

EnviroSmart Plus



Phase 1 Contaminated Land Assessment

Site address

Land off Whitecarr Lane / Newall Road
Wythenshawe
Manchester
M23 2TX

Date issued

April 2022

Report status

Final

Grid Reference

380690, 387260

Site Area

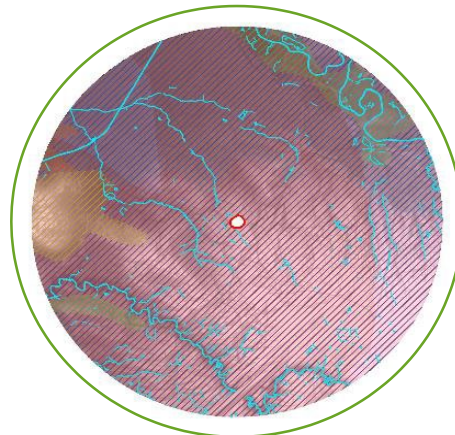
0.3 ha

Report prepared for

Abbeyway Commercial

Report reference

76712R1



Risk – Low to Moderate/low

Given the likely presence of imported material / Made Ground at the Site, there is the potential for contamination to be present. It is therefore recommended that a proportionate programme of site investigation and monitoring works be undertaken in order to establish the presence or absence of contamination and to enable a quantitative assessment of the associated environmental risks.

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Executive Summary



The purpose of this EnviroSmart report is to provide clear and pragmatic advice regarding the nature and potential significance of contaminated land hazards which may be present at the study site. GeoSmart are providing consultancy and professional opinion based upon our collation, interpretation and assessment of information contained within an Envirocheck report, and other sources where expressly stated (i.e. site visits, photographs, and anecdotal evidence). It is acknowledged that the risk assessment findings are based on documentary sources of information alone.

Site analysis

1. Probability/likelihood of a contaminant hazard at the Site	High likelihood	
	Likely	
	Low likelihood	
	Unlikely	
2. Potential severity/consequence of any impacts	Severe	
	Medium	
	Mild	
	Minor	
3. Overall land quality risks posed by the Site	Very high	
	High	
	Moderate	
	Moderate/low	
	Low	
	Very low	

Summary of existing and proposed development

The Site is an access road and car park connecting to the buildings to the east, as well as undeveloped land to the north and south of the road. Development proposals comprise the construction of a two-storey apartment building containing eight units. The existing access road and car parking will be retained with modification to suit the new use. An amenity area and landscaping are also proposed.

Environmental Setting

The underlying superficial geology consists of Till, Devensian which is classified as a Secondary (undifferentiated) Aquifer and the bedrock geology consists of the Bollin Mudstone Member which is classified as a Secondary (B) Aquifer.

The nearest water feature is Fairywell Brook, located c. 80 m south west of the Site boundary.

There are no environmentally sensitive land uses within 500 m of the Site.

Site History

The Site was undeveloped including partial woodland cover until c. 2018. In 2018 an access track and parking area (connecting the development to the north east with Whitecarr Lane to the west) was constructed in the north of the Site. Aerial imagery shows that the southern and south eastern parts of the Site (plus the off-Site land to the south) have likely been raised with imported material (brought onto Site between 2018 and 2020). This was verified during the Site visit given that the Site ground levels appeared to be elevated above the surrounding land surface. Several mature trees were also sunken below the on-Site ground level, providing further evidence of infilling / built-up ground. Off-Site land uses include a mix of agricultural and residential; two infilled ponds were previously present to the north west.

Radon

The Site lies in an area where <1% of homes are at or above the UK radon action level (200 Bq/m3).

Coal Mining

The Site does not lie within an identified coal mining area and is therefore unlikely to be affected by related ground stability or mine gas issues.

Summary of Conceptual Site Model (CSM)

Source of Contamination

Potential for inorganic and low volatility organic contaminants plus asbestos containing material to be present within the subsurface soils associated with potentially imported material and built up areas of the Site, plus any residual contaminants associated with the neighbouring farming activity.

Receptors

Human Health.

Human Health (pathway)

Dermal contact, ingestion & inhalation of soils & soil dust, consumption of home grown produce and liberation of sub surface ACMs and inhalation of any asbestos fibres.

Preliminary Risk Assessment

Overall, the preliminary risk classification of the Site in relation to the proposed redevelopment is considered to be Low to Moderate/Low.

Recommendations / Next Steps

Phase 2 intrusive investigation

Given the likely presence of imported material at the Site, there is the potential for contamination to be present. It is therefore recommended that a proportionate programme of site investigation and monitoring works be undertaken in order to establish the presence or absence of contamination and to enable a quantitative assessment of the associated environmental risks.

1. Introduction



1.1 Background

The study site (from herein known as 'the Site') is situated at Land off Whitecarr Lane / Newall Road in Wythenshawe, M23 2TX. A location plan of the Site is shown in Section 1.5. A proposed development plan of the Site is shown in Section 1.6.

GeoSmart was commissioned by Abbeyway Commercial in April 2022 to undertake a Phase 1 Land Quality Assessment for the Site. The report has been requested in order to support a proposed planning application for the Site.

The proposed development is for the construction of a two-storey apartment building containing eight apartments. The existing access road and car parking will be retained with modification to suit the new use. An amenity area and landscaping are also included.

The EnviroSmart report has been undertaken by firstly compiling information concerning the Site and the surrounding area, including current and historical land uses, geological records and registered pollution incidents. The information which is gathered is then used to construct a 'conceptual site model', including an understanding of likely contaminant sources, pathways and receptors. Finally, a preliminary assessment of risks posed to identified receptors (i.e., people, buildings or the natural environment) from the anticipated land quality at the Site is performed. The risk assessment methodology is consistent with CIRIA C552 (2001); see Section 3.4 for details.

1.2 Purpose of this report

The purpose of this EnviroSmart report is to provide clear and pragmatic advice regarding the nature and potential significance of contamination hazards which may be present at the Site.

1.3 Report contents

This report is divided into two sections, as described below:

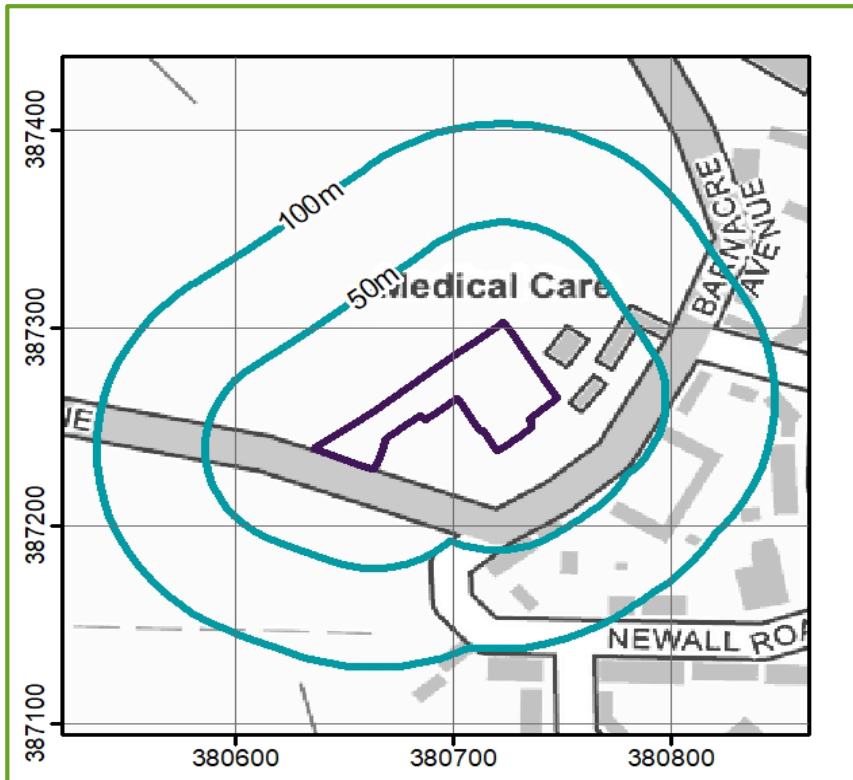
Section	Content	Purpose
Section 2: LAND QUALITY ASSESSMENT	A summary of the site history and environmental setting, the findings of the preliminary risk assessment and associated recommendations	To present a clear and concise overview of the land quality issues facing the Site, including recommendations of how to manage any land contamination which may be present
Section 3: SUPPORTING INFORMATION	A collection of site specific information on which the land quality assessment is based	To provide detailed information in support of the risk assessment; this section also represents a source of reference data for use in any subsequent site works/assessments

1.4 Report limitations

It is noted that the findings presented in this report are largely based on information supplied by third parties. Whilst we assume that all information is representative of past and present conditions we can offer no guarantee as to its validity.

This report excludes consideration of potential hazards arising from any activities at the Site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities.

1.5 Site location plan

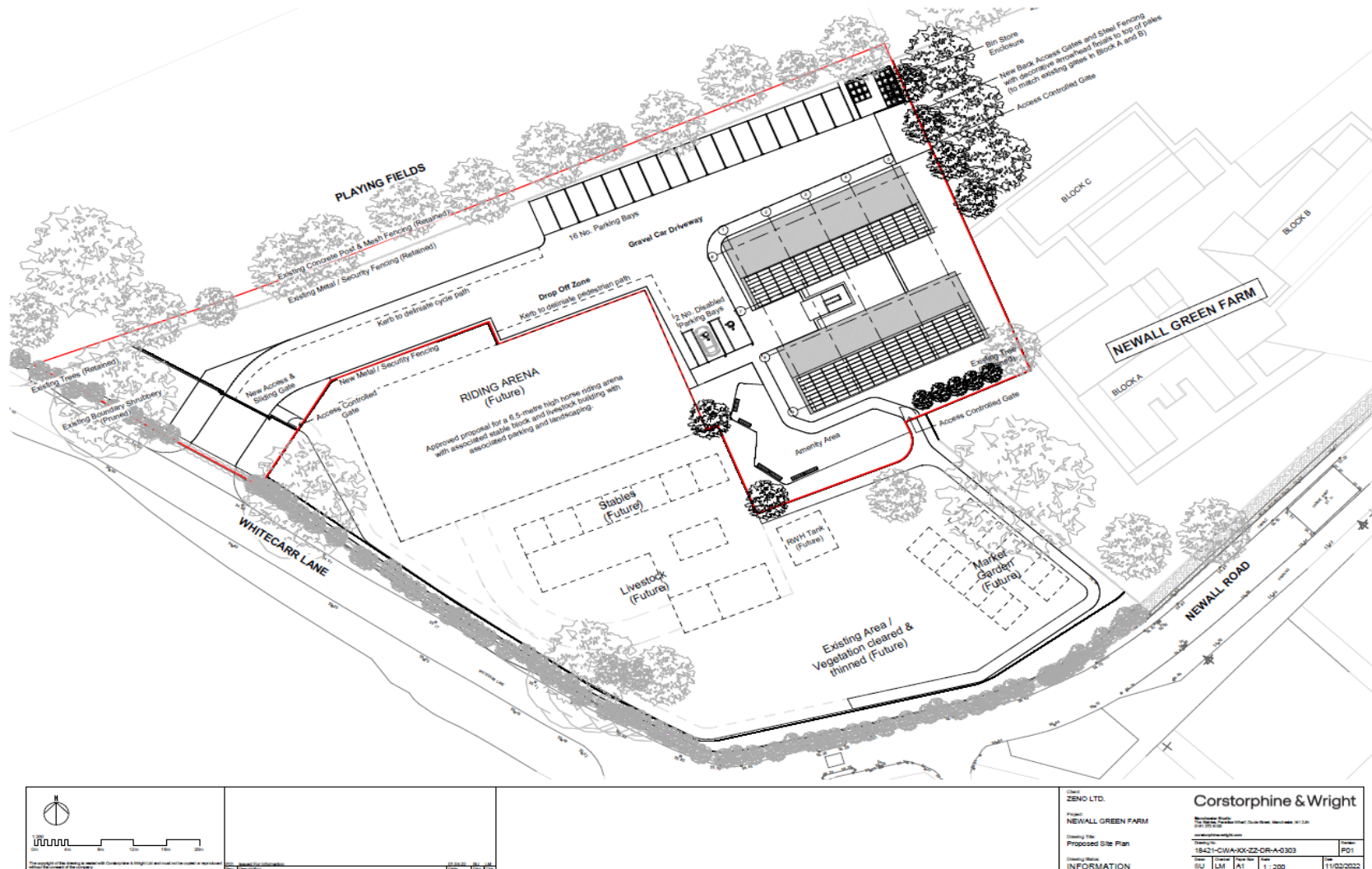


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1.6 Proposed Site development plan



2. Land quality assessment



2.1 Site details

Site name:	Land off Whitecarr Lane / Newall Road	Current land cover:	Access track and parking area (45%) plus vegetated areas (55%)
Current use:	Access road and car parking		
Proposed use:	Residential flats with landscaping	Site area:	0.3 ha

2.2 Conceptual understanding (potential sources of contamination)

 Site history (historical land use taken within 250m radius of the Site boundary)	Date	Description of land use		POTENTIAL SOURCES OF CONTAMINATION	Source description	LOW LIKELIHOOD	PROBABILITY OF CONTAMINATION
		On-Site	Off-Site				
	1876	The Site is undeveloped. The north east of the Site is mapped as being vegetated / wooded and the south western edge of the Site is bound by a road.	There are two ponds c. 20 m and c. 45 m north west; Various buildings are evident to the north east plus a well.		The land use history suggests that there is the potential for contamination to have occurred <u>on-Site</u> relating to the following:		
	1882	No apparent change			Car parking Vehicle parking may have resulted in leakage of small quantities of engine oil, fuel, antifreeze, etc.		
	1898 - 1899	No apparent change	A pump is labelled associated with the development adjacent to the north east of the Site.		Deposition of material Imported material appears to have been deposited on-Site; this has the potential to contain miscellaneous contaminants, subject to its origin and nature.		
	1910 - 1911		The pump to the north east is no longer labelled.				
	1935		The well to the north east is no longer labelled.				
	1938	No apparent change			The land use history suggests that there is the potential for contamination to have occurred <u>off-Site</u> relating to the following:		
	1954	No apparent change	There has been large scale residential development c. 45 m south east and east of the Site.		Farm - Bulk storage of fuels and/or miscellaneous chemicals. - Miscellaneous small scale fuel and chemical spills (i.e., fuels used for heating/agricultural machinery/other vehicles, oils and lubricants, herbicides/pesticides, fertilisers, paints/thinners, creosote, etc.). - Potential for localised/historical deposition of domestic/agricultural waste materials.		
	1960		The development to the north-east is labelled as Newall Green Farm. The two ponds to the north west are no longer shown and the land is labelled as a playing field.				
	1961 - 1990	No apparent change			<i>continued overleaf</i>		
	1992	The north east of the Site is no longer mapped as being vegetated / wooded.	The area adjacent to the south east is labelled as an orchard.				

2.2 Conceptual understanding (potential sources of contamination)

 Site history <i>(historical land use taken within 250m radius of the Site boundary)</i>	Date	Description of land use		POTENTIAL SOURCES OF CONTAMINATION	Source description	LOW LIKELIHOOD	PROBABILITY OF CONTAMINATION
		On-Site	Off-Site				
	1996	No apparent change	The orchard is no longer labelled.		Potentially infilled ponds Made Ground associated with former infilling activities. Any Made Ground/fill materials may contain a variety of inorganic and organic contaminants and could give rise to the generation of bulk gases and also leachate. Despite there having been two ponds present local to the Site which appear to have been subsequently infilled, given the small scale of these features and the time that has passed since infilling occurred (~62 years), it is considered unlikely that there will be an appreciable gas source which could impact future Site users. Therefore this potential source will not be carried forward into the risk assessment.		
	1999	No apparent change					
	2000	Aerial imagery shows the Site is undeveloped and fully vegetated	Aerial imagery shows no apparent change.				
	2003 - 2016	Aerial imagery shows no apparent change					
	2017	Aerial imagery shows a modest stockpile of material in the east of the Site.	Aerial imagery shows that development is occurring on the adjacent development to the north east. As part of this work the vegetated area within and adjacent to the south-east of the Site has been uncovered.				
	2018	Aerial imagery shows that the Site has been developed as an access track/parking area connecting Whitecarr Lane and Newall Green Farm. The stockpile of material is no longer present but there appears to be material spread across the eastern and south eastern parts of the Site and off-Site to the south and south east.	Aerial imagery shows no apparent change.				
	2019	Aerial imagery shows numerous cars parked on the access track/parking area. The south east of the Site is once again vegetated.					
	2020	Aerial imagery shows the absence of any vegetation on-Site or to the south east, with soil / infill material appearing to have been deposited at surface.					
	2021	Aerial imagery shows the southern area of the Site and off-Site area to the south is once again vegetated.					
2022	No apparent change	The development to the east is labelled as Medical Care.					

2.2 Conceptual understanding (potential sources of contamination)

 Current land use	The Site is an access road and car park connecting to the buildings to the east, as well as undeveloped land to the north and south of the road. During the Site walkover it was apparent that the Site appears to be elevated with lower ground on all sides; this may reflect the presence of previously imported materials. In addition, some of the mature trees appear to be sunk below the level of the ground. There are no known buried storage tanks at the Site. There is no known bulk fuel or chemical storage on Site. Additional information concerning the current Site condition is presented in Section 2.5 (site walkover information).	POTENTIAL SOURCES OF CONTAMINATION	Given the Site's current use, there is potential for localised contamination relating to the following: - Made Ground associated with the observed built up areas of the Site.	LOW LIKELI-HOOD																																																								
 Neighbouring industrial land uses (see environmental data report in Section 3.3 for full listing)	<table><tr><td colspan="3">No potentially contaminative land uses are located within 250m of the Site.</td></tr><tr><td>Distance from Site</td><td>Number of active industrial land uses</td><td>Number of inactive industrial land uses</td></tr><tr><td>1 - 50 m</td><td>0</td><td>0</td></tr><tr><td>51 - 100m</td><td>0</td><td>0</td></tr><tr><td>101 - 250 m</td><td>0</td><td>0</td></tr></table> <table><tr><td>Nr</td><td>Nearest distance</td><td>Land use / permitted activity / authorisation</td></tr><tr><td>0</td><td>NA</td><td>Fuel station entries</td></tr><tr><td>0</td><td>NA</td><td>Gas pipelines</td></tr><tr><td>0</td><td>NA</td><td>Underground electrical cables</td></tr><tr><td>0</td><td>NA</td><td>Control of major accident hazards sites (COMAH)</td></tr><tr><td>0</td><td>NA</td><td>Notification of installations handling hazardous substances (NIHHS)</td></tr><tr><td>0</td><td>NA</td><td>Explosives sites</td></tr><tr><td>0</td><td>NA</td><td>Planning hazardous substance consents</td></tr><tr><td>0</td><td>NA</td><td>Planning hazardous substance enforcements</td></tr><tr><td>0</td><td>NA</td><td>Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990</td></tr><tr><td>0</td><td>NA</td><td>Records of Licensed Discharge Consents.</td></tr><tr><td>0</td><td>NA</td><td>Local Authority pollution prevention and control sites</td></tr><tr><td>0</td><td>NA</td><td>Local Authority pollution prevention and control enforcements</td></tr><tr><td>0</td><td>NA</td><td>Records of Category 3 or 4 Radioactive Substance Licences</td></tr></table>		No potentially contaminative land uses are located within 250m of the Site.			Distance from Site	Number of active industrial land uses	Number of inactive industrial land uses	1 - 50 m	0	0	51 - 100m	0	0	101 - 250 m	0	0	Nr	Nearest distance	Land use / permitted activity / authorisation	0	NA	Fuel station entries	0	NA	Gas pipelines	0	NA	Underground electrical cables	0	NA	Control of major accident hazards sites (COMAH)	0	NA	Notification of installations handling hazardous substances (NIHHS)	0	NA	Explosives sites	0	NA	Planning hazardous substance consents	0	NA	Planning hazardous substance enforcements	0	NA	Sites determined as Contaminated Land under Part IIA of the Environmental Protection Act 1990	0	NA	Records of Licensed Discharge Consents.	0	NA	Local Authority pollution prevention and control sites	0	NA	Local Authority pollution prevention and control enforcements	0	NA	Records of Category 3 or 4 Radioactive Substance Licences	Given the absence of any current potentially contaminative land uses/activities within 250 m of the Site no associated contamination hazards have been identified.
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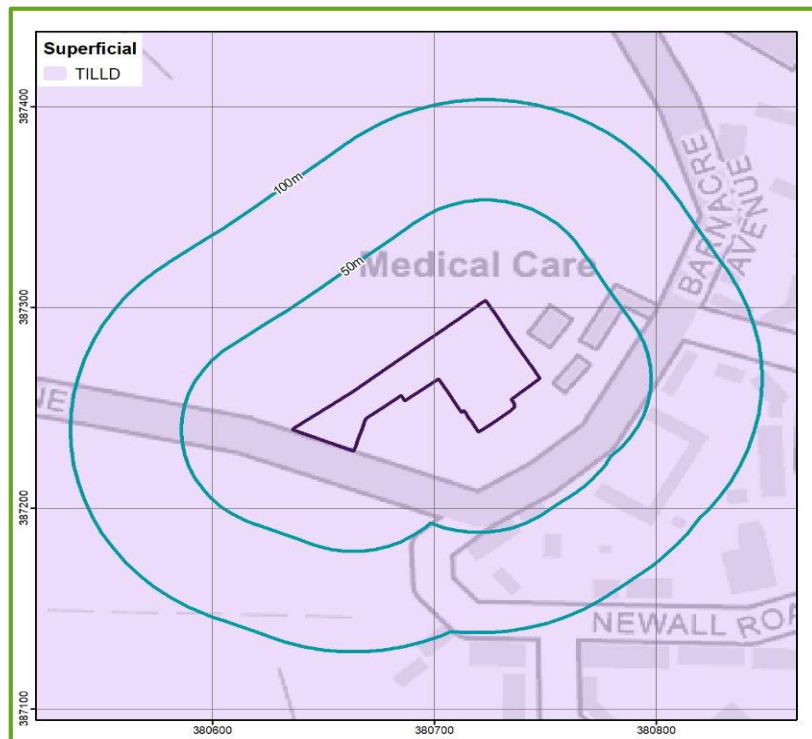
2.2 Conceptual understanding (potential sources of contamination)

 EA recorded pollution incidents <i>(see environmental data report in Section 3.3 for full listing)</i>	No Environment Agency pollution incidents have been recorded within 250 m of the Site.	POTENTIAL SOURCES OF CONTAMINATION	No potential for gross contamination has been identified in relation to any pollution incidents occurring near to the Site.	NEGLECTIBLE	PROBABILITY OF CONTAMINATION
 Landfills / waste sites <i>(taken within 500m radius of the Site boundary, see environmental data report in Section 3.3 for full listing)</i>	There are no Environment Agency listed historical landfills located within 500 m of the Site. There are no registered landfills located within 500 m of the Site. There are no Local Authority listed historical landfills located within 500 m of the Site. The following other waste sites are registered within 500 m of the Site: 0 Records of registered waste transfer sites. 0 Records of registered waste treatment or disposal sites. 0 Records of licenced waste management facilities.		Given the absence of any historical or operational landfills within close proximity of the Site no associated contamination hazards have been identified. Given the absence of any waste treatment, transfer or disposal sites within close proximity of the Site no associated contamination hazards have been identified.	NEGLECTIBLE	
 Radon <i>(see environmental data report in Section 3.3 for full listing)</i>	According to current UK radon mapping the Site lies in an area where <1% of homes are at or above the UK radon action level (200 Bq/m3).		<1% of homes are at or above the UK radon action level (200 Bq/m3).	UNLIKELY	

2.3 Conceptual understanding (environmental sensitivity / potential severity of impacts)

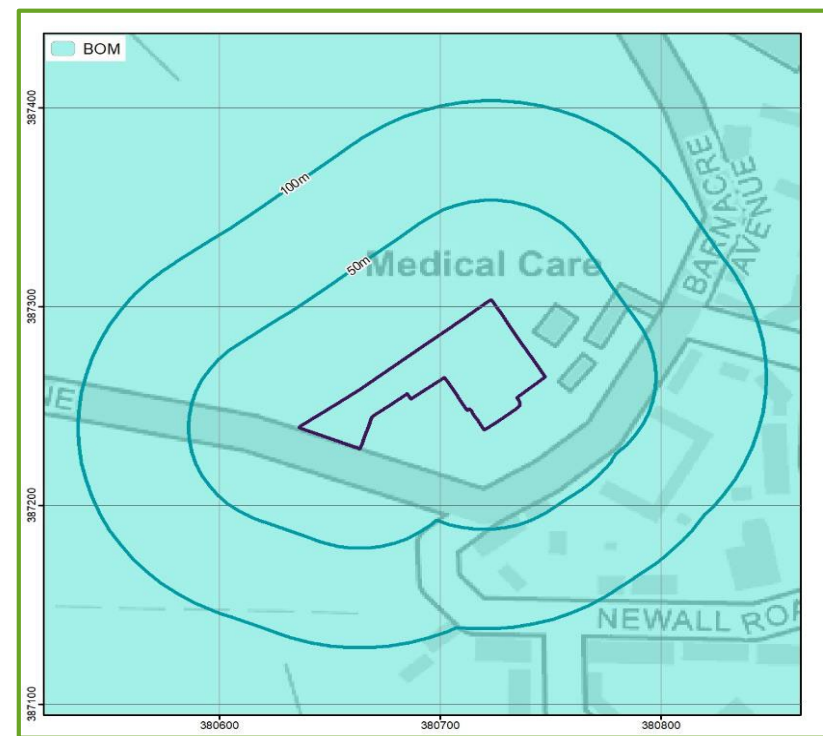
 Geology and Groundwater <i>(see the environmental data report in Section 3.3 for full details)</i>	British Geological Survey mapping indicates that the underlying superficial geology consists of Till, Devensian (TILLD) which comprises diamicton and is classified as a Secondary (undifferentiated) Aquifer. British Geological Survey mapping indicates that the bedrock geology consists of the Bollin Mudstone Member (BOM) which comprises of mudstone and is classified as a Secondary (B) Aquifer. According to the GeoSmart Groundwater Flood Risk (GW5) Map (GeoSmart, 2021). The risk of groundwater flooding at the Site is 'negligible'. The Site does not lie within a groundwater Source Protection Zone (SPZ). There are no groundwater abstraction licences within 1 km of the Site.	POTENTIAL RECEPTORS	A Secondary (Undifferentiated) Aquifer is assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type. A Secondary (B) Aquifer is likely to comprise lower permeability layers which may yield limited amounts of groundwater due to localised fissures, thin permeable horizons and weathering. Based on the susceptibility of the Site to groundwater flooding, a groundwater flood risk assessment is not considered necessary for the Site. The depth to groundwater beneath the Site is unknown. The absence of any groundwater abstractions does not necessarily indicate a low resource potential. Small scale abstractions, such as for private water supplies, may not be listed.	MINOR	POTENTIAL SEVERITY OF IMPACT
 Geohazards <i>(see the environmental data report in Section 3.3 for full details)</i>	The Site does not lie within a 'Coal Mining Reporting Area'. There are no brine affected areas within 75 m of the Site. Based on observations made during the Site walkover, artificial ground / Made Ground is anticipated to be present on Site. There are no natural hazards (with a hazard rating of moderate or above) at or within 50 m of the Site.		The Site does not lie within an identified coal mining area and is therefore unlikely to be affected by related ground stability or mine gas issues. The Site does not lie within an area of former brine working and is therefore unlikely to be affected by related ground stability issues. BGS GeoIndex Onshore mapping does not have any artificial deposits recorded at the Site.	MILD	

Superficial Geology (BGS, 2022)



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Bedrock Geology (BGS, 2022)



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2.3 Conceptual understanding (environmental sensitivity / potential severity of impacts)

 Surface water <i>(see the environmental data report in Section 3.3 for full details)</i>	The nearest water feature is Fairywell Brook, located c. 80 m south west of the Site boundary. The Site lies within a Flood Zone 1 (low probability). There are no surface water abstraction licences within 1 km of the Site.	POTENTIAL RECEPTORS	Given the distance from the Site and the nature of the local geology, the sensitivity of local surface waters is judged to be low.	MILD	POTENTIAL SEVERITY OF IMPACT
 Environmental designations <i>(see the environmental data report in Section 3.3 for full details)</i>	There are no environmentally sensitive land uses within 500 m of the Site.		No relevant environmentally designated sites/receptors have been identified.	NEGLIGIBLE	
 Human receptors	Proposed residents/users of the Site plus neighbouring residences.		Human receptors are proposed to be present on Site.	SEVERE	

2.4 Regulator perspective

GeoSmart consultant	Jessica Bayliff	Manchester City Council
Consultation outcome	The Council declined to answer any queries relating to the Site other than through formal chargeable consultation.	

2.5 Site inspection (see photographs in section 3.2)

Inspection date	1st April 2022	General site description	Access road and car parking for adjacent development.
GeoSmart consultant	Martin Lucass	Site contact	None
Topography	The Site appears to be elevated compared to the surrounding land areas, reflecting the possible presence of imported material / Made Ground. Additional evidence for this is that some of the on-Site trees appear to be sunk below the level of the ground.	Ground cover	Compacted earth present across the area used for parking. Grass throughout rest of the Site with tree line and hedges on the boundaries including several mature trees.
Current site land use	Access road and car parking for adjacent development.	On-Site structures	No on-Site structures present
Visual / olfactory evidence of contamination	No visual or olfactory evidence of any on-Site contamination was observed during the site walkover.	On-Site drainage	Drainage covers seen in the centre and eastern parts of the Site.
Bulk storage tanks (fuel and chemical storage)	No direct evidence of any bulk fuel or chemical storage was observed during the Site walkover.	Invasive species	No direct evidence of any invasive species was observed during the Site walkover.

2.5 Site inspection (see photographs in section 3.2)

Neighbouring land uses	North	Playing fields for school	Off-Site contaminant sources	No visual or olfactory evidence of any off-Site contamination was observed during the Site walkover.
	South	Open land, road and housing		
	East	Newall Green Farm		
	West	Road and agricultural land		
Local water features	No evidence of any surface water features was observed within the immediate vicinity of the Site during the site walkover.		Distance to nearest residential property	The nearest residential accommodation is currently located adjacent to the Site.
Comments				

2.6 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
On-Site sources								
1	Potential for inorganic and low volatility organic contaminants to be present within the subsurface soils	Dermal contact, ingestion & inhalation of soils & soil dust	HH	Future Site occupants	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Given the potential presence of imported material / Made Ground at the Site, any associated contamination has the potential to impact future site users particularly in the proposed landscaped/amenity areas. It is acknowledged that the development plans do not include any private gardens (which may constrain future soil exposures).
2		Consumption of home grown produce	HH		MEDIUM	UNLIKELY	LOW RISK	
3		Ingress into water supply pipework and subsequent water ingestion	HH		MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	
4		Building materials in direct contact with aggressive ground	PROP	Future Site buildings	MILD	LOW LIKELIHOOD	LOW RISK	Given the potential presence of Made Ground beneath the Site, it would be prudent to verify the underlying ground conditions prior to foundation design.
5		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Till, Devensian (a Secondary (undifferentiated) Aquifer)	MILD	LOW LIKELIHOOD	LOW RISK	The superficial geology is likely to offer some protection to the underlying bedrock formation from any surface based contaminants.
6		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Bollin Mudstone Member (a Secondary (B) Aquifer)	MEDIUM	UNLIKELY	LOW RISK	
7		Dissolution into pore water/shallow groundwater and subsequent lateral migration	CW	Fairwell Brook (c. 80 m south west)	MEDIUM	UNLIKELY	LOW RISK	The risk classification reflects the reasonable distance to the nearest surface water feature.
8		Dissolution into aqueous phase and preferential migration via drainage structures	CW		MEDIUM	UNLIKELY	LOW RISK	

2.6 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
9	Potential for volatile organic contaminants to be present within the subsurface soils	Dermal contact, ingestion & inhalation of soils & soil dust	HH	Future Site occupants	MEDIUM	UNLIKELY	LOW RISK	The risk classification reflects the likely absence of any significant sources of volatile organic contamination based on the known land use history.
10		Consumption of home grown produce	HH		MEDIUM	UNLIKELY	LOW RISK	
11		Ingress into water supply pipework and subsequent water ingestion	HH		MEDIUM	UNLIKELY	LOW RISK	
12		Migration of vapours to surface; inhalation indoors	HH		MEDIUM	UNLIKELY	LOW RISK	
13		Migration of vapours to surface; inhalation outdoors	HH		MEDIUM	UNLIKELY	LOW RISK	
14		Building materials in direct contact with aggressive ground	PROP	Future Site buildings	MILD	UNLIKELY	VERY LOW RISK	Aggressive ground conditions relating to VOCs are not anticipated to be present.
15		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Till, Devensian (a Secondary (undifferentiated) Aquifer)	MEDIUM	UNLIKELY	LOW RISK	The risk classification reflects the likely absence of any significant sources of volatile organic contamination.
16		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Bollin Mudstone Member (a Secondary (B) Aquifer)	MEDIUM	UNLIKELY	LOW RISK	
17		Dissolution into pore water/shallow groundwater and subsequent migration	CW	Fairywell Brook (c. 80 m south west)	MEDIUM	UNLIKELY	LOW RISK	
18		Dissolution into aqueous phase and preferential migration via drainage structures	CW		MEDIUM	UNLIKELY	LOW RISK	

2.6 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
19	Potential for asbestos containing materials within the subsurface soils	Liberation of sub surface ACMs and inhalation of asbestos fibres	HH	Future Site occupants	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Given the potential presence of imported material at the Site, there is potential for asbestos containing material to be present within the sub soil.
20	Potential for dissolved phase contaminants to be present within shallow groundwater	Lateral and vertical groundwater movement via natural or artificial flow paths	CW	Till, Devensian (a Secondary (undifferentiated) Aquifer)	MILD	LOW LIKELIHOOD	LOW RISK	The superficial geology is likely to offer some protection to the underlying bedrock formation from any surface based contaminants.
21		Lateral and vertical groundwater movement via natural or artificial flow paths	CW	Bollin Mudstone Member (a Secondary (B) Aquifer)	MEDIUM	UNLIKELY	LOW RISK	
22		Lateral and vertical groundwater movement via natural or artificial flow paths	CW	Fairywell Brook (c. 80 m south west)	MEDIUM	UNLIKELY	LOW RISK	
23	Potential for elevated methane to be present within the sub-surface soils	Lateral and vertical migration into on-Site buildings; potential to cause an explosion	HH	On-Site properties and their occupants	SEVERE	UNLIKELY	MODERATE/LOW RISK	Given the potential presence of imported material / Made Ground at the Site within an unknown thickness, there is potential for there to be a gas risk associated with this material.
24		Lateral migration towards off-Site buildings; potential to cause an explosion	HH	Off-Site properties and their occupants	SEVERE	UNLIKELY	MODERATE/LOW RISK	
25	Potential for elevated carbon dioxide to be present within the subsurface soils	Lateral and vertical migration into on-Site buildings; potential to cause asphyxiation	HH	Occupants of on-Site buildings	SEVERE	UNLIKELY	MODERATE/LOW RISK	
26		Lateral migration towards off-Site buildings; potential to cause asphyxiation	HH	Occupants of off-Site buildings	SEVERE	UNLIKELY	MODERATE/LOW RISK	
27	Potential for radon within the subsurface	Lateral migration towards on-Site buildings; potential to cause long term health effects	HH	Occupants of on-Site buildings	MEDIUM	UNLIKELY	LOW RISK	The Site lies in an area where <1% of homes are at or above the UK radon action level (200 Bq/m3).
OVERALL ON-SITE RISK RATING							MODERATE/LOW RISK	

2.6 Preliminary Risk Assessment

Nr	Sources	Pathways	TYPE	Receptors	Consequence	Probability	Risk classification	Comments
Off-Site sources - Farm adjacent to the north east								
28	Potential for both inorganic and volatile organic contaminants to be present within the subsurface soils	Dermal contact, ingestion & inhalation of soils & soil dust	HH	Future Site occupants	MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	Given the close proximity of the neighbouring farm to the Site and the association of the Site with the farm, there is potential that any contaminants associated with this land use could impact the Site and future Site users, particularly in the proposed landscaped/amenity areas. It is acknowledged that the development plans do not include any private gardens (which may constrain future soil exposures).
29		Consumption of home grown produce	HH		MEDIUM	UNLIKELY	LOW RISK	
30		Ingress into water supply pipework and subsequent water ingestion	HH		MEDIUM	LOW LIKELIHOOD	MODERATE/LOW RISK	
31		Migration of vapours to surface; inhalation indoors	HH		MEDIUM	UNLIKELY	LOW RISK	It is plausible that the source mass associated with any volatile contaminants that were originally present as part of the farm, prior to redevelopment, may have been significantly reduced due to the effects of volatilisation and degradation over time.
32		Migration of vapours to surface; inhalation outdoors	HH		MEDIUM	UNLIKELY	LOW RISK	
	OVERALL OFF-SITE RISK RATING						MODERATE/LOW RISK	

2.7 Next Steps

✓	Phase 2 intrusive investigation		Given the apparent presence of imported material at the Site, there is the potential for contamination to be present. It is recommended that a proportionate programme of site investigation and monitoring works be undertaken in order to establish the presence or absence of contamination and to enable a quantitative assessment of the associated environmental risks. Further advice: Please contact info@geosmartinfo.co.uk for further information regarding the need for a Phase 2 investigation. For information on reputable site investigation companies, enquiries can be made directly to your local authority or via www.endsdirectory.com
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3. Supporting Information



The following supporting information is contained in this section:

Section	Content
3.1	Referenced materials used in the EnviroSmart reporting
3.2	Site photographs
3.3	Published environmental data records (Landmark Envirocheck report Land off Whitecarr Lane / Newall Road, Wythenshawe, M23 2TX. REF: 294276698_1_1) including: • Aerial photographs and site map • Environmental permits, incidents and registers • Landfill and other waste sites • Current land use information • Geology • Hydrogeology and hydrology • Flooding • Designated environmentally sensitive sites • Other environmental factors
3.4	Risk assessment methodology
3.5	Historical land use maps

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Important consumer protection information

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- sets out minimum standards which firms compiling and selling search reports have to meet
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- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

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TPOs contact details:

The Property Ombudsman scheme
Milford House
43-55 Milford Street
Salisbury
Wiltshire SP1 2BP
Tel: 01722 333306
Fax: 01722 332296
Email: admin@tpos.co.uk

You can get more information about the PCCB from www.propertycodes.org.uk

Please ask your search provider if you would like a copy of the search code

Complaints procedure

GeoSmart Information Limited is registered with the Property Codes Compliance Board as a subscriber to the Search Code. A key commitment under the Code is that firms will handle any complaints both speedily and fairly. If you want to make a complaint, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
- Liaise, at your request, with anyone acting formally on your behalf.

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk.

We will co-operate fully with the Ombudsman during an investigation and comply with his final decision. Complaints should be sent to:

Martin Lucass
Commercial Director
GeoSmart Information Limited
Suite 9-11, 1st Floor
Old Bank Buildings, Bellstone
Shrewsbury
SY1 1HU

Tel: 01743 298100
martinlucass@geosmartinfo.co.uk

3.1 References

The following references were used to inform the conceptual site model and preliminary risk assessment:

British Geological Survey, 2022a. Geology of Britain viewer (<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>)

British Geological Survey, 2022b. GeoIndex Onshore (<http://mapapps2.bgs.ac.uk/geoindex/home.html>)

British Standards Institute, 2011. Investigation of potentially contaminated sites – code of practice. BS10175:2011+A1:2013.

CIRIA, 2001. Contaminated land risk assessment. A guide to good practice. Publication C552. CIRIA London. ISBN 0-86017-552 9

Environment Agency, 2020. Land Contamination Risk Management (LCRM)

GeoSmart Information Limited, 2022. National Groundwater Flood Risk Map (GW5)

Health Protection Agency, 2000. Spring 2000 Newsletter featuring; Radon: Guidance on Protective Measures for New Dwellings (BR 211).

Landmark, 2022. Landmark Envirocheck report Land off Whitecarr Lane / Newall Road, Wythenshawe, M23 2TX. REF: 294276698_1_1