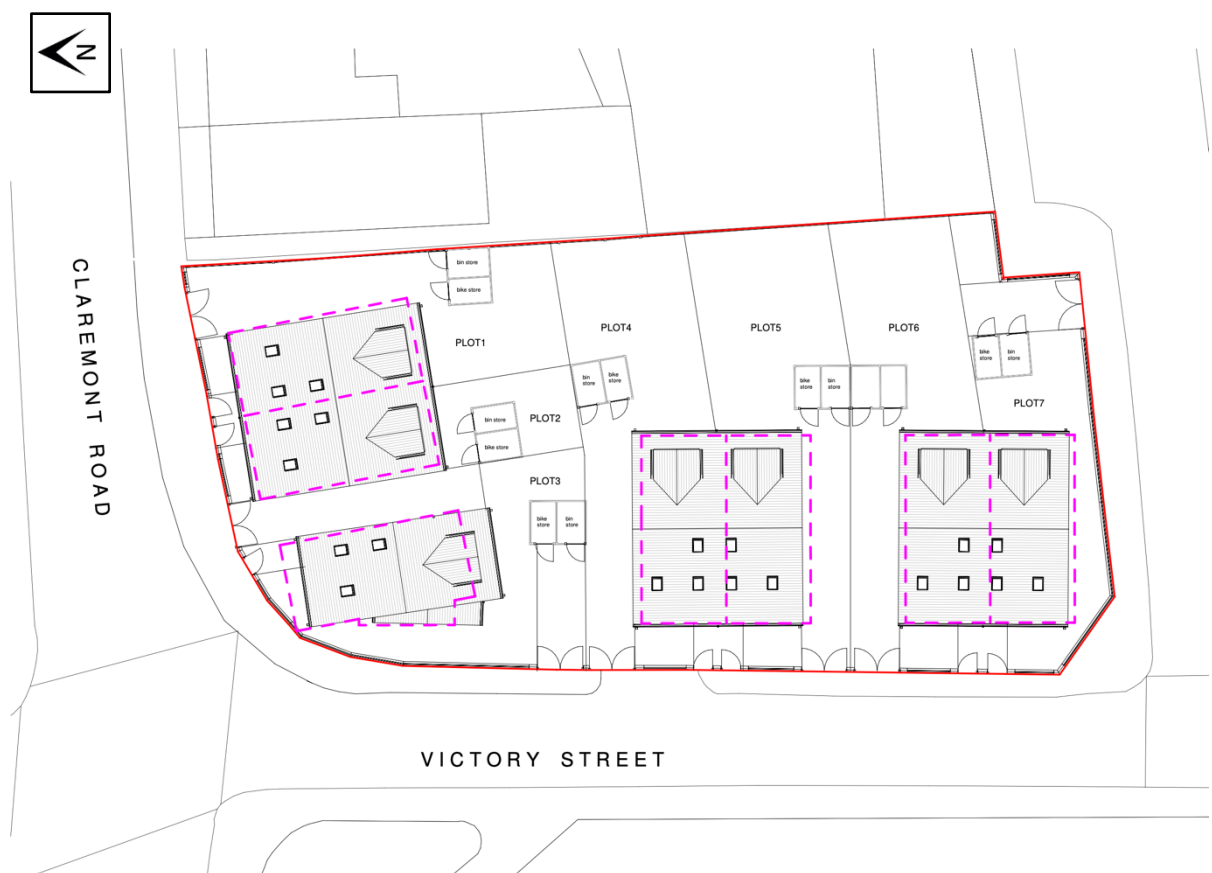
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1.0 INTRODUCTION

Appointment

- 1.1 Earth Environmental & Geotechnical was commissioned by PHA Architects on behalf of RS Drylining MCR (the client) to undertake a Phase I Environmental Desk Study at Claremont Road, Rusholme, Manchester.
- 1.2 The proposal includes the development of seven residential dwellings with private garden areas.

Figure 1 Site Development Plan



Objective

- 1.3 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

1.4 The Phase I Environmental Desk Study comprises of a site reconnaissance visit and a review of the following information sources some of which was 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 presented in the site specific GroundSure Reports (Appendix 1).
- Coal Authority Interactive Viewer.
- Manchester City Council Planning Portal.

2.0 SITE LOCATION AND DESCRIPTION

- 2.1 The site is situated between and bounded by Claremont Road to the north, Victory Street to the west with a park further west, Stenbury Close to the south and residential homes and gardens to the east.
- 2.2 The site is located approximately 3.1km south of the centre of Manchester and 1.25km north of Fallowfield. Access to the site is from the east via Victory Street. The approximate National Grid Reference for the centre of the site is SJ 85087 95107 (X: 385087 Y: 395107) with the closest postcode being M14 5AB.
- 2.3 The site occupies approximately 0.10ha across a rectangular shaped, generally level parcel of land, approximately 50m long and 20m wide.
- 2.4 A location plan is shown as Figure 2, below.

Figure 2 Site Location Plan



Site Utility Services

- 2.5 A site service plan has been not provided by the client. The status of all services should be checked with the statutory providers prior to any development (including site investigation) commencing.

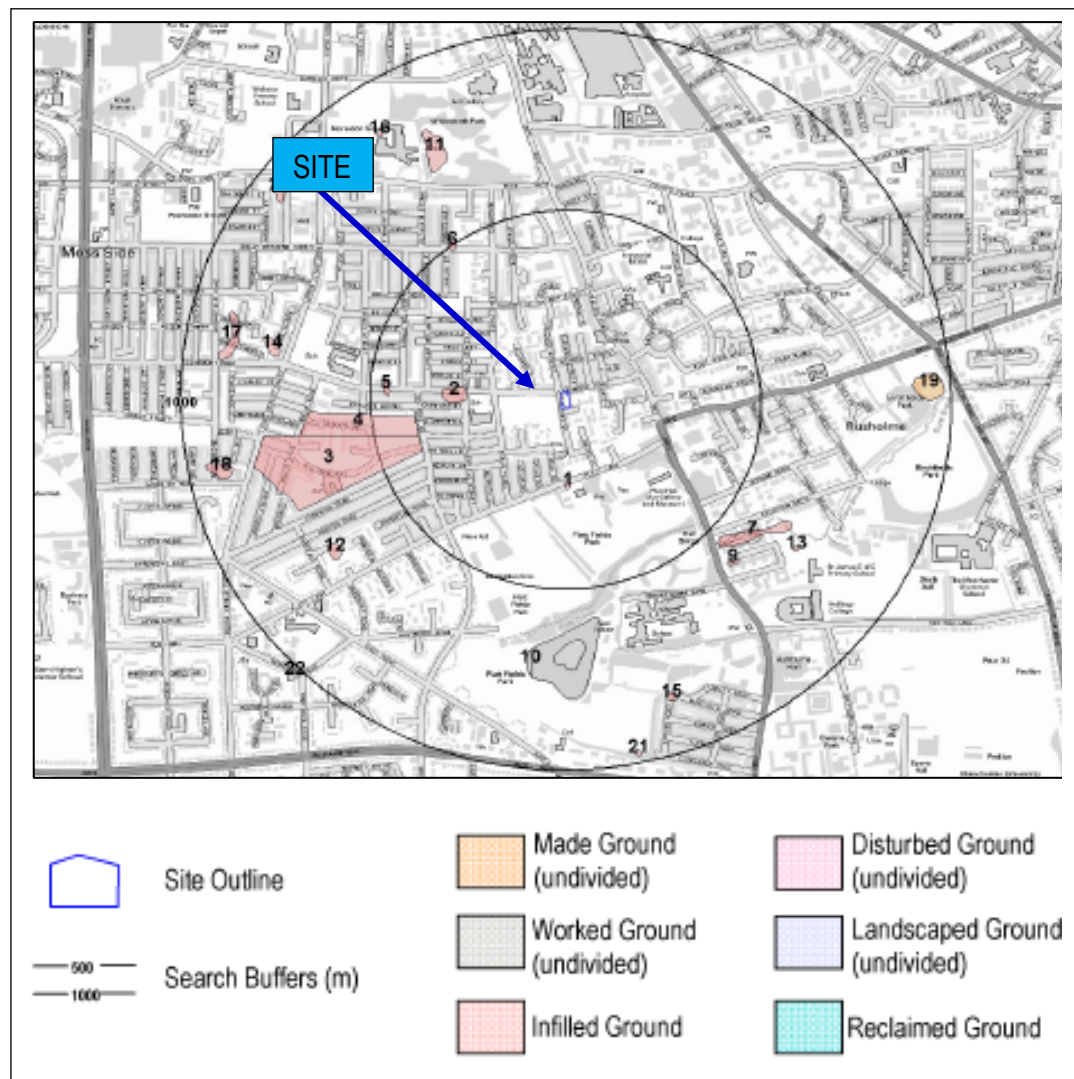
3.0 ENVIRONMENTAL SETTING

- 3.1 The geology of the site is covered by British Geological Survey (BGS) online data and the site specific GroundSure GeoInsight report (Appendix 1).
- 3.2 Environmental conditions are covered by Environment Agency (EA) and British Geological Survey (BGS) online data, and the site specific GroundSure EnviroInsight report (Appendix 1).

Geology

- 3.3 The BGS states that the site is not underlain by any made ground. The nearest record of artificial ground is located 202m south of the site. A copy of the artificial ground map is included below as Figure 3.

Figure 3 Artificial Ground Map



- 3.4 The site is underlain by Devensian Till superficial deposits.
- 3.5 The superficial deposits are underlain by the Chester Pebble Beds Formation consisting of sandstone, fine to coarse grained, commonly pebbly, with conglomerates and sporadic siltstones.
- 3.6 There are no records of geological faults within 500m of the site boundary.
- 3.7 There are no records of landslips within 500m of the site boundary.
- 3.8 There are 10no. borehole records identified within 250m of the site, with the nearest 17m south west of the site. The nearest borehole proved clay to the base of the borehole at 5m.
- 3.9 The site is in an area where the hazard rating is negligible or very low with regards to, landslides, shrink-swell clays, ground dissolution of rocks, natural subsidence, collapsible deposits, compressible deposits and running sands.

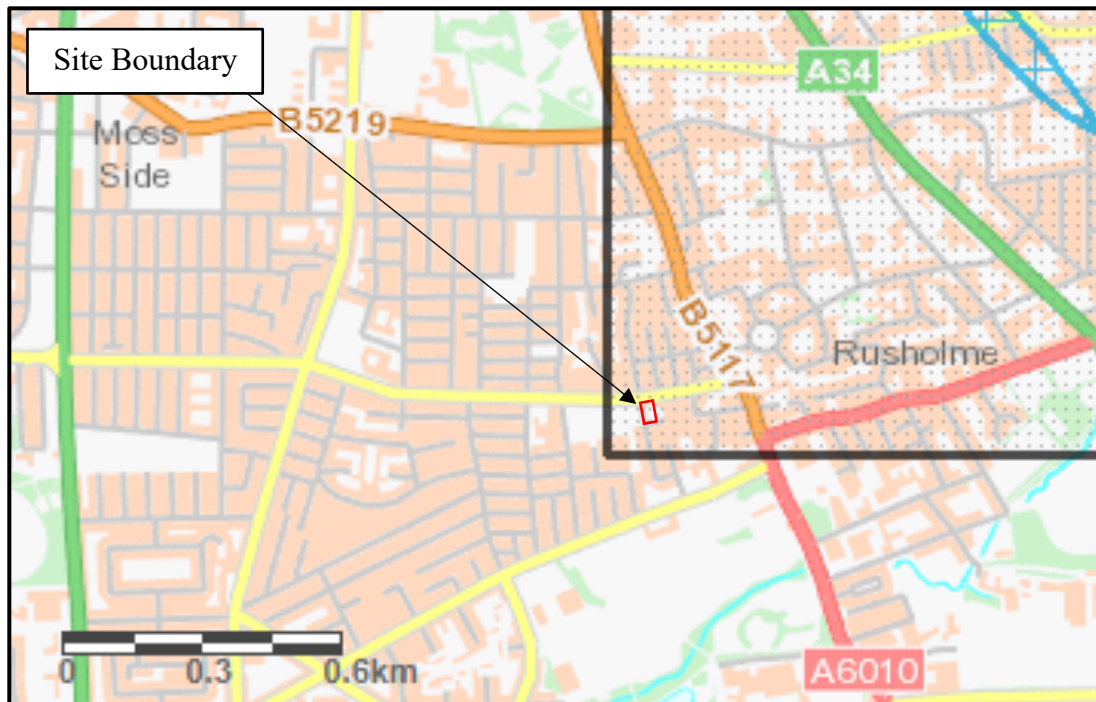
Ground Workings

- 3.10 There are no records of historical surface ground working features identified within 250m of the site boundary.
- 3.11 There are no records of historical underground working features identified within 1km of the site boundary.
- 3.12 There is 1no. current ground working feature identified 539m west of the site with a ceased status.
- 3.13 There are no historical railway features recorded within 250m of the site.
- 3.14 There are no historical railway lines or other tunnels within 250m of the site.
- 3.15 There are no current active railway features within 250m of the site boundary.
- 3.16 The site is not within 5km of the route of the High Speed 2 or Crossrail 1 rail projects.
- 3.17 There are no underground railway lines identified within 250m of the site.

Mining and Other Underground Workings

- 3.18 There are no historical mining records within 1km of the site
- 3.19 There is 1no. record of coal mining onsite although according to the Coal Authority Interactive Viewer, the site is not located within a coal mining development high risk area and there are no mine entries nearby.

Figure 3 Coal Mining Development High Risk Area



- 3.20 There are no non-coal mining areas located within 1km of the site.
- 3.21 There are no areas of gypsum extraction, brine extraction, tin mining or clay mining within 1km of the site.
- 3.22 There are no non-coal cavities or natural cavities identified within 1km of the site.
- 3.23 There are no historical underground working features identified within 1km of the site.

Radon Potential

- 3.24 The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level and therefore no radon protection measures are necessary.

Hydrogeology and Hydrology

- 3.25 The underlying superficial Devensian Till deposits are classified by the Environment Agency (EA) as a Secondary (undifferentiated) Aquifer with a mixed flow type and high maximum and low minimum permeability. The BGS states the following:

'Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.'

- 3.26 The underlying Chester Formation (mixed flow type, moderate minimum and high maximum) is classified by the Environment Agency (EA) as a Principal Aquifer. The BGS states the following:

'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.'

- 3.27 The EA classifies the groundwater vulnerability and soil leaching potential on site as HU for major aquifer with high leaching potential, where the BGS states:

'Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information'

- 3.28 There are 13no. historical and active groundwater abstraction licence within 2km of the site. The nearest is located 1.4km north west of the site for general cooling.
- 3.29 There is no surface water abstraction license within 2km of the site.
- 3.30 There are no portable water abstraction licences within 2km of the site.
- 3.31 There is one groundwater Source Protection Zone 3 recorded located onsite.
- 3.32 The site is not within 500m of a Source Protection Zone within a confined aquifer.
- 3.33 There are 2no. detailed river network records within 500m of the site. The closest record refers to Platt Brook, a primary river 424m south east of the site.
- 3.34 There are no identified surface water features located within 250m of the site.
- 3.35 There is 1no. biological river quality record located 1.18km south west of the site.
- 3.36 There are no chemical river quality records.

Landfill and Waste Management Activity

- 3.37 There are 9no. records of historical potentially infilled land identified within 500m of the site. The closest record is a pond located 79m south west of the site. Other uses include water bodies, brick works, unspecified pits and depository's.
- 3.38 There are no records of EA landfill sites within 1km of the site.
- 3.39 There are no records of historic EA landfill sites within 1.5km of the site.
- 3.40 There are no records of landfills from Local Authority and Historical Mapping Records within 1.5km of the site.
- 3.41 There are no BGS/DoE non-operational landfill sites within 1.5km of the site.
- 3.42 There are no waste treatment, transfer or disposal site within 500m of the study site.
- 3.43 There are 3no. records of Environment Agency/Natural Resources Wales licensed waste sites within 1.5km of the site, the closest being a clinical waste transfer station 836m north of the site.

Industrial Land Use Information

- 3.44 There are 27no. records of historically potentially contaminative uses identified within 500m of the site. There are 4no. records located within 100m of site comprising of police stations and unspecified works. In the vicinity are records for slaughter houses, fire stations, electrical substations, garages, laundries, unspecified factories, brickworks, unspecified works and a depository.
- 3.45 There are 9no. records of current potentially contaminative uses identified within 250m of the site. The nearest record is ATS Euromaster Ltd for vehicle parts and accessories located 161m east of the site. Other records within the vicinity include electrical features, vehicle repair, testing and servicing, jewellery, baking, airline services, unspecified works or factories and food and beverage industry machinery.
- 3.46 There are 11no. records of historical tanks identified within 250m of the site. There are 3no. records located 122m~ north west of the site comprising of tanks dating to 1950. Other records within the vicinity include unspecified tanks.
- 3.47 There are 14no. records of historical energy features identified within 500m of the site, the closest record refers to an electricity substation 154m north east of the site, dated 1950. Other records include electricity substations.
- 3.48 There are no records of historical petrol or fuel sites within 500m of the site.
- 3.49 There are 3no. records of petrol or fuel sites within 500m of the site. The nearest being an open shell garage 427m north.
- 3.50 There are 32no. historical garages and motor vehicle repair sites identified within 500m of the site. The closest is car body work shop located 257m east. Other uses include garages and coach works.
- 3.51 There are no National Grid high voltage underground electricity transmission cables or high pressure gas transmission pipelines within 500m of the site.

Environmental Permits, Incidents and Registers

- 3.52 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

Historic IPC Authorisations	None
Part A (1) and IPPC Authorised Activities	None
Red List Discharge Consents	None
List 1 Dangerous Substances Inventory Sites	None
List 2 Dangerous Substances Inventory Sites	None
Part A (2) and Part B Activities and Enforcements	5
Category 3 or 4 Radioactive Substance Authorisations	None
Licensed Discharge Consents	1
Water Industry Referrals	None
Planning Hazardous Substance Consents and Enforcements	None
Dangerous or Hazardous (COMAH and NIHHS) Sites	None
National Incidents Recording System (Pollution Incidents), List 2	None
National Incidents Recording System (Pollution Incidents), List 1	None
Sites Determined as Contaminated Land under Part 2A EPA1990	None

3.53 There are 5no. records for Part A (2) and Part B Activities within 500m of the site. The nearest record refers to a Part B petrol vapour recovery process located 309m east.

3.54 There is 1no. Licensed Discharge Consent recorded 284m north of the site for sewage discharges.

Environmentally Sensitive Sites

3.55 There are no Designated Environmentally Sensitive Sites records within 2km of the study site.

Ecology

3.56 It should be noted that an ecological assessment of the site falls outside the brief of this report and that an ecological specialist should be consulted in this regard.

Archaeology

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

Potential Flood Risks

- 3.58 Detailed assessment of flood risks is outside the scope of this report. However, the site does not lie within 250m of an Environment Agency Zone 2 (Fluvial/Tidal Models) or within 250m of a zone 3 Fluvial Models) floodplain.
- 3.59 There are no records of flood defences, areas benefitting from flood defences or areas used for flood storage within 250m of the site.
- 3.60 According to the Environment Agency the highest risk of flooding on site is very low.
- 3.61 According to the BGS there are areas within 50m of the site boundary that may be susceptible to clearwater flooding. The highest susceptibility to groundwater flooding is 'potential at surface' and the BGS confidence rating is low. The BGS states:

'The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.'

Previous Site Investigations

- 3.62 Earth Environmental & Geotechnical Ltd are unaware of any previous site investigations.

4.0 SITE HISTORY

- 4.1 The historical development of the site has been determined by reference historical plans and Google Earth imagery. The reviewed historical plans comprise only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the site. The earliest available historical mapping covering the site dates back to 1849.
- 4.2 The site history is summarised in Table 2, below, followed by selected extracts from maps and aerial photographs.

Table 2: Summary of Site History

Date	Site	Surrounding Land Use
1849	The site appears to be undeveloped and unoccupied however the current land use is not clear.	Mixed rural and residential setting with mills or factories in the vicinity. Adjacent to the N boundary is Regents Park. Adjacent to the E boundary are residential homes with parks, agricultural land and homes further to the east. Adjacent to the southern boundary is a residential development. This development ends at a church 250m south of the site before continued by agricultural land. A smaller residential development is located to the west of the site followed by agricultural land with small ponds. The nearest pond located approximately 100m south west. Plat Brook located approximately 500m south of the site running northeast- southwest.
1850	Clearer imagery indicates the site is occupied by Kingsthorpe Grove comprising of three residential dwellings with associated gardens. North of the site is open soft verge.	Moor Street Chapel 50m to the east.
1891, 1892, 1905, 1923	The soft verge area now situates six residential homes with small garden areas.	Large scale development of homes and road infrastructure. A police station has been built adjacent to the northern boundary. (1891-1923) A fire station (1891-1905) and Slaughter house (1891-1934) 50m to the west. Followed by a Brick Works with a reservoir. Churches and schools to the south. A public Hall and Library, churches and playing fields to the east. The creation of a Boating lake in Fallowfield 0.75km south of the site. (1932)
1934, 1938, 1950, 1956, 1961, 1966, 1968, 1972, 1976,	Homes still present south of the site with a new public house development.	More development of homes and road infrastructure. The brick works have been replaced by a football ground.

1982, 1983, 1988, 1989	The southern development has been removed and left as open land (1982)	Building of small churches in the surrounding area. Xaverian College approximately 500m north west. Athletics ground 1.4km south east of the site.
2002	No significant change	Athletics ground 1.4km south east of the site has been removed for homes and flats. Further development of roads and homes.
2010, 2014, Google Earth Imagery 2017	The site has been cleared of all building structures	No significant change.

Figure 5 OS Map Extract 1849

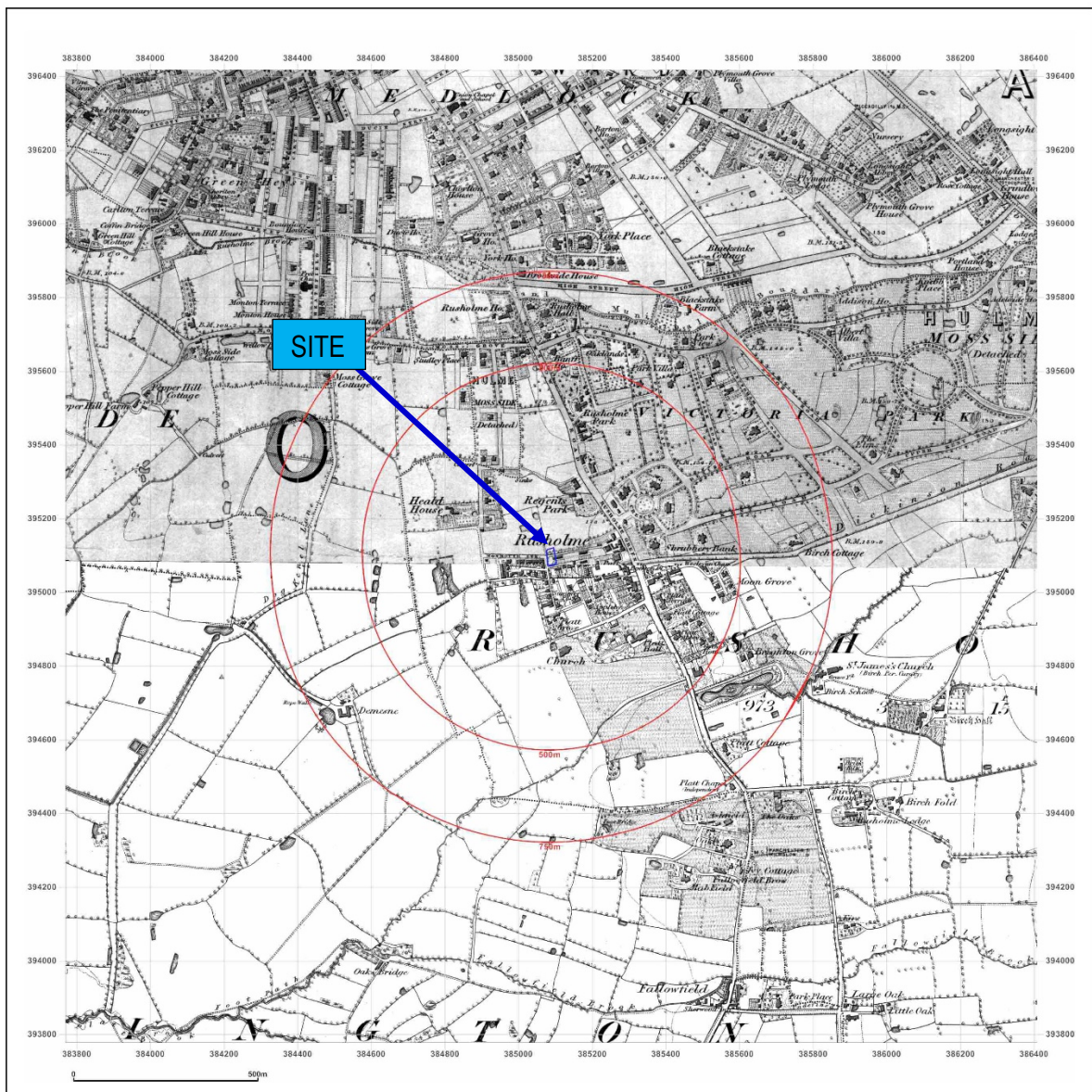
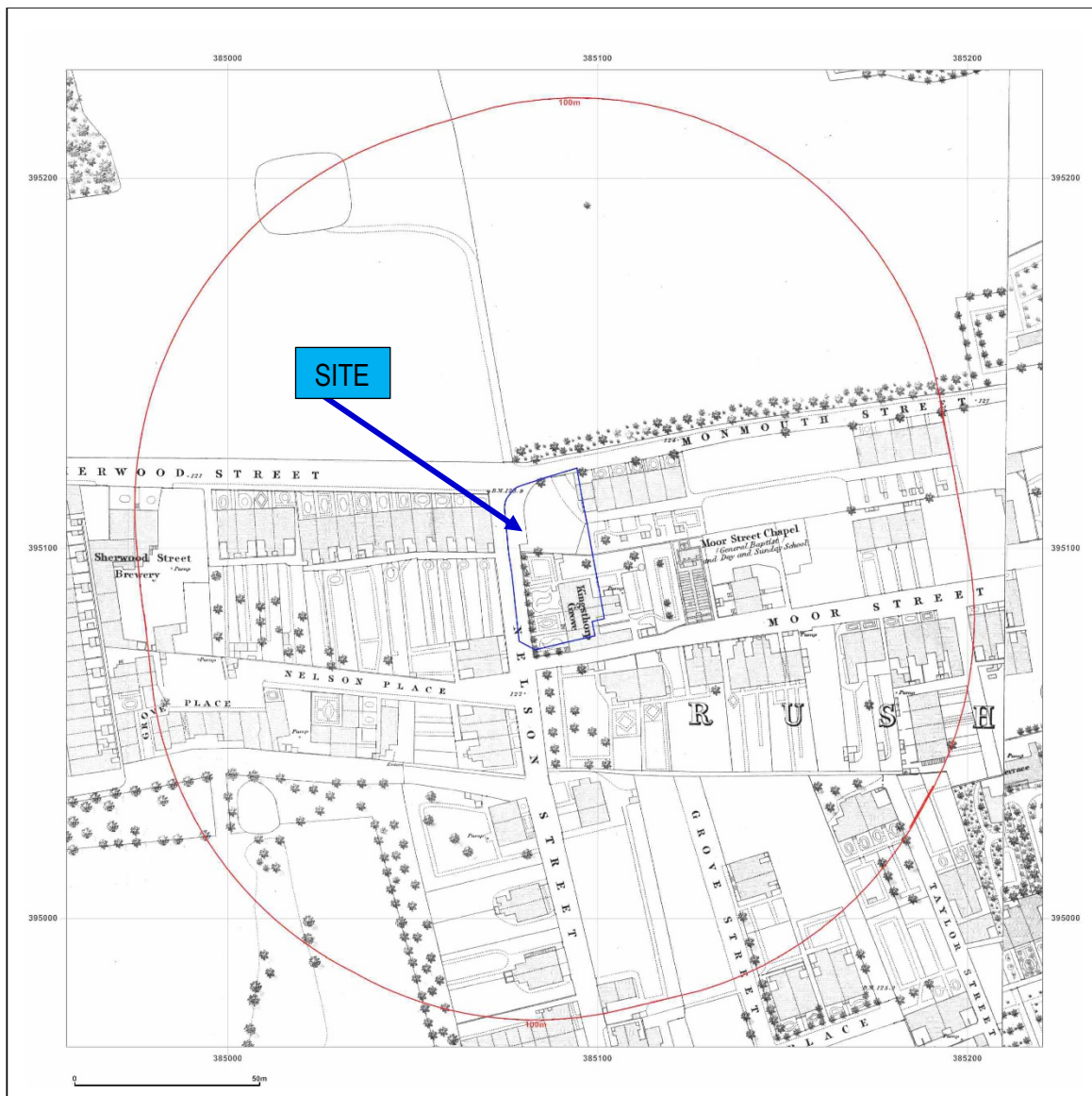


Figure 6 OS Map Extract 1850



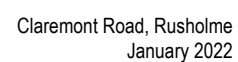


Figure 8 OS Map Extract 1988

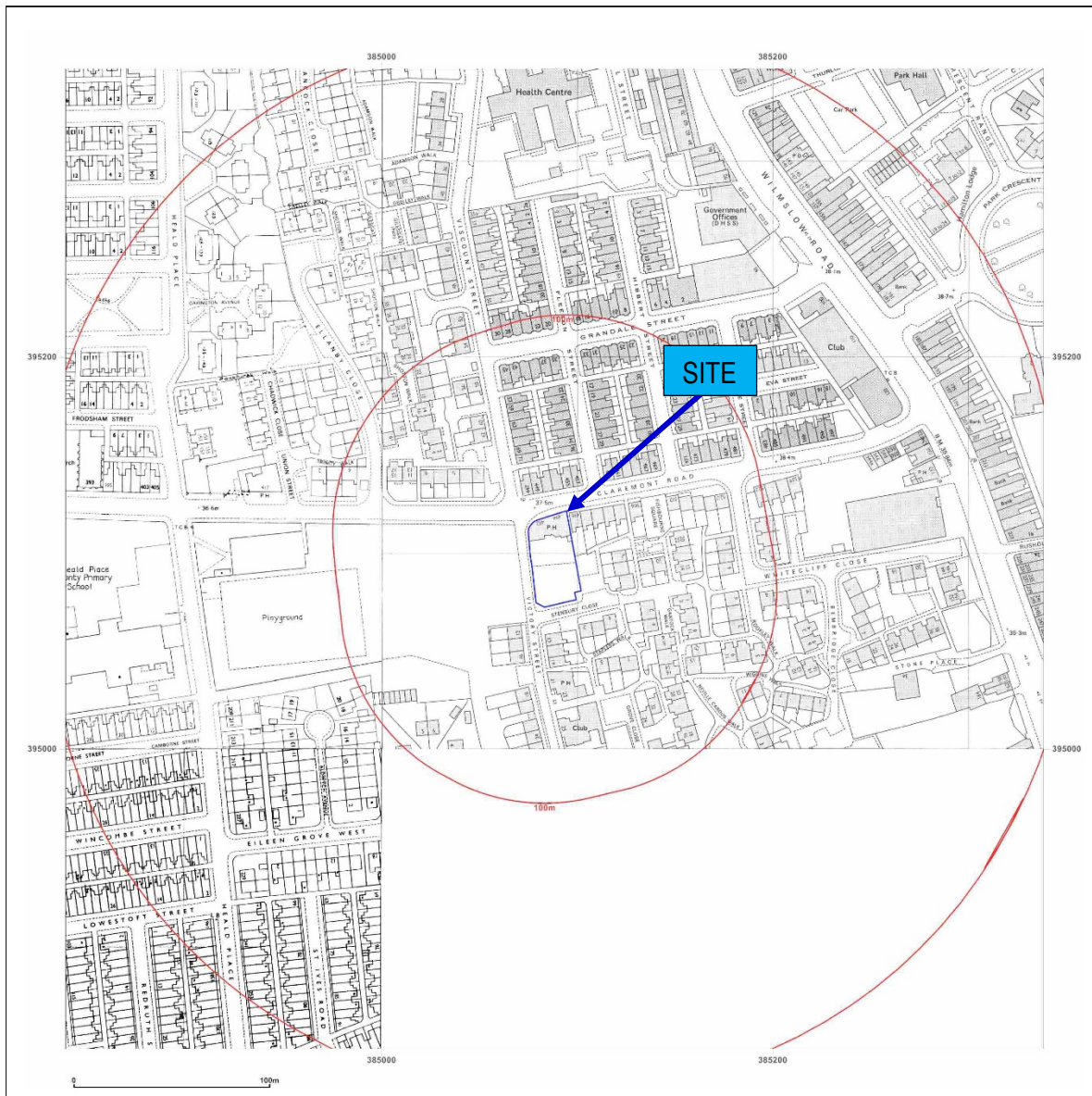
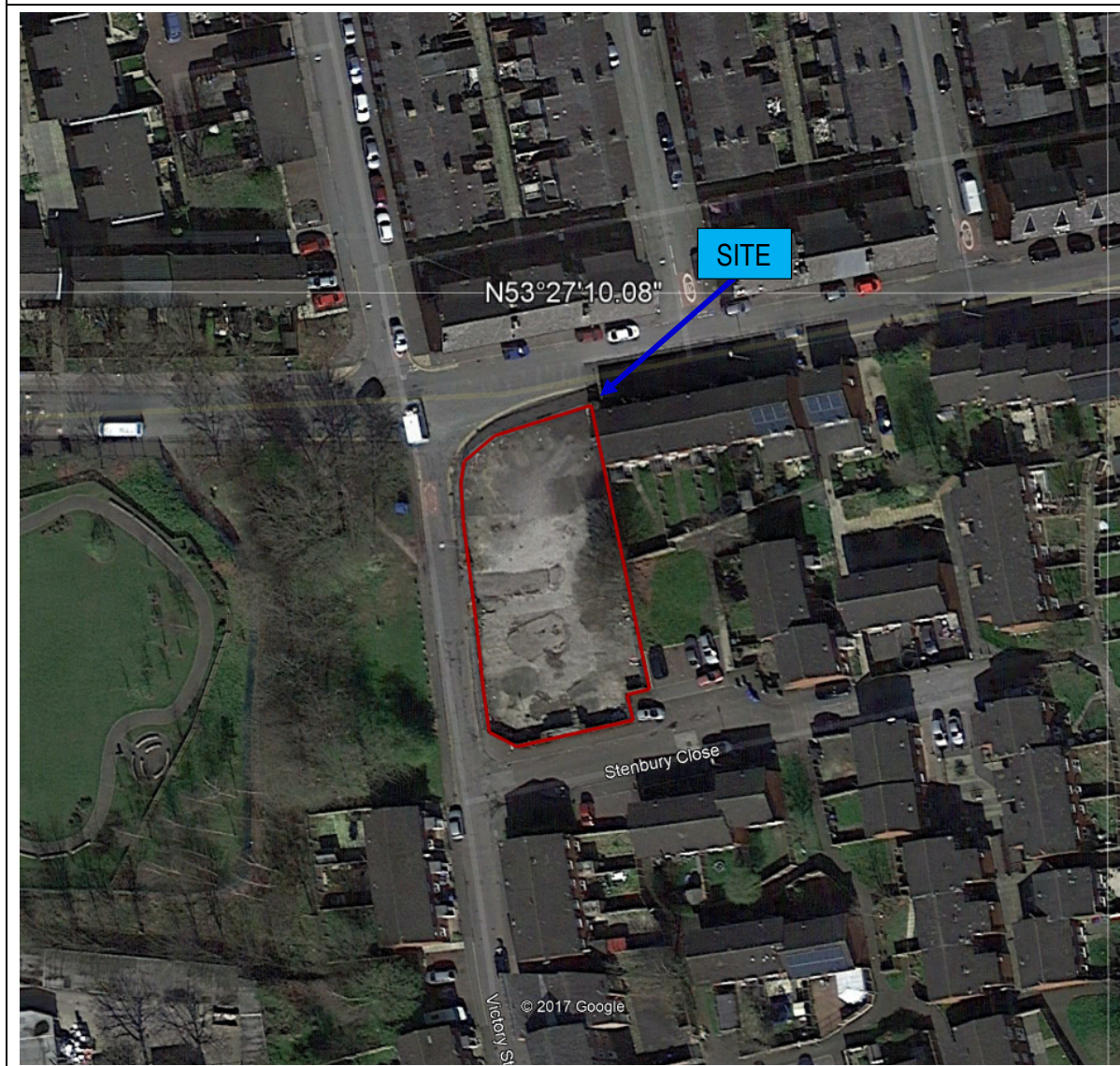


Figure 9 Google Earth Image 2017



5.0 WALKOVER SURVEY

- 5.1 A walkover survey was completed on the 25th August 2017. The photographs and notes from this survey are appended to this report as Appendix 2 and Appendix 3 respectively.
- 5.2 The site is an unoccupied plot with an access gate located along the eastern site boundary (Victory Street).
- 5.3 The site is generally level. There are small amounts of light vegetation on-site comprising of grass and shrubs due to poor maintenance. Mature trees are located along the eastern site boundary.
- 5.1 The site currently has no existing structures.
- 5.2 The site is on hardstanding (asphalt).
- 5.3 The site is bounded by the residential homes to the north, east and south. West of the site is a soft verge followed by a park.
- 5.4 Presence of fly-tipped material includes a stockpile of wood, pallets, plastic and piping. These are generally construction materials located south of the site.
- 5.5 There are two empty Intermediate Bulk Containers (IBCs) located north east of the site.
- 5.6 There are no tankers, electrical substations or transformers located on site.
- 5.7 Materials on site consist of inert waste. In addition, the site is being used for storage of; wood and plastics, two storage containers, two IBCs, scaffolding, plastic piping, vehicles (lorry & caravan), a trailer, fencing and stillages.

6.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

- 6.1 The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site as defined by DEFRA and the EA Model Procedures for the Management of Land Contamination, CLR11 (2004).
- 6.2 Table 3 provides a Preliminary Conceptual Model (PCM) which defines the site in terms of a potential pollution linkage, that is, whether a pathway exists between a contamination source and a sensitive environmental receptor (Source-Pathway-Receptor relationship).
- 6.3 Table 3 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 mean that a significant risk exists, but indicates that further information is required through appropriate site investigation to substantiate the conceptual model.

Table 3: Preliminary Conceptual Model

- 6.4 The PCM/PRA is based on a potential residential; end use, representing the most sensitive potential receptors.

Source	Pathway	Receptor	Linkage	Comment
Due to the presence of made ground, on site the likelihood of significant ground contamination sources being present at the site, associated with historical land use, is considered LOW .	Direct contact, ingestion of soil, dermal contact, dust exposure pathways.	Current Site Users	Unlikely	As the site is currently unoccupied, the risk associated with current site users via direct exposure is considered to be LOW .
		Adjacent land users	Unlikely	The neighbouring properties are residential. The current risk is considered LOW .
		Construction Workers	Unlikely	Standard industry working practices for working on sites will be sufficient to manage any potential risks. Therefore, the risk associated with construction workers via direct exposure is considered to be LOW .
		Future land users	Unlikely	If the site is used residential purposes and covered with hardstanding the risk associated with future site users via direct exposure is considered to be LOW .



Due to the presence of made ground on site the likelihood of soluble and/or liquid and therefore mobile contaminants occurring at the site due to its past use is considered LOW .	Direct downward migration through leaching and/or mobile liquids.	Groundwater	Possible	The site lies upon Secondary (Undifferentiated) Aquifer. The perceived risk to groundwater is considered LOW .
	Off-site migration in groundwater or surface water flow.	Surface water	Possible	There are no surface water abstraction licences within 2km of the site. The perceived risk to surface water is considered LOW .
		Groundwater / surface water abstractions	Possible	The nearest active surface groundwater abstraction licence 1.5km from the site. The risk to water abstractions is therefore considered LOW .
		Adjacent Properties	Possible	There is expected to be clay underlying the site. The preliminary risk to adjacent properties is considered LOW .
		Ecology	Unlikely	The site is in a developed area. The risk to ecology is therefore considered LOW .
Due to the current and past land use associated with the site, the likelihood of volatile contaminants at the site due to its this is considered LOW .	Inhalation of harmful vapours (indoor and outdoor airspaces)	Current Site Users	Unlikely	As the site is currently unoccupied, the risk associated with current site users is considered to be LOW .
		Adjacent Properties	Unlikely	The potential risk to adjoining site users is therefore considered LOW .

Due to the nature of the past buildings on site. The likelihood of degradable materials with the potential to generate hazardous ground gas is LOW .	Emissions from the ground collecting in confined spaces and excavations	Construction/ services maintenance workers	Unlikely	The preliminary risk is therefore considered LOW .
	Migration of gases on/off site and collecting in confined spaces on/off site.	Adjoining site users	Unlikely	The potential risk to adjoining site users is therefore considered LOW .
		Current/future site users	Unlikely	The potential of commercial end use represents sensitive receptors. The potential risk is considered LOW .
Chemicals which could prove aggressive to construction materials may be present on site.	Direct contact	Construction concrete, plastic water pipes.	Unlikely	Risks to construction materials can be identified via site investigation prior to the proposed construction works. The perceived risk is considered LOW .

Preliminary Risk Assessment

- 6.5 The site was primarily undeveloped until 1850 after which residential dwellings were built in the southern sector of the site. There was then a public house and works on the site.
- 6.6 The majority of the potential pollution linkages are considered unlikely or possible and the preliminary risks are assessed as **LOW** due to the historic and current land uses.

7.0 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 The likelihood of contamination on the site is overall Low.
- 7.2 The site is underlain by Devensian Till superficial deposits and the Chester Formation.
- 7.3 There are no surface water features within the 250m of the site.

Recommendations

- 7.4 An 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 surrounding area.
- 7.5 As part of the geotechnical investigation, it is recommended that samples of soil are recovered from proposed garden areas for contamination testing and to confirm whether there are any potential risks.

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 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 1 SE of the site boundary, looking N along the site boundary.	Plate 2 SE of the site boundary, looking W along the site boundary.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 3 SW of the site boundary, looking N along the site boundary.	Plate 4 W of the site boundary, looking E at the site boundary.
	
Date: 25th August 2017	Date: 25th August 2017

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 5 W of the site boundary, looking SE at the site boundary.	Plate 6 W of the site boundary, looking NE at the site boundary.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 7 NW of the site looking NE of the site. (two IBCs)	Plate 8 NW of the site looking SE of the site (vehicles and storage containers).
	
Date: 25th August 2017	Date: 25th August 2017

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 9 N of the site looking S.	Plate 10 SW of the site looking NE.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 11 SW of the site looking E.	Plate 12 SE of the site looking N.
	
Date: 25th August 2017	Date: 25th August 2017

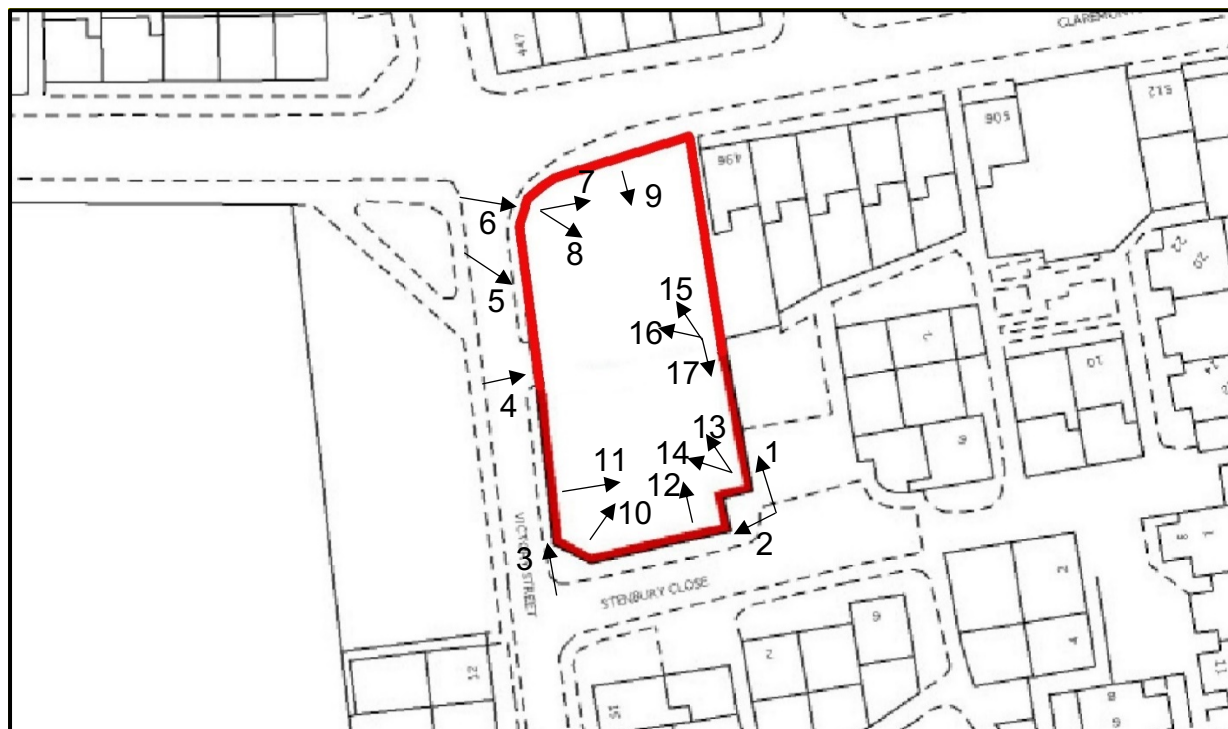
Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 13 SE of the site looking NW.	Plate 14 SE of the site looking W.
	
Date: 25th August 2017	Date: 25th August 2017
Plate 15 W of the site looking NE.	Plate 16 W of the site looking E.
	
Date: 25th August 2017	Date: 25th August 2017



Earth Environmental
& Geotechnical

Earth Environmental & Geotechnical Ltd Tel: 0161 975 6088 Email: info@earthenvironmental.co.uk Web: www.earthenvironmental.co.uk	SITE PHOTOGRAPHS 
Job No.: A2212/17	Site: Claremont Road, Rusholme
Plate 17 W of the site looking E.	Plate 18 W of the site looking N.
	
Date: 25th August 2017	Date: 25th August 2017

Figure 10 Site Walkover Photo Locations



APPENDIX 3

SITE WALKOVER NOTES

WALK OVER SURVEY REPORT

Site: Claremont Road, Manchester

Date: 25th August 2017

Job No: A2212

Undertaken By: Nigel Ramsumair

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)		Town setting of Rusholme, Manchester. Predominantly residential with the nearest commercial surroundings along the curry mile 200m east. Orientated N-S. A park is located adjacent to the west. Residential homes are located north and south of the site. The site is not currently active and is being used for storage. This includes the following; wood and plastic, two containers, scaffolding, plastic piping, vehicles (lowry & caravan), trailer, fencing and stillages.
Evidence of Past Activities	Are there: Any relevant street names in area? Features or relics which indicate past history?	Yes/No Yes/No	The site is boarder by Stenbury Close in the south, Victory street in the west and Claremont road to the North.
Geographic Setting	Description required for: Low lying flood plain/dry valley/rolling hills etc.		Site is primarily flat lying across the service yard or car park.
Ground Conditions	Is there any evidence of: Mining, Mine entries Subsidence Landslip/slope erosion Former investigation works	Yes/No Yes/No Yes/No	

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Topography	Description required for: Are there apparent differences between site and surrounding area? (If yes describe the presence of retaining walls, and slopes). Is there evidence of Made Ground / Fill on site?	Yes/No Yes/No	The site is located at the end of a housing estate to the east. Soft verge west of the site across Victory Street The site boundary is comprised of a combination of steel fencing and retaining walls. The Brick wall is predominantly along the eastern boundary line. The site is covered in hard standing (asphalt).
Site Boundaries and Neighbours	Description required for: Type of boundary demarcation (if any) on each side of 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 boundary is comprised of a combination of steel fencing and retaining walls. The Brick wall is predominantly along the eastern boundary line. The nearest commercial surroundings along the curvy mile 200m east. Orientated N-S. A park is located adjacent to the west. Residential homes are located north and south of the site.
Vegetation	Is there any vegetation/trees on or close to side (if yes describe locations, type, maturity, etc) Is there any evidence of poor health / distress?	Yes/No Yes/No	There is light vegetation and shrubs growing on site due to is inactivity. There are mature trees along the eastern boundary along the side on the existing retaining wall.
Ground Surface	Are there areas of hardstanding and estimate the split between hard and soft cover. (If yes describe locations, types and conditions). Is the any evidence of any spillages or staining?	Yes/No Yes/No	The site is completely covered in hardstanding (asphalt).

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)	Yes /No	There were no visible manhole covers however the site is currently being using for storage so it is possible that may have been covered at the time of the walkover.
	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 water, clear or cloudy)	Yes /No	
	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	
Electrical Equipment	Are there any electricity sub stations on or adjacent to the site? Are there any electrical transformers, capacitors, pylons etc on site?	Yes /No	
Buildings	Is there any evidence of asbestos construction materials e.g. roofing, insulation materials.	Yes /No	
	Do any buildings have basements?	Yes /No	
	Do any buildings have a boiler room (if yes, describe fuel type and storage arrangements)?	Yes /No	

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)?	Yes /No	N/A
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?	Yes /No Yes/ No	The is a stockpile of building materials predominantly along the northern boundary of the site (wood and plastics).
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)?	Yes/ No Yes /No Yes /No	There are empty Intermediate bulk containers (IBCs) stored north east of the site.
Accidents	In the event of a large spillage would runoff affect any vulnerable watercourse/culverts? Are emergency procedures / equipment in place?	Yes/ No Yes /No	A spillage could potentially run into road drainage.

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?	Yes/No Yes/No Yes/No	The is a stockpile of building materials predominantly along the southern boundary of the site (wood and plastics).
Atmospheric	Are there any fumes, odours originating from site or affecting site from neighbouring sites?	Yes /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 investigation scope/techniques. Identify possible site office and storage locations. Identify possible water supply	Yes/No	There are no issues accessing the inactive site. Difficulties will arise if access is required to an area currently being used as storage. The site is inactive and there is adequate space for storage.
Site Environs	Are there any local features that could have a harmful influence e.g. landfill, industrial processes, railway land? Are there any sensitive water features/courses near to the site?	Yes/No Yes/No	
Local Knowledge / Anecdotal Evidence			
Site Dimensions	Describe shape of Site in plan and measure dimensions.		The site is rectangular approximately 50m x 20m.

APPENDIX 4

REPORT LIMITATIONS

LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd on the basis of a defined programme and 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, is made 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 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 2022 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 assessment 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 of 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 upon Earth Environmental & Geotechnical Ltd observations of existing physical conditions at the site gained from a walkover survey of the site together with Earth Environmental & Geotechnical Ltd interpretation of information including documentation, obtained from third parties and from the client on the history and usage 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 and that it 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 attempt to 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 as investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current 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 understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records 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 or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

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