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Phase I

Environmental Risk Assessment

Great Stone Road, Stretford, M32 0YP

A REPORT PREPARED

FOR AND ON BEHALF OF ACCRUE (FORUM) 1 LLP

Issue Date: 10 March 2020
Revision NO:
Revision Date:



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SIGNATURE:






For and on behalf of
Paragon Building Consultancy Limited

- Critical or high risk issue for urgent management attention*
- Moderate to high risk issue considered as a significant management item*
- Medium risk issue for ongoing management or action*
- Low to medium risk issue that may require management or action*
- Low risk item or for information only*

DASHBOARD SUMMARY

KEY ISSUES

	<p>The following issues represent the key matters for consideration as a result of our Phase 1 Environmental Risk Assessment with regards to ground conditions as part of the proposed development of 333 residential units, with mixed flexible space, associated engineering works, parking provisions and infrastructure.</p>	
<p>1.</p>	<p>The site is currently occupied by a vacant warehouse structure that was formerly occupied by B&Q. Current development proposals comprise demolition of the current warehouse and construction of residential units with ancillary land use. Historically, the site was occupied by a gun club which may have given rise to a degree of subsurface lead contamination. A railway line flanks the southeast site boundary which may represent a potential source of Total Petroleum Hydrocarbons (TPH) and Poly Aromatic Hydrocarbons (PAH), although this is not considered to be a gross source of contamination. Geological mapping and environmental data indicate that the site is underlain by Glaciofluvial sands and gravels, over Sandstone designated as Secondary (A) and Principal Aquifers respectively.</p>	
<p>2.</p>	<p>Noting the potential for residual contamination to exist from Made Ground and the rifle range, and the perceived sensitivity of the change in land use from commercial to residential, we would advise a ground investigation is undertaken to understand contamination potential within the subsurface materials on site. Additionally, owing to the presence of a Principal Aquifer below the site, it will be necessary to understand the potential impacts to groundwater from the future redevelopment proposals.</p>	
<p>3.</p>	<p>Given the nature of the underlying ground conditions and initial proposals for the development, there will be a requirement for detailed geotechnical assessment and provision of design parameters for foundation design etc.</p>	

ENVIRONMENTAL RISK RATING

Based on the findings of this report, the potential for viable pollutant linkages associated with the proposed development is not considered to be overly significant. However, owing to the change of use to residential the sensitivity is increased. There is considered to be a **low-medium** risk from residual contaminants present on site causing significant harm to human health and Controlled Waters.

RECOMMENDATIONS AND COST

We would advise that you undertake a ground investigation to understand contamination potential within the subsurface materials on site. It will also be necessary to understand the potential impacts to groundwater from the future redevelopment proposals.

The following geotechnical and geoenvironmental investigation is proposed:

- 3 No. rotary cored boreholes to target depths of 20-30m bgl (1x30m & 2x20m);
- 3 No. cable percussive boreholes to 20mbgl;
- Dynamic cone penetrometer tests (CBRS) to assist design of pavements and roadways;
- 1 day (6 locations) of windowless sampling to install gas wells and to gain geoenvironmental samples of shallow soils;
- In situ geotechnical testing and subsampling;
- Geotechnical and geoenvironmental laboratory testing;
- One round of water monitoring and six (required for a residential development as a minimum) rounds of gas monitoring.

Construction workers breaking ground should be equipped with appropriate Personal protective Equipment (PPE).

Based on the preliminary unexploded ordnance (UXO) risk, a detailed, specialist desk study will be required to assess risks in more detail and determine a risk mitigation strategy.

We would recommend that this report is submitted to the Local Authority for their comments and approval.

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PHASE 1 ENVIRONMENTAL RISK ASSESSMENT

CLIENT NAME: Accrue (Forum) 1 LLP

PROPERTY ADDRESS: Great Stone Road
Stretford









INSPECTION DATE: 25 April 2016





1.0 KEY AUDIT FINDINGS

<p>1.1</p>	<p>Introduction</p>	
<p>1.1.1</p>	<p>This assessment has been carried out in general accordance with current UK best practice and guidance as given in the Management of Land Contamination CLRM, 2019 and Contaminated Land Exposure Assessment (CLEA) framework, Part IIA of the Environmental Protection Act (EPA) 1990 and CIRIA Contaminated Land Risk Assessment Guide to Good Practice C552. Due consideration is given to the requirements of the National Planning Policy Framework (NPPF).</p>	<p>L</p>
<p>1.2</p>	<p>Development Proposals</p>	
<p>1.2.1</p>	<p>Current proposals comprise the demolition of the existing retail unit and associated structures; erection of buildings for a mix of use including: 333 apartments (use class C3) and communal spaces ancillary to the residential use; flexible space for use classes A1, A3, D1 and/or D2; undercroft car parking; new public realm; and associated engineering works and infrastructure.</p> <p>Minimal amounts of soft, border landscaping is proposed; the scheme will not include private gardens. This report is prepared in connection with a planning application submission.</p>	<p>L</p>

1.3	Environmental Site Assessment	
1.3.1	<p>The site is currently occupied by a vacant warehouse type structure that was formerly occupied by B&Q. The walkover was originally completed by Paragon in April 2016, however as the property is secure, no significant changes to site conditions are anticipated within the time that has elapsed. At that time no evidence for invasive species (Japanese Knotweed) was observed but and up to date specialist survey would be required to confirm this.</p> <p>There are steps formed up the adjacent road embankment to provide pedestrian access from Great Stone Road. Externally there are hardstanding areas of concrete and tarmac that formed the car park, service road, loading area and storage yard. Within the yard there was a localised area of paint spillages on the hard standing, however, this was not close to any surface water drains.</p> <p>There also is a large decommissioned sprinkler tank on site. A skip containing waste materials was present in the yard and litter was present along the east and southeast perimeter of the site, which is flanked with a steel palisade fence separating it from an off-site railway line and sidings. No significant issues of environmental concern were highlighted from the current use of the site. Further details on the site's description are provided in Appendix 1.</p>	L
1.3.2	The site is flanked by infrastructure including a road to the north and northwest and railway line to the east and southeast. Additionally, there is the Old Trafford cricket ground and commercial offices to the north and residential properties to the west.	L M
1.4	Historical Land Use	
1.4.1	Historical mapping from circa 1894 indicated that the site formed part of a cricket ground and gun club. By the 1930s, the gun club was no longer recorded and by the 1950s, the site was recorded as being clear of structures. The site was then redeveloped to its current commercial use in the late 1970s. Historical map extracts are provided in Appendix 2.	L M
1.4.2	Due to the post war site clearance, it is possible that the site may have been impacted by World War 2 (WWII) bombing. Therefore, a specialist UXO study will be required prior to any intrusive works at the site. A preliminary assessment of risk from unexploded ordnance (UXO) has been made via the online Zetica bomb risk map resources. This shows that the site is in high risk area for UXO.	H
1.4.3	The surrounding area has supported limited potentially contaminative land uses, the nearest being the railway line and sidings that flank the southeast and eastern boundaries of the site.	L M
1.5	Potential Sources of Current and Historical Contamination	
1.5.1	Limited on site sources of contamination have been identified in connection with the on and off site land uses. A railway line flanks the site and this may represent a potential source of hydrocarbons and PAH, although this is not considered to be a gross source of contamination. If shooting at the historical gun club took place on site, this may have given rise to a degree of subsurface lead contamination.	L M


1.6	Environmental Setting	
1.6.1	Geological mapping and environmental data indicate that the site is underlain by Glaciofluvial sands and gravels over Sandstone designated as a Secondary (A) Aquifer and Principal Aquifer respectively. There are two active groundwater abstraction wells located some 380m and 445m from the site for ground source heat pumps. There is no potable water abstraction within 2km of the site and the site is not located within a Source Protection Zone.	
1.6.2	Borehole records obtained from British Geological Society (BGS) records and located north of the site at the cricket ground broadly indicate the following ground conditions to be present: <ul style="list-style-type: none"> • Topsoil to 0.30m bgl; • Over Sand and Gravels (occasionally clayey) to 2.60m to 2.70m bgl; • Over Boulder Clay to the base of the boreholes at 15.50m and 20.00m bgl. Groundwater was encountered at approximately 1.70m bgl.	
1.6.3	There are no surface water features within 250m of the site. There is no surface water abstraction within 1km.	
1.7	Flood Risk	
1.7.1	According to the Environment Agency website, the site is not located within a fluvial flood risk zone.	
1.8	Waste	
1.8.1	There are no landfill sites within 500m of the site. There is a waste transfer station some 455m from the site, however, the impact of this to the site is likely to be negligible.	
1.9	Additional Information & Previous Reports	
1.9.1	No significant issues of environmental concern have been identified from third party databases or information searches.	
1.9.2	The site is not located in a coal mining or radon affected area.	
1.9.3	The following environmental report has been provided for review: <ul style="list-style-type: none"> • Groundsure (2013) Groundsure Site Guard Report: B&Q, Great Stone Road, Stretford. Ref: GS-927679 on behalf of Savills (UK) Limited. The report reviews similar third party desk based information to that collated by Paragon, however, it does not include a site inspection or liaisons with the Local Authority. The report indicates that there is potentially a low to moderate risk of environmental risk associated with the site's ownership.	





<p>1.10</p>	<p>Regulatory Consultation</p>	
<p>1.10.1</p>	<p>The Contaminated Land Officer (Richard Pollitt of Trafford Council) confirmed, in May 2016, that the site has not been designated as contaminated land. The officer also stated there are several sites within 250m which have the potential for contamination to have occurred but none have been designated as contaminated land. This information is considered to still be valid. Further information on Regulatory Consultations is provided at Appendix 6.</p>	
<p>1.10.2</p>	<p>The Environment Agency has not been contacted as part of this assessment as the risk of contamination originating from the site and impacting Controlled Waters is considered to be minimal. However, owing to the presence of a Principal Aquifer below the site, it will be necessary to understand the potential impacts to groundwater from the future redevelopment proposals.</p>	





2.0 ENVIRONMENTAL RISK ASSESMENT

<p>2.1</p>	<p>Preliminary Conceptual Site Model (CSM)</p>	
<p>2.1.1</p>	<p>In connection with Part IIA of the EPA 1990 and the regulatory planning framework, a preliminary CSM has been compiled for the site, in Appendix 6. This assessment is based on the potential historical sources identified, the site’s environmental setting and the development proposals to evaluate the potential source-pathway-receptor linkages, which must exist to define a site as contaminated land. The evaluation of risk associated with these linkages is set out in Section 3.0.</p>	

3.0 ENVIRONMENTAL RISK EVALUATION

	<p>Having evaluated the information gathered during this study and described in the previous sections, Paragon have produced the following evaluation of the overall risk associated with the proposed development.</p>		
<p>3.1</p>	<p>Contamination Potential</p>		
	<p>Issue</p>	<p>Detail</p>	
<p>3.1.1</p>	<p>Significant on-site contamination</p>	<p>No significant sources of contamination have been identified from the current or historical use of the site. However, the potential for residual contamination to exist from Made Ground and the rifle range cannot be discounted.</p>	

3.1.2	Contaminant migration from site source(s) to off-site receptor(s)	The perceived permeability of the underlying superficial deposits and Sandstone may facilitate the migration of soil and groundwater contamination, if present, off the site.	
3.1.3	Contaminant migration to on-site receptor(s) from off-site source(s)	The perceived permeability of the underlying superficial deposits and Sandstone may facilitate the migration of soil and groundwater contamination, if present, to the site.	
3.2	Environmental Impacts		
	Issue	Detail	
3.2.1	Risk of pollution of Controlled Waters	The Secondary (A) and Principal Aquifers beneath the site are classified as Controlled Waters and regulated by the EA. Therefore, the likelihood of historical onsite contamination potentially impacting the aquifer and river cannot be entirely discounted. A ground investigation will be necessary to understand the potential impacts to groundwater from the future redevelopment proposals.	
3.2.2	Risk of damage to property	No significant issues have been identified that could cause a significant risk of damage to property. There is unlikely to be a significant risk to the structure or services given the limited potential for off-site sources to have significantly impacted the shallow subsurface soils below the site. As a precautionary measure, owing to the increased sensitivity of the proposed residential end use, gas monitoring will be completed to check the gas regime (if any).	

<p>3.2.3</p>	<p>Risk of harm to human health</p>	<p>Owing to the potential for Made Ground and railway land to the southeast there is potential for ground gas and vapours. The extensive coverage of hardstanding across the subject site would limit direct dermal contact and ingestion pathways with contaminants (if present).</p> <p>Construction workers shall be equipped with suitable Personal Protective Equipment (PPE) and as a precautionary measure samples will be taken of the shallow Made Ground to check for the presence of residual contaminants.</p>	
<p>3.3</p>	<p>Business Consequences</p>		
	<p>Issue</p>	<p>Detail</p>	
<p>3.3.1</p>	<p>Risk of liability for owner</p>	<p>Noting the potential for residual contamination to exist from Made Ground and the rifle range, and the perceived sensitivity of the change in land use from commercial to residential, we would advise a ground investigation is undertaken to understand contamination potential within the subsurface materials on site.</p>	
<p>3.3.2</p>	<p>Likelihood of designation as Contaminated Land under EPA 1990</p>	<p>The Contaminated Land Officer has confirmed that the site is not currently designated as Contaminated Land.</p>	
<p>3.3.3</p>	<p>Suitability for the proposed end use</p>	<p>Further assessment is required to establish the viability of pollutant linkages raised by the CSM and determine appropriate mitigation and / or remediation measures that are likely to be required to facilitate the residential development.</p>	

4.0 CONFIRMATION OF INSTRUCTIONS

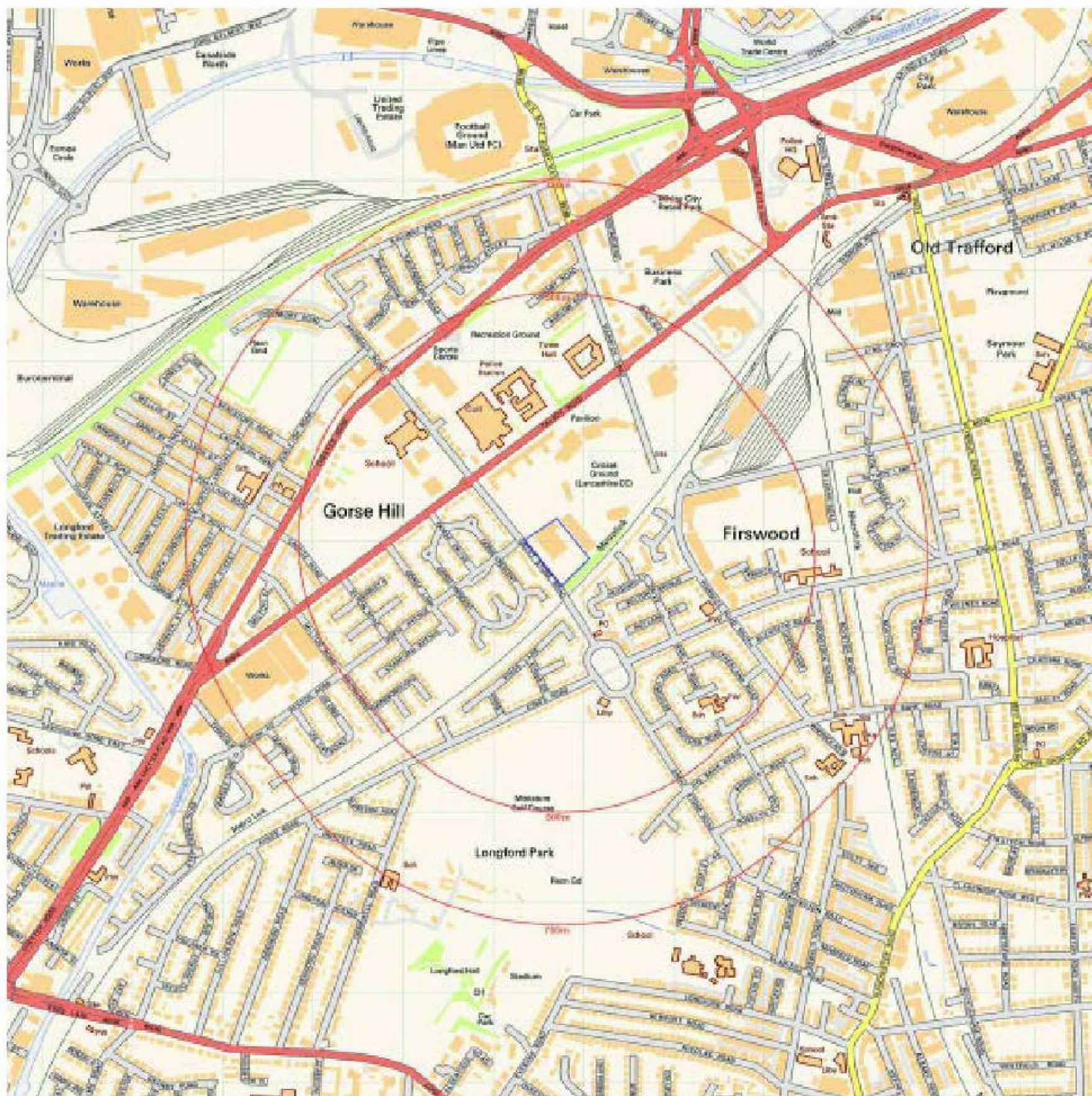
<p>4.1</p>	<p>We have been instructed by Accrue (Forum) 1 LLP to undertake a Phase I Environmental Audit of Great Stone Road, Stretford. The purpose of the report is to highlight environmental considerations with respect to ground conditions as part of the proposed development of 333 residential units, with ancillary land uses and infrastructure.</p>
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Great Stone Road, Stretford, M32 OYP

APPENDIX 1: SITE DESCRIPTION

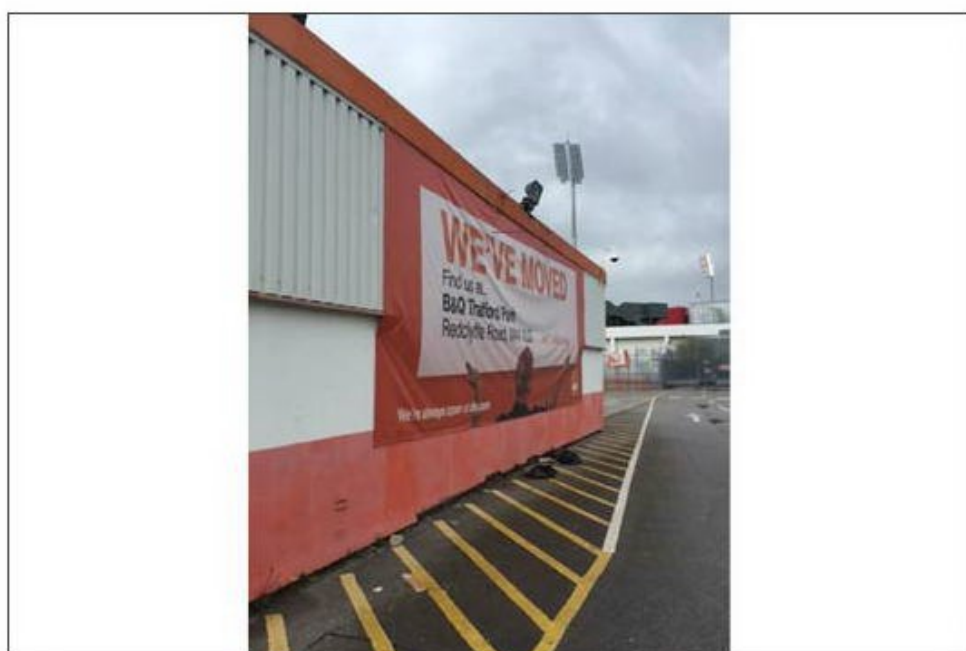
1.0 SITE DESCRIPTION

1.1	Site Description and Location
1.1.1	The site is located of Great Stone Road, to the south of Old Trafford Cricket Ground. The site is centred around National Grid Reference 380927, 395403.
1.1.2	The site is flanked by infrastructure including a road to the north and north west and railway line to the east and south east. Additionally, there is the Old Trafford cricket ground and commercial offices to the north and residential properties to the west.
1.1.3	A site location map and photographs are provided below.
1.2	Current Land Use/Site Activities
1.2.1	The subject site comprises a vacant, commercial warehouse unit that was formerly occupied by B&Q.
1.2.2	An inspection of the site was originally undertaken by Paragon on 25 April 2016. The following key details were noted. As the property is secure, no significant changes to site conditions are anticipated within the time that has elapsed. At that time no evidence for Japanese Knotweed was observed but a specialist survey would be required to confirm this.
1.3	General Site Details
1.3.1	The site is currently occupied by a vacant warehouse type structure that was formerly occupied by B&Q. There is a greenhouse type extension to the main structure, which formed the garden centre.
1.3.2	There also is a large decommissioned sprinkler tank on site.
1.4	External Areas
1.4.1	Externally there are hard standing areas of concrete and tarmac that formed the car park, service road, loading area and storage yard.
1.4.2	Within the yard there was a localised area of paint spillage on the hard standing, however, this was not close to any surface water drains.
1.5	Waste Materials
1.5.1	A skip containing waste materials was present in the yard and litter was present along the east and south east perimeter of the site, which is flanked with a steel palisade fence separating it from an off-site railway line and sidings.
1.6	Potential Contaminative Sources
1.6.1	No significant issues of environmental concern were highlighted from the current use of the site.

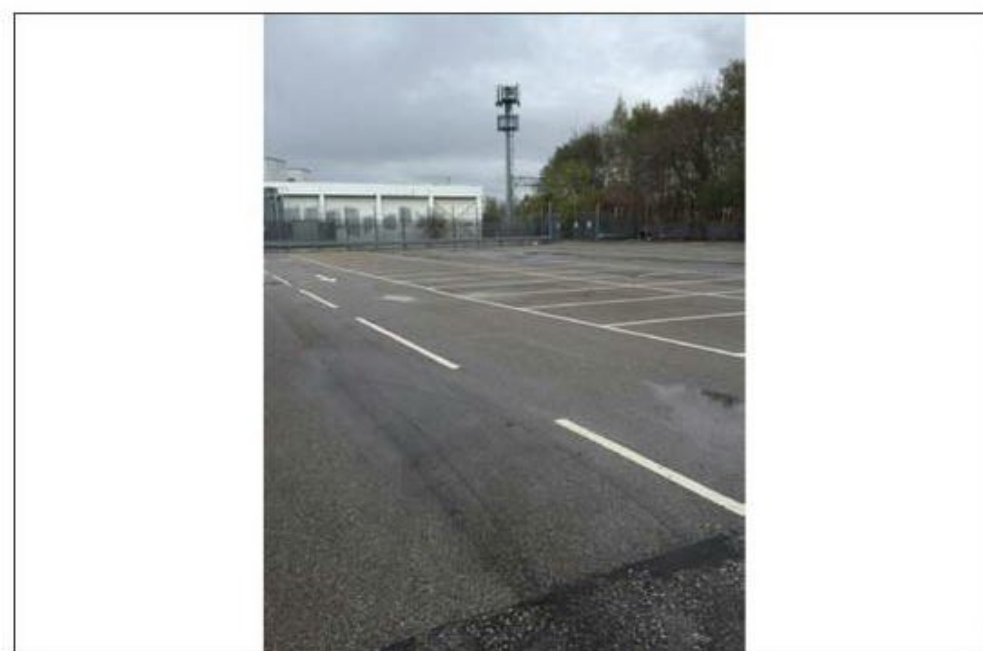


Title: Site Location Plan

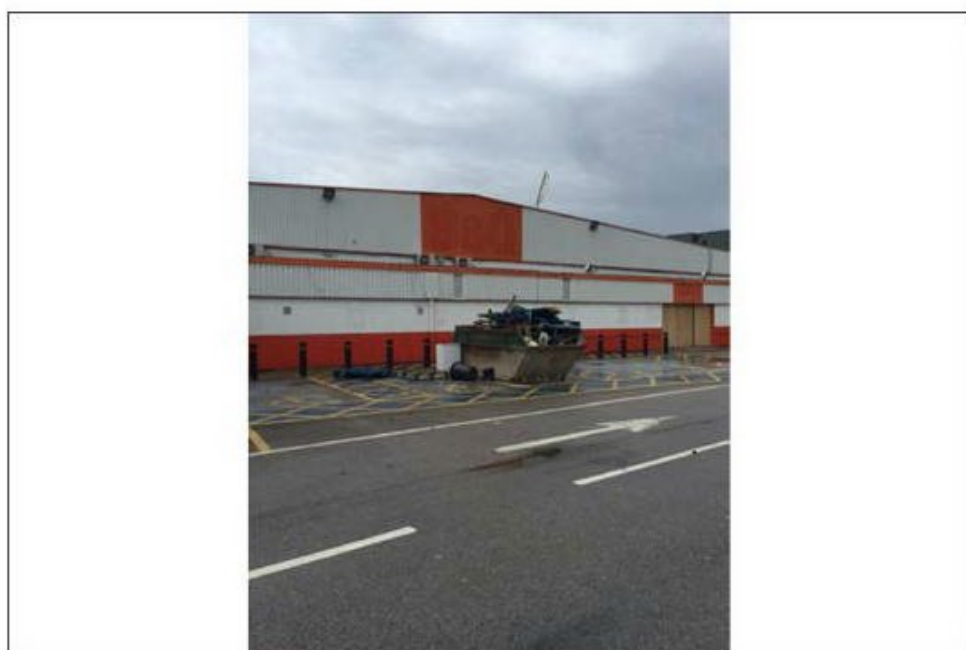
Great Stone Road, Stretford, M32 0YP



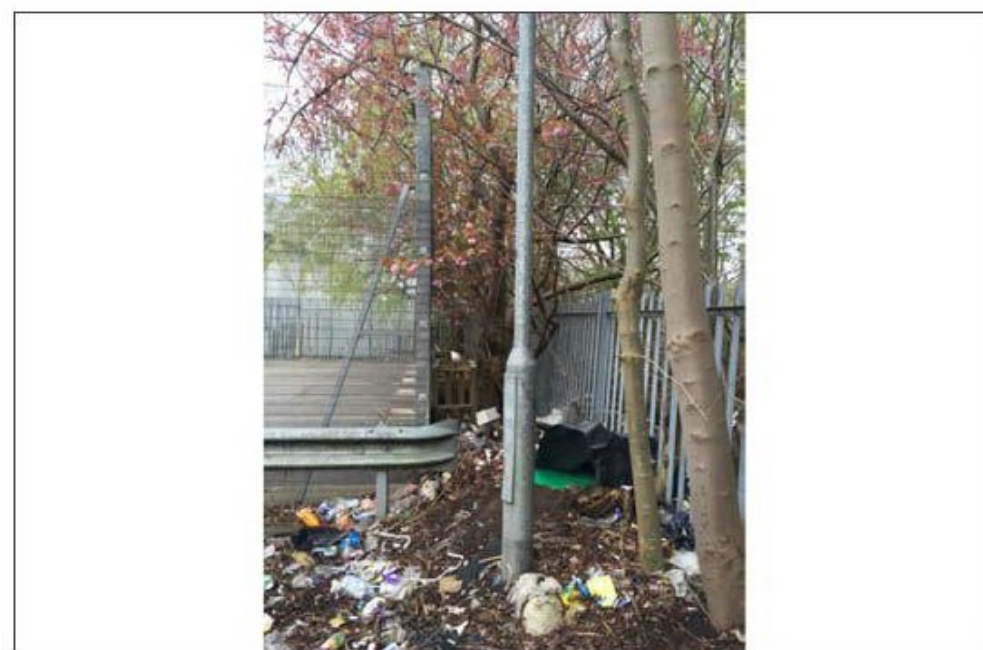
01: Site



02: Car park

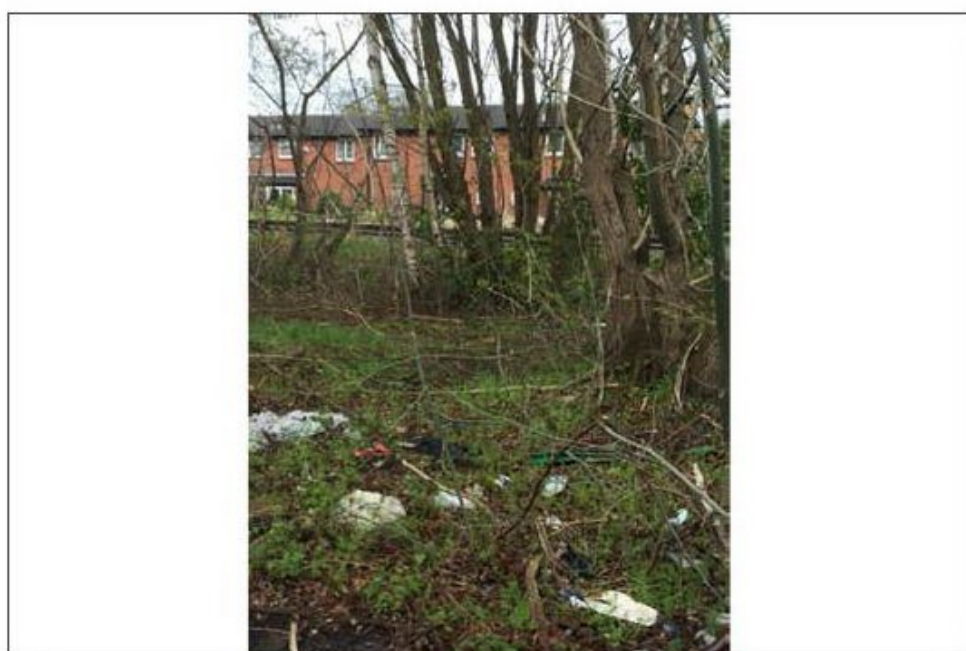


03: Skip on site

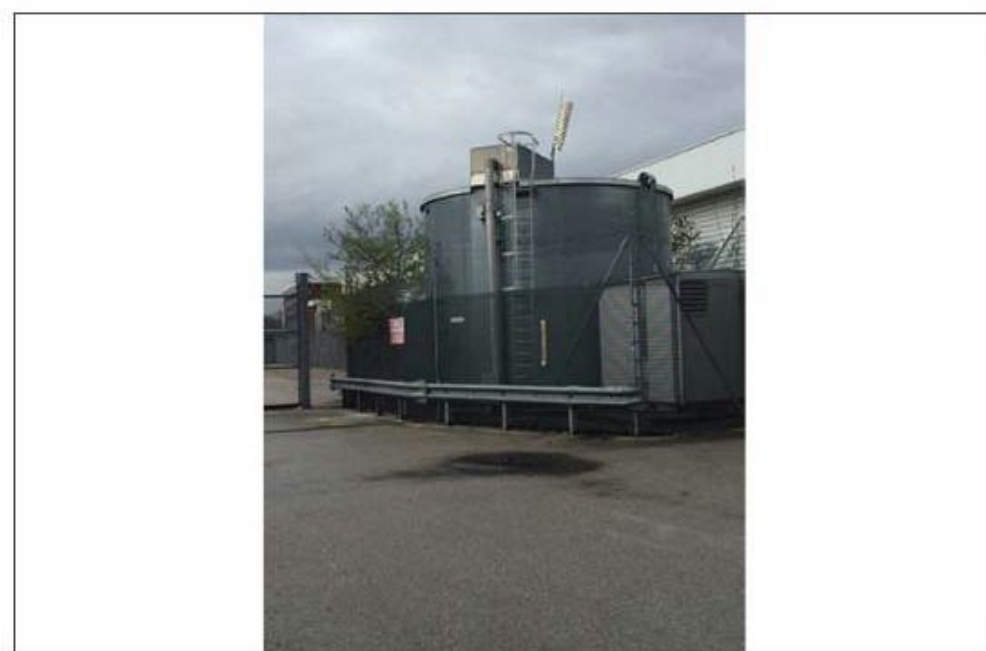


04: Litter on site

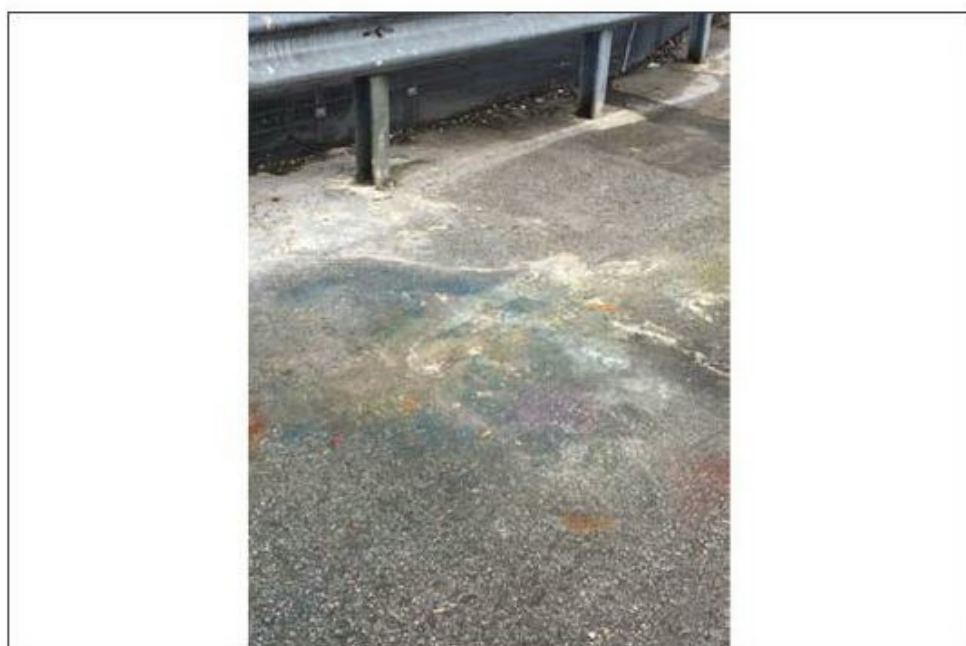
Great Stone Road, Stretford, M32 OYP



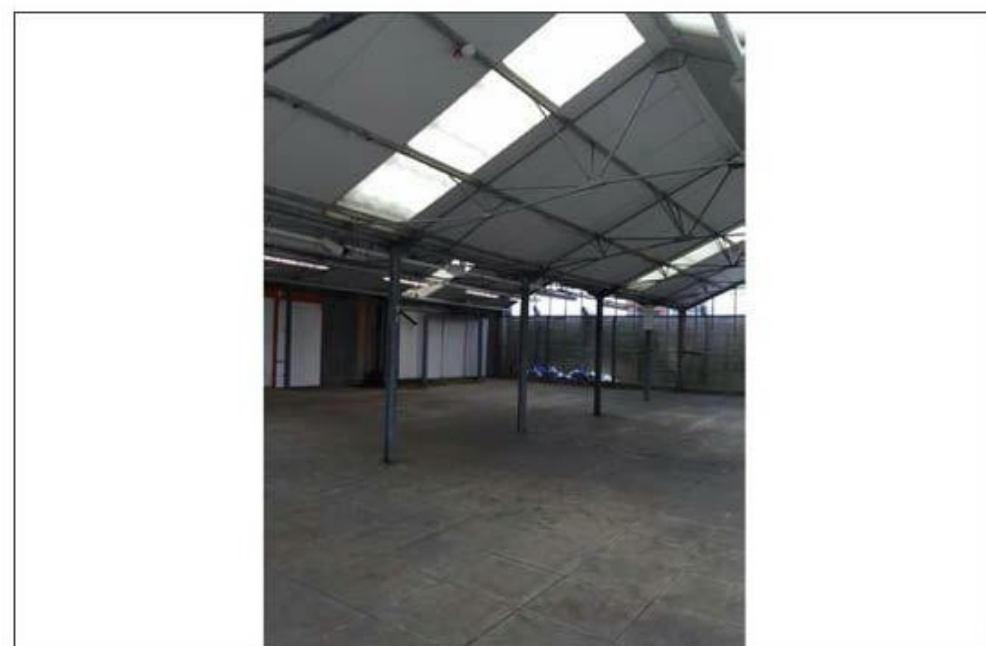
01: Adjacent railway



02: Sprinkler tank



03: Spilled paint



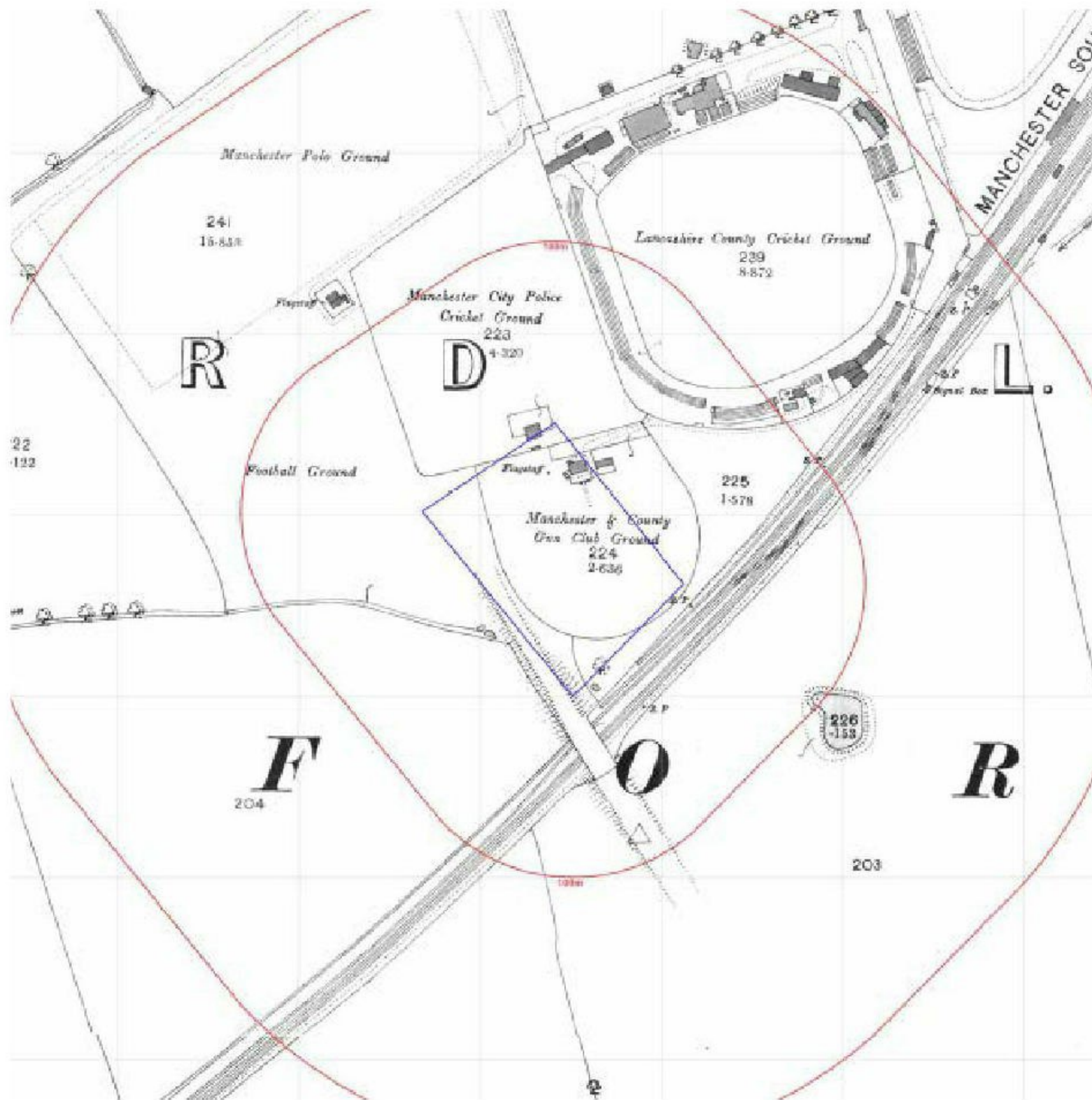
04: Inside unit

Great Stone Road, Stretford, M32 OYP

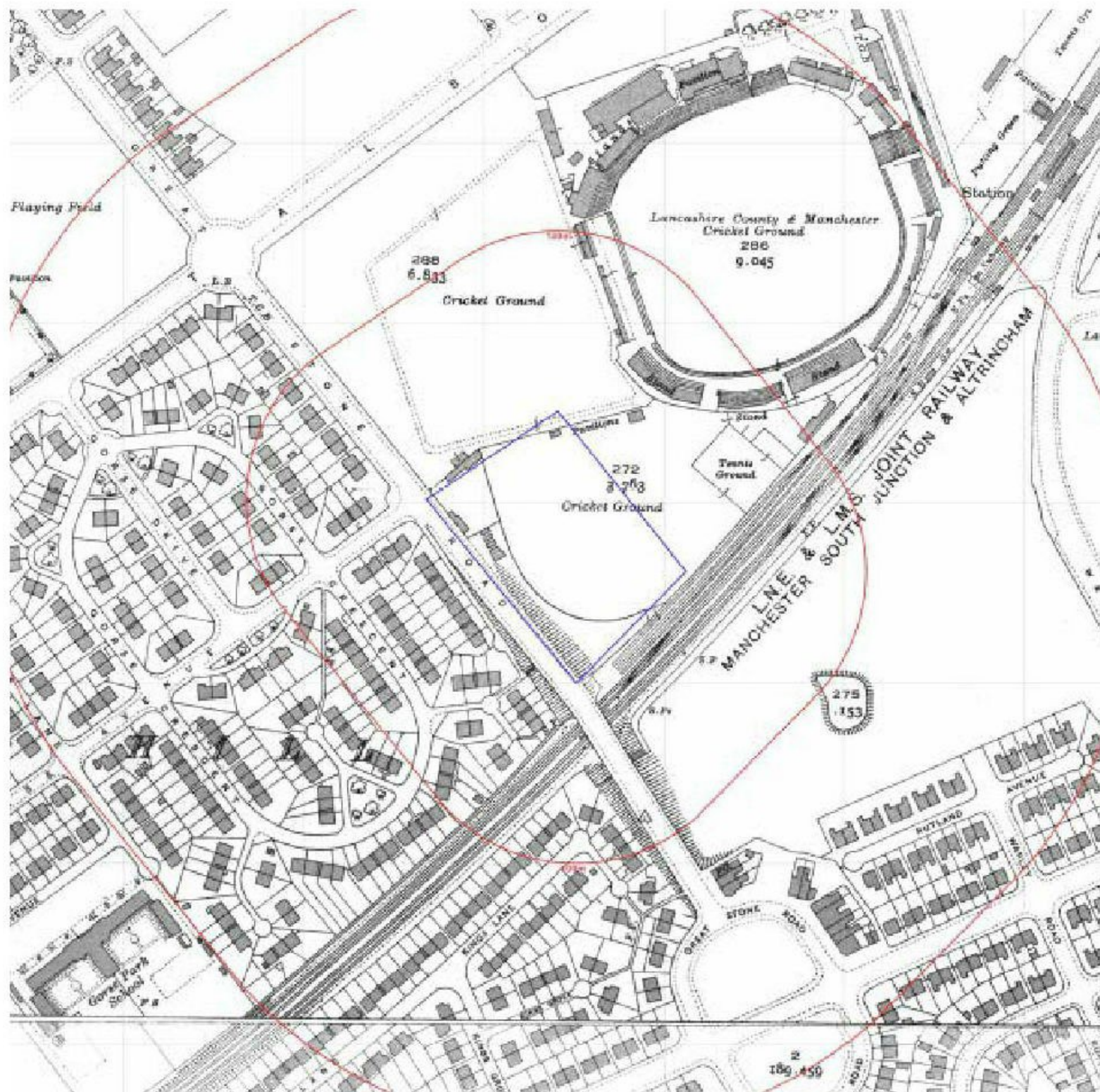
APPENDIX 2: LAND USE

2.0 LAND USE

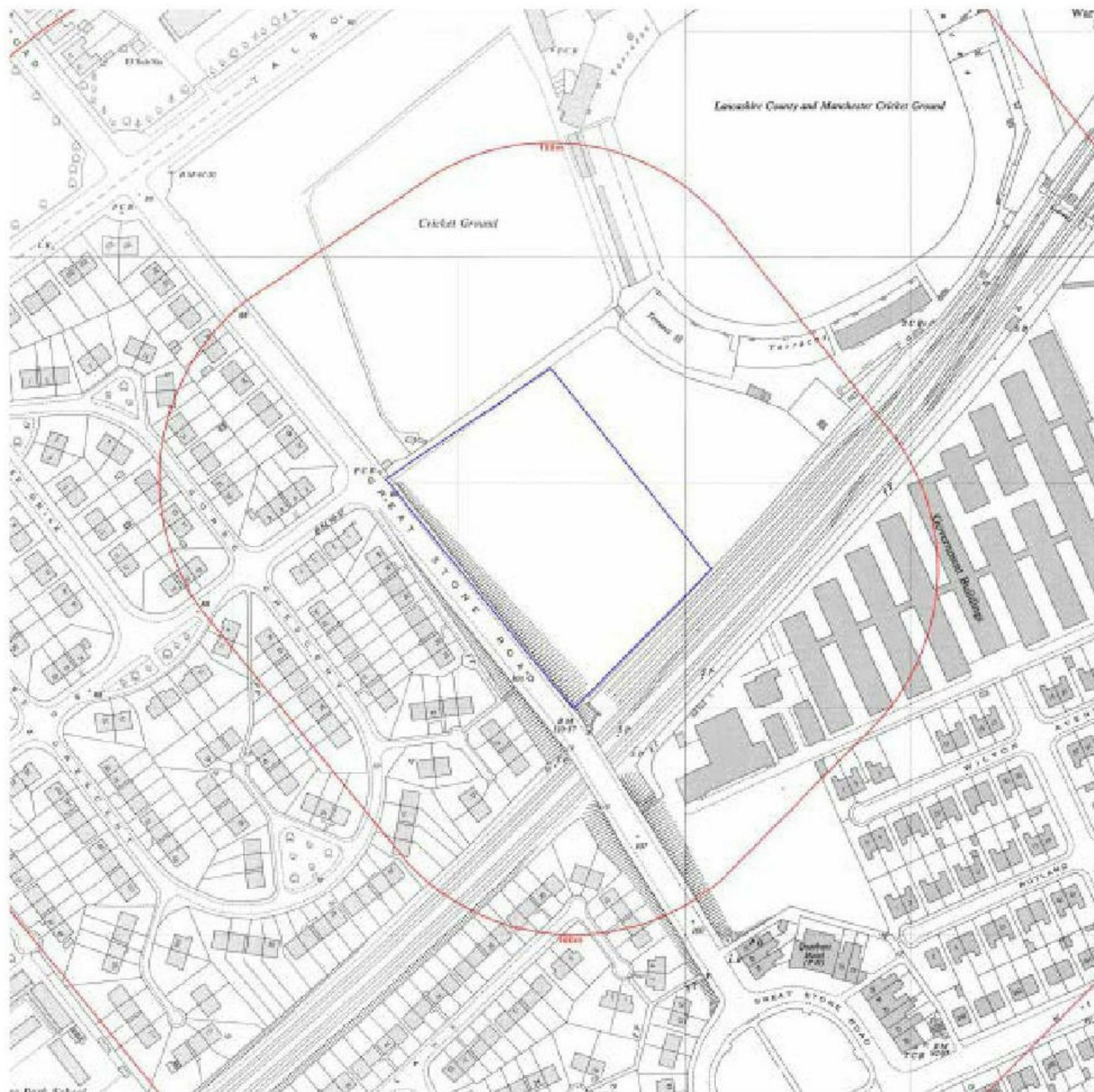
2.1	Former Land Uses
2.1.1	A study of historical Ordnance Survey maps, the site's planning history and local history information has been undertaken to identify any potentially contaminative former land uses.
2.2	Map Information
2.2.1	The following represents a summary of the historical use of the site:
2.2.2	Historical mapping from circa 1894 indicated that the site was formed part of a cricket ground and gun club. By the 1930s, the gun club was no longer recorded and by the 1950s, the site was recorded as being clear of structures. The site was then redeveloped to its current commercial use in the late 1980s.
2.2.3	Online Zetica bomb risk maps indicate there is potentially a high risk associated with UXO at the site.
2.2.4	The following represents a summary of the historical use of the surrounding area (within 250 metres):
2.2.5	The surrounding area has supported limited potentially contaminative land uses, the nearest being the railway line and sidings that flank the south east and east of the site.
2.3	Planning History
2.3.1	A search of Trafford Council's online planning portal did not reveal any environmentally pertinent information to the site itself.



Title: 1894



Title: 1931



Title: 1953



Title: 1977



Title: 1984



Title: 2009

Great Stone Road, Stretford, M32 OYP

APPENDIX 3: ENVIRONMENTAL DATA

3.0 ENVIRONMENTAL DATA

3.1

3.1.1 The following information has been ascertained from publicly available Environment Agency, BGS, Local Authority and NRPB records.

Environmental Records	On site	0-250m	Description
Discharge Consents	0	0	Not Applicable (N/A)
Pollution Incidents to controlled waters	0	0	N/A
Registered landfill or other waste disposal sites	0	0	N/A
Waste transfer sites	0	0	N/A
Part A(2) and B activities	0	0	N/A
Integrated Pollution Prevention and Control authorisations	0	0	N/A
Licensed radioactive substances	0	0	N/A
Enforcements, prohibitions or prosecutions	0	0	N/A
Fuel sites	0	0	N/A
Is the site in an area where there is a known risk of subsidence?			Records indicate that the area in general has a negligible to very low risk of subsidence hazards as a result of ground movement.
Is the site in a radon-affected area?			Less than 1% of homes are above the radon Action levels, as such, no radon protection measures are considered necessary.
Are there any overhead transmission lines, masts or pylons for electricity on or within 250 metres of the site?			There are no obvious masts or pylons within 250 metres of the subject site.

3.2

Environment Agency

3.2.1 According to the Environment Agency website, the site is not located within a fluvial flood risk zone.

Great Stone Road, Stretford, M32 OYP

APPENDIX 4: ENVIRONMENTAL CONTEXT

4.0 ENVIRONMENTAL SETTING

4.1 Geology/Hydrogeology

4.1.1 Geological mapping from the BGS website and environmental data from Groundsure shows the geological sequence outlined below. Reference has been made to the Environment Agency (EA) Groundwater Vulnerability Map and Regional Appendices, to provide the following aquifer status descriptions.

Formation	Aquifer Designation	Hydrogeological Significance
Glaciofluvial Deposits	Secondary (A) Aquifer	Potential to support small scale local abstractions and important in supplying base flow to rivers
Wilmslow Sandstone Formation	Principal Aquifer	Potentially highly productive and able to support large abstractions for public potable supply and other purposes

4.1.2 Borehole records obtained from BGS records and located north of the site at the cricket ground broadly indicate the following ground conditions to be present:

- Topsoil to 0.30m bgl;
- Over Sand and Gravels (occasionally clayey) to 2.60m to 2.70m bgl;
- Over Boulder Clay to the base of the boreholes at 15.50m and 20.00m bgl.

Groundwater was encountered at approximately 1.70m bgl.

4.1.3 There are two active groundwater abstraction wells located some 380m and 445m from the site for ground source heat pumps. There are reportedly no licensed potable groundwater abstraction points within 2km of the subject site.

4.1.4 The site is not located within a groundwater Source Protection Zone (SPZ) as designated by the Environment Agency.

4.2 Hydrology

4.2.1 There are no surface water features within 250m of the site. There is no surface water abstraction within 1km.

4.3 Surrounding Land Uses

4.3.1 The subject site is surrounded by commercial, sporting and residential land uses together with infrastructure.

4.3.2 There are no Areas of Outstanding Natural Beauty, Environmentally Sensitive Areas, Sites of Special Scientific Interest or Special Protection Areas on, or within 250m of, the site

4.4	Sensitivity Analysis
4.4.1	The site is within a moderately sensitive area in respect of groundwater owing to the presence of two sensitive aquifers being present below the site. The aquifers may act as a pathway for contaminants (if present) to / from the site, however, in the absence of significant potential sources of contamination or off the site the risk is considered to be reduced.

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APPENDIX 5: REGULATORY INFORMATION & CONSULTATION




5.0 REGULATORY INFORMATION AND CONSULTATION

5.1	Contaminated Land
5.1.1	The Contaminated Land Officer (Richard Pollitt of Trafford Council) confirmed in May 2016 that the site has not been designated as contaminated land. The officer also stated there are several sites within 250m which have the potential for contamination to have occurred but none have been designated as contaminated land.

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APPENDIX 6: CONCEPTUAL SITE MODEL

6.0 ENVIRONMENTAL RISK ASSESSMENT

Source	Receptor	Pathway	Risk
On site			
Contamination within Made Ground or near surface natural soils and groundwater including lead, due to previous activities at the site comprising a gun club. Paint spills to concrete hardstanding were also observed during the site walkover.	Future site users	Low to medium risk - Owing to the potential for Made Ground there is potential for residual contamination and ground gas. The extensive coverage of hardstanding across the subject site would limit direct dermal contact, inhalation and ingestion pathways with contaminants (if present). However, nominal border soft-landscaping is proposed where direct ingestion / inhalation pathways may be more prevalent thus requiring further investigation.	
	Construction workers	Low risk- Ingestion, Inhalation and dermal contact with contaminated soils and groundwater will be mitigated by employing the use of PPE and good hygiene practices on site during service entry and excavation works.	
	Building and services	Low risk - Direct contact with building materials and buried services with contaminated soils and groundwater. Existing services are not proposed to remain. The future development would require services, drainage and pipework resistant to such contaminants. If implemented the risk is low.	

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Source	Receptor	Pathway	Risk
Contamination within Made Ground or near surface natural soils and groundwater including hydrocarbons and PAHs due to previous activities off site including a railway line and sidings.	Building and services	<p>Low risk - Direct contact with building materials and buried services with contaminated soils and groundwater.</p> <p>Existing services are not proposed to remain. The future development would require services, drainage and pipework resistant to such contaminants. If implemented the risk is low.</p>	L

Great Stone Road, Stretford, M32 OYP

APPENDIX 7: EXTENT OF SURVEY AND LIMITATIONS

EXTENT OF SURVEY AND LIMITATIONS

The report has been designed to identify potential source, pathway and receptor pollutant linkages by assessing the following:

- Current, former and proposed land uses on site including an inspection of the site and the immediate environs, information provided by the client on the current use of the site and a review of historical data;
- Environmental sensitivity of the site location as determined by factors including geology, hydrogeology, surface watercourses and neighbouring land uses; and
- Pertinent information provided by environmental regulators.

The environmental risk assessment will be undertaken with due regard to Contaminated Land Guidance documents (available and relevant at the time of issuing our report) issued by (but not limited to) the Environmental Protection Act Part IIA 1990, Department for Environment, Food and Rural Affairs (DEFRA) and its predecessors, the Environment Agency (and its devolved equivalents), British Standards Institute (BSI), the Royal Institution of Chartered Surveyors (RICS) and the American Society for Testing and Materials (ASTM) Standard E 1527-00. No liability can be accepted for the effects of any future changes to such guidelines and legislation. In the event that guidance / legislation changes it may be necessary for Paragon to update or modify reports.

Specific comment is made regarding the site's status under Part 2A of the Environmental Protection Act (EPA) 1990, which provides a statutory definition of Contaminated Land and as revised under The Contaminated Land (England) (Amendment) Regulations 2012. Unless specifically stated as relating to this definition, references to 'contamination' and 'contaminants' relate in general terms to the presence of potentially hazardous substances in, on or under the site.

The risk assessment is dictated by the finite data on which it is based and is relevant only for the purpose of which the report is commissioned. If additional information or data becomes available which may affect the opinions expressed in our report, we reserve the right to review such information and, if warranted, to modify the risk assessment accordingly. We reserve the right to charge an additional fee for un-anticipated second opinion reviewing of previous reports. A site inspection was not carried out within the scope of this assessment.

Paragon has been able to identify perceived risks based on the information reviewed and made available. Our Phase I Environmental Audit will be based on a visual inspection of the site, a review of available historical and environmental setting records, consultations with site representatives, pertinent information provided from the client and regulatory consultations. No samples will be taken as part of this study. No intrusive ground investigation work was carried out and, as such, actual risks have not been established. Actual risks can only be assessed following an intrusive investigation of the site.

With regard to flooding our commentary is based on the publicly available mapping only, which is available at the time of writing via the EA, NRW, SEPA and / or the BGS. We cannot accept any liability where the information is updated following the issue of our report. No inspection or comment is made on the below ground drainage installations or service conduits unless instructed otherwise.

Where budget costs are included in our report, these costs are for guidance purposes only.

Our report will be for the attention and purposes of the Addressee only and consequently we cannot accept any third party liability for the whole or any part thereof. Neither may the whole nor any part of our report, nor any reference thereto, be published in any way nor included in any published document, circulate or statement without our prior written approval of the form and context in which it may appear.

PARAGON ENVIRONMENTAL RISK ASSESSMENT

RISK CLASSIFICATIONS

RISK RATING	DEFINITION
LOW	<p>The potential for liability in the future with respect to environmental considerations is considered negligible.</p> <p>No ground contamination investigation is advised. The likelihood of the Regulatory Authority requiring a ground contamination investigation as part of the development is considered minimal.</p>
LOW TO MEDIUM	<p>The potential risk of liability associated with environmental considerations in the future is considered minimal. A ground contamination investigation may be considered to fully assess the level of perceived risk. This would include an intrusive soil, groundwater and ground gas contamination assessment, and possible remedial works. A minor likelihood exists for the Regulatory Authority to require a ground contamination investigation at the site as part of the development.</p>
MEDIUM	<p>The potential risk of liability associated with environmental considerations in the future exists.</p> <p>A ground contamination assessment is advised prior to development to fully assess the level of perceived risk. This would include an intrusive soil, groundwater and ground gas contamination assessment, and possible remedial works. The potential exists for the Regulatory Authority to require a ground contamination investigation at the site in relation to the development.</p>
MEDIUM TO HIGH	<p>A potentially significant risk of liability associated with environmental considerations in the future exists.</p> <p>The development of the site should proceed with caution once risks are assessed. An intrusive ground contamination assessment is likely to identify contamination across the site that may require extensive remediation. A significant likelihood exists that the Regulatory Authority will require a ground contamination investigation at the site as part of the development.</p>
HIGH	<p>The risk of liability associated with environmental considerations in the future is considered high.</p> <p>An intrusive ground contamination assessment is likely to identify significant contamination across the site that may require extensive remediation. It is known that the Regulatory Authority will require a ground contamination investigation at the site to facilitate the development. Subsequent remedial works are considered likely.</p>