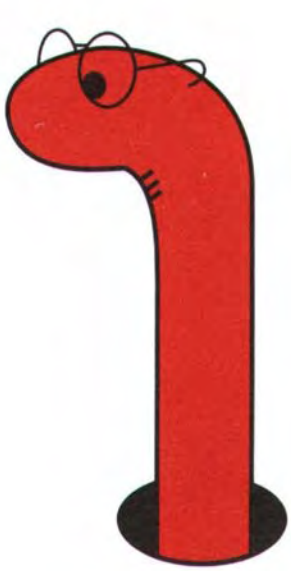
Electronic Report



WORMS EYE

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01282 414649 / 458410

Our Ref: Stott Lane/M24 6XJ/2018
Date: 4 July 2018

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PROPOSED BARN CONVERSION
YEW TREE FARM SOUTH, STOTT LANE, MIDDLETON, MANCHESTER, M24 6XJ
PRELIMINARY RISK ASSESSMENT (DESK STUDY)

INTRODUCTION

A residential development is proposed. The objective is to carry out a desk study, supplemented with a walk over survey, to form a Preliminary Risk Assessment to consider contamination and landfill gas issues.

SITE DESCRIPTION

The site is an irregular shaped plot, about 30 by 41 metres, located to the south of Oaken Bank Road in Middleton and at OS Grid Reference 386605, 408460. The site, inspected on 22/06/2018 by Mr S Gimeno (Geotechnician), comprises a 'T' shaped collection of barns/farm building. The site is part of an old farm and along the west of the site were some old structures forming the boundary.

The structures have been numbered 1 – 6 and are described below:

1. A rundown shed/lean-to, used for the storage of milk bottles.
2. A barn, brick built with a slate roof, used for keeping dogs.
3. A barn, brick built with asbestos sheet roof, used for keeping live stock.
4. A barn, built of breeze block with asbestos roof, used to store wood.
5. An extremely dilapidated structure, built of brick with a slate roof, storing building materials.
6. A wooden lean-to/stable, partly built of breeze block, used for horses.

East of the farm buildings was a yard. This was used to store a boat and a bus. Towards the north were two shipping containers, though to be used for storing tools. Scrap metal was seen throughout the yard along with various old oil drums, paint tins and waste material. The south of the yard was largely overgrown with weeds. Parts of the yard was surfaced with tarmac, but this was in poor condition, the rest of the yard was unsurfaced. There are suggestions of probable staining in places.

This is a rural area. To the northeast is Yew Tree Farm East, to the southwest is Yew Tree Farm South, and to the east are fields. The waste materials spread onto the adjoining land. To the southwest is a slurry tank.

The area slopes down to the northwest.

TREES

There were no trees of note seen on site, although a small hedge, up to about 4 metres high, formed the southern boundary of the yard.

PROPOSED DEVELOPMENT

The proposal is to convert of the existing barn into three dwellings together with associated landscaping and off-road parking. The lean-to at the southeast will be demolished.

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NOT INCLUDED IN THE REPORT

- Arboricultural Survey.
- Asbestos Survey
- Invasive Plant Survey (Japanese Knotweed etc.).
- Mining Risk Assessment.
- River/Tidal Flood Risk Assessment.
- Surface Water Flooding.
- Underground Services Survey.

General comments may be made with regards to the above where there are obvious features seen on site, in the data review or where they are applicable to the environmental and geotechnical risk assessment. These general comments do not constitute a detailed risk assessment.

DATA SOURCES

The following data sources have been viewed in compiling this report.

- BGS, Geology Map, 1:50000 scale, Solid and Drift Edition
- BGS, on-shore boreholes scans
- Landmark Envirocheck Report, 25/05/2018
- Ordnance Survey, Historical Maps, 1:10000 and 1:2500 scale
- Walkover Survey, 22/6/18

This report is referred to as a Preliminary Risk Assessment (PRA) and may involves a site inspection. Alternative names for such reports are 'Phase I' Report (Phase II being the intrusive work involving boreholes etc.) or a Desk Study.

ENVIRONMENTAL DATA

A Landmark Envirocheck report has been obtained for the site and geological maps have been reviewed, the following is a summary of the combined data. The Envirocheck report indicated none of the following within 250 metres:

- Contaminated land register entries
- Discharge consents
- Substantiated pollution incidents
- Water abstraction points
- Source protection zones
- Radioactive sites
- Areas of flooding from rivers
- Landfill sites
- Hazardous substances sites
- Trade directory entries
- Fuel stations

Geology of Site

The geological map indicates that the underlying solid rocks are mudstone of the Pennine Lower Coal Measures formation.

Surface drift is shown as glacial till (boulder clay) of unknown thickness.

Surface Water (Hydrology)

There are no rivers or streams close to the site.

The nearest surface water feature is a pond 95m northeast.

There is 1 pollution incident to surface water listed within 250 metres:

- Minor incident –Fire water/foam to freshwater stream/river in 1997 – 116m west *

The area slopes down to the northwest and the flow of surface water is expected to be in this direction.

- Not relevant due to distance/severity/significance

Flooding (General)

Information is obtained from the EA flood maps and suggests areas where rivers would flood. There are two zones:

- 'normal' flooding, based on a 1 in 100 chance of it happening in any year (1:200 if flooding is from the sea). This is normally closer to the river.
- 'extreme' flooding, further away from the river and having a 1 in 1000 chance.

Flooding can occur for many reasons other than those dealt with by the EA maps. These include:

- burst pipes
- blocked drains, sewers and culverts
- inadequate drainage
- cloudbursts/flash flooding overwhelming normally satisfactory drainage systems

Statements in this report such as 'clear of flooding/flood plain' and 'flooding – no further action' are references to the EA river and sea flood maps and are no guarantee that flooding will not occur.

Groundwater Flooding

The site is shown to be in an area with a limited potential for groundwater flooding to occur.

Flooding from Rivers and Seas

The site is shown to be clear of flooding from rivers and seas.

Surface Water Flooding

The southeast of the site is shown to be at risk of 1 in 10 year surface water flooding, with the southeast and northwest at risk of 1 in 1000 year surface water flooding.

Groundwater (Hydrogeology)

The solid rocks under the site are indicated as a Secondary A aquifer.

Superficial (drift) deposits are classed as a Secondary Undifferentiated aquifer with a low permeability.

Groundwater flow is likely to follow the topography and move to the northwest.

Radon

The site is in a lower probability radon area as less than 1% of homes in the area are above the radon action level.

Radon protection measures are not required.

Sensitive Land Uses

Areas of Adopted Greenbelt on the south of site *

Local Nature Reserve 247m northeast *

Nitrate Vulnerable Zones 221m east *

* not relevant due to distance/severity/significance

SITE HISTORY

Date	On Site	Off Site
1848 – 1851 1:10,560	Mapping unclear. Barn possibly built.	Site is part of Yew Tree Farm with fields to the north, east, south. Yew Tree Farm 15m northeast.
1893 1:2,500	Barn on west of site.	Pond 235m northeast and 105m southwest. Farm buildings immediately west.
1910 1:2,500	Little or no change.	Pond 105m southwest shown as marshy land.
1929 1:2,500	Little or no change.	Pond to southwest, not present, likely silted up. Small pond 145m north. Tramway 160m southwest.
1956 1:2,500	Little or no change.	Pond to north, not present. Tramway is now a road. Housing 90m northwest.
1977 1:2,500	Part of building on south of site.	Farm building immediately south.
1992 1:2,500	Little or no change.	No relevant change.
2018 1:10,000	Site as present.	No relevant change.

DISCUSSION

Contamination

The site is a collection of derelict barns with numerous pieces of equipment and building materials stored inside. Externally is a yard. Historic aerial photographs show numerous vehicles and presumably vehicle parts around the yard area. Pieces of equipment/machinery and materials, spreading onto adjoining land, are currently present. There are also oil and paint tins around the yard, with staining in places.

The findings suggest that contaminants will have entered the ground over the years, likely to be at high levels in places and exceeding stringent residential thresholds over a wide area, including below the buildings and the yard.

To the northeast and southwest are farms, there are no nearby land uses which are considered likely to affect the site and no pollution incidents on or close to the site.

The proposed development will be to convert the existing barn into three dwellings, with associated landscaping. Potential pollutant linkages are considered to be:

- Direct contact with soil.
- Ingestion of soil.
- From homegrown vegetables and soil attached to vegetables.
- Inhalation and ingestion of dust.
- Inhalation of vapours.
- Contaminants entering drinking water pipes.

A high risk to householders is considered possible.

Controlled Waters

There is an underlying Secondary A aquifer beneath low permeability clay.

There are no nearby surface water receptors.

The landscaped areas will allow rainwater to pass through the surface soils and migrate towards the aquifer. Although contamination is expected at raised levels, the underlying clay will impede the migration of water and it is anticipated there will be a low to moderate risk to the aquifer.

No risk is expected to surface waters.

Landfill Gas/Ground Gas

There are no landfill sites within 250 metres.

There are no significant filled features within 250 metres of the site. However, there was a nearby slurry tank and the quality/condition of the base and associated pipe work is not known. These can be potential ground gas sources.

Furthermore, hydrocarbons are also expected to be present below the site and these can produce ground gases as they degrade.

A low gas risk is anticipated.

Radon

Radon protection measures are not required.

Flooding from Rivers and Seas

The Environment Agency maps show that this site is clear of flooding from rivers.

Groundwater and Surface Water Flooding

The site is shown to be at risk of 1 in 10 to 1 in 1000 year surface water flooding.

The site is shown to be in an area with limited potential for groundwater flooding to occur.

INDUSTRY PROFILE

The site is a collection of derelict barns, at a farm, with numerous pieces of equipment, tools and building materials.

Industry	Possible Contaminants
Potential Contaminants	Metals: lead, chromium, copper Inorganics: cyanide, sulphate BTEX compounds Volatile organic compounds/solvents (VOC) Fuel: petrol, diesel, MTBE (TPHs) Polycyclic aromatic hydrocarbons (PAH) Asbestos Pesticides

CONCEPTUAL MODEL

A conceptual model based on the source-pathway-receptor concept is included with this desk study to show the potential pollutant linkages with this site.

Source	Receptors	Pathway	Potential/Likely Pollutant Linkage
Asbestos	Construction workers	Inhalation	Yes
	End-users	Inhalation	Yes
	Off-site	Migration off-site	Yes
Inorganic contaminants	Construction workers	Short-term direct contact, inhalation of dust, ingestion	Yes
	Householders	Direct contact, ingestion, from home grown vegetables, ingestion and inhalation of dust	Yes
	Groundwater	Leaching towards	Possible
	River/stream	No nearby receptors	No
Hydrocarbons	Construction workers	Short-term direct contact, inhalation of dust, ingestion	Yes
	Householders	Direct contact, ingestion, from home grown vegetables, ingestion and inhalation of dust	Yes
	Service pipes	Seeping into drinking water pipes	Yes
	Groundwater	Migrating towards	Yes
	River/stream	No nearby receptors	No
Hydrocarbon vapours	Construction workers	Short-term inhalation	Yes
	Householders	Inhalation of vapours indoors and outdoors	Yes
Landfill gas	End-users - in buildings	Seeping into buildings, explosion, asphyxiation	Yes
Radon	End-users - in buildings	Seeping into buildings	No

CONCLUSION

Contamination

Taking into account the past use of the site, it is thought likely that contamination will be present on the site, exceeding residential thresholds over wide areas and at high levels in places.

An intrusive investigation is required, consisting of boreholes/trial holes and tests to confirm the presence and extent of contamination on the site.

There are no specific point sources for contamination and the investigation will need to target proposed gardens (most sensitive part of the development), proposed houses and provide all round coverage.

Controlled Waters

A moderate risk to controlled water is expected. This will need to be reviewed following the soil tests and leachate tests will be required. Tests on shallow groundwater samples will be required, if available.

Landfill Gas/Ground Gas

There are no nearby landfill sites or significant filled features. However, there is a nearby slurry tank and probable hydrocarbons below the site, posing a possible gas risk.

Radon

Radon protection measures are not required.

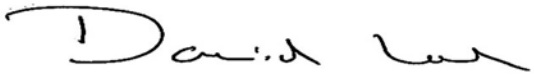
Flooding

The EA maps indicate that the area is clear of flooding from rivers.

The maps suggest that the site could be subject to 1 in 10 to1 in 1000 year surface water flooding. These maps are fairly crude and it is beyond the scope of this report to provide a comprehensive flood risk assessment.

For greater confidence a detailed flood risk assessment should be obtained.

Yours faithfully
on behalf of Worms Eye Ltd



David Lord
BSc (Hons)
FGS, MIEnvSc, AIEMA

PROPOSED BARN CONVERSION

YEW TREE FARM SOUTH, STOTT LANE, MIDDLETON, MANCHESTER, M24 6XJ

LIST OF APPENDICES – PRELIMINARY RISK ASSESSMENT (Desk Study)

Existing Site Plan

Photographs of Site

Proposed Site Plan

Landmark Summary Map

Historical Maps

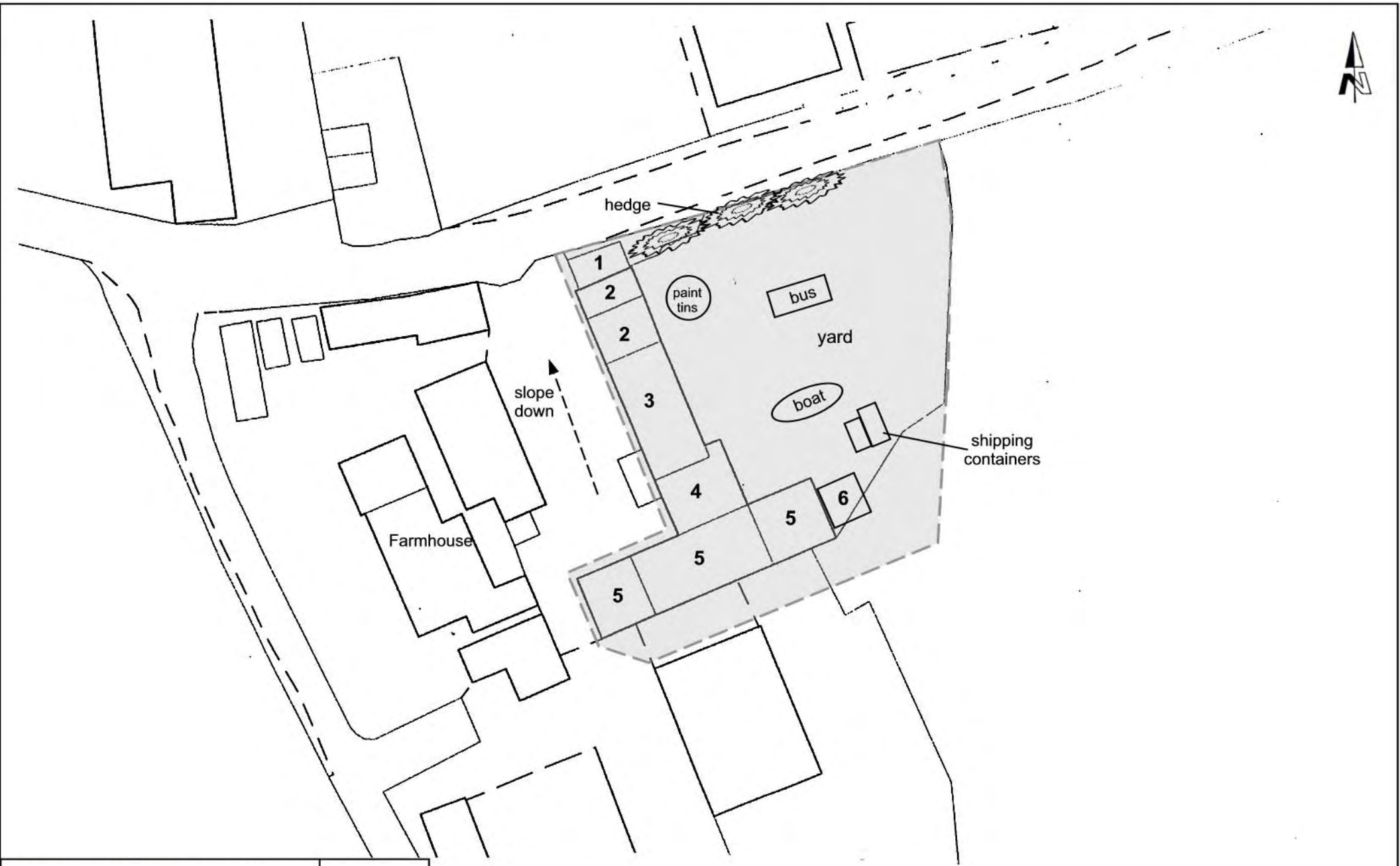
Landmark Envirocheck Report

Landmark Data Plans

Conceptual Model

ABBREVIATIONS

Chemical	BAP	Benzo(a)pyrene
	BTEX	Benzene, toluene, ethylbenzene, xylene
	DAHA	Dibenzo(ah)anthracene
	MTBE	Methyl tertiaryt-butyl ether (additive to petrol)
	EPH	Extractable Petroleum Hydrocarbons (formerly Diesel Range Organics – DRO)
	NFD	No fibres detected (asbestos test)
	PAH	Polycyclic aromatic hydrocarbons
	PCB	Polychlorinated biphenyls
	PID	Photo ionisation detector
	PRO/GRO	Petrol range organics/gasoline range organics
	SVOC	Semi-volatile organic compounds
	TCE	Trichloroethylene
	TPH	Total petroleum hydrocarbons
	VOC	Volatile organic compounds
Other	AGS	Association of Geotechnical Specialists
	BGS	British Geological Survey
	BRE	Building Research Establishment
	CBR	California Bearing Ratio
	CIEH	Chartered Institute of Environmental Health
	CIRIA	Construction Industry Research and Information Association
	CLEA	Contaminated Land Exposure Assessment (Environment Agency)
	CLR 8	Contaminated Land Research Report 8 (Environment Agency)
	DWQ	Drinking water quality
	EA	Environment Agency
	EQS	Environmental quality standards
	ICRCL	Inter-departmental Commission for the Reclamation of Contaminated Land
	LQM	Land Quality Management Ltd (Land and Environmental Consultancy)
	NHBC	National House Builders Council
	SGV	Soil Guideline Values
	SPT	Standard penetration test
	TPHWG	TPH Working Group



Stott Lane, Middleton M24 6XJ
Existing Site Plan 1: 500

WORMS EYE Ltd
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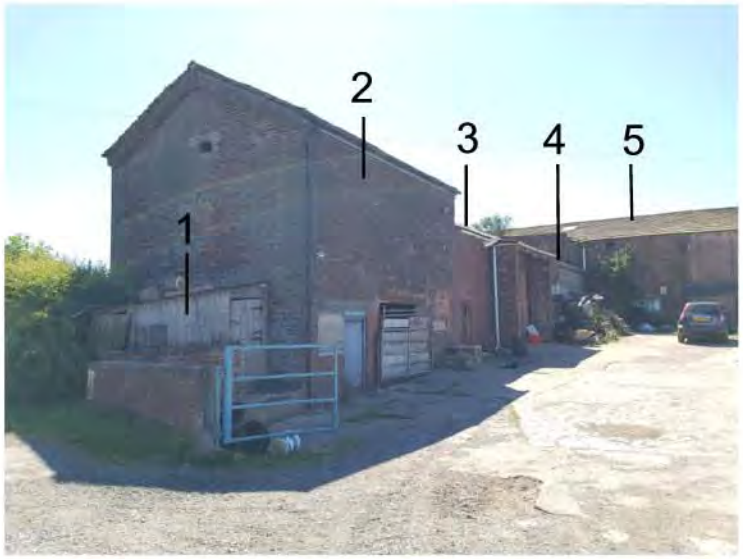
Tel: 01282 414 649

Stott Lane, Middleton, M24 6XJ



view looking southeast



view looking northeast (rear of building 5)



view looking northeast



view looking northeast (rear of building 5)

Stott Lane, Middleton, M24 6XJ



general view of yard looking southwest

1
4 BED

2
4 BED

3
3 BED

137.2m

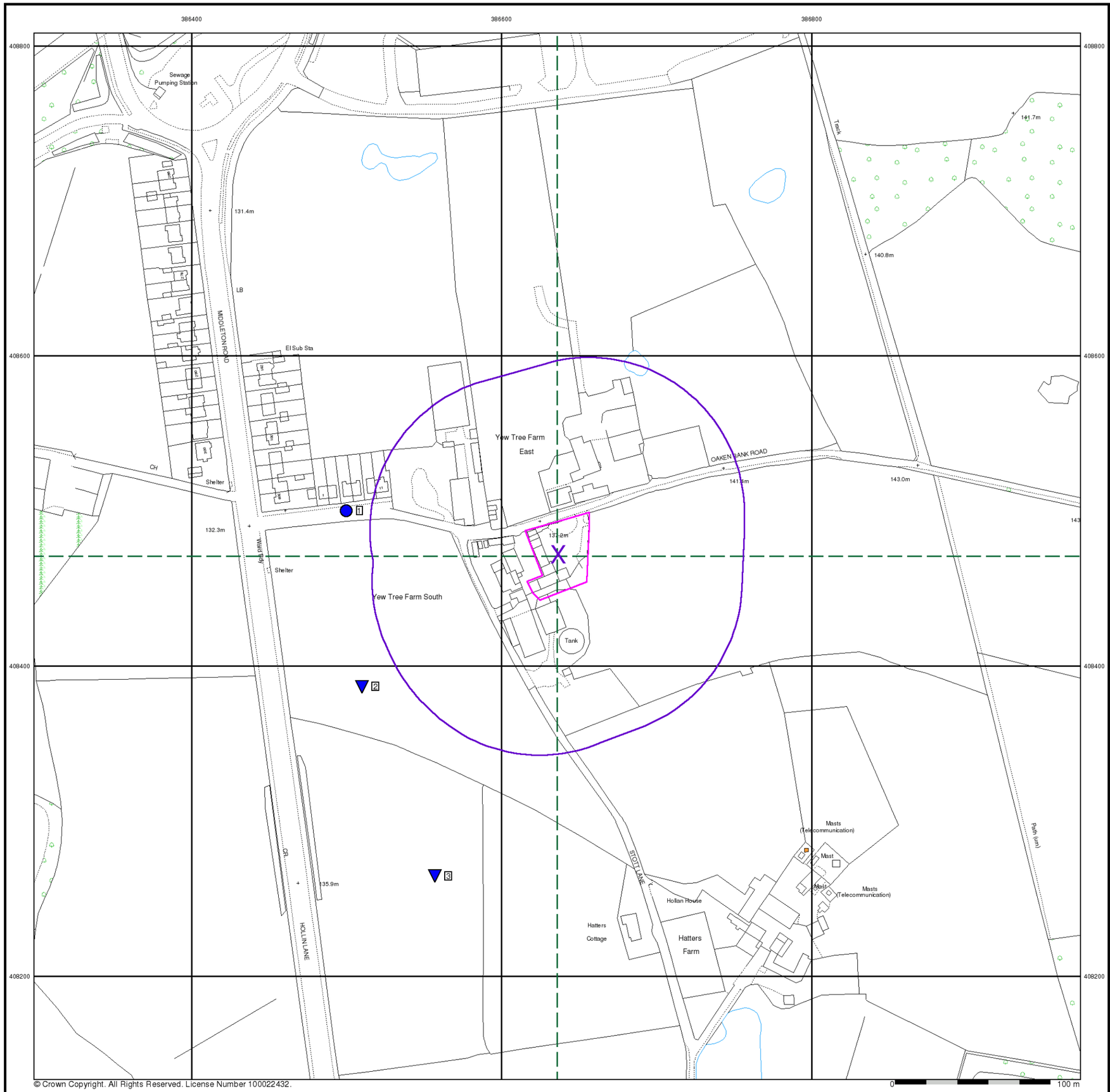
N

Scale

0 2 4 6 8 10 12 14 16 18 20

scale 1 : 200

Yew Tree Farm
Middleton
Manchester



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

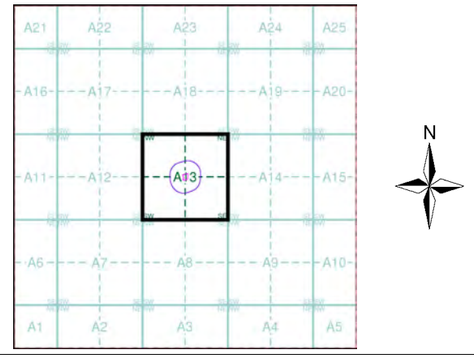
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details

Order Number:	167668786_1_1
Customer Ref:	M24 6XJ
National Grid Reference:	386640, 408470
Slice:	A
Site Area (Ha):	0.17
Plot Buffer (m):	100

Site Details

Yew Tree Farm South, Middleton, MANCHESTER, M24 6XJ

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Tel: 0844 844 9952
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Web: www.envirocheck.co.uk

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
167668786_1_1

Customer Reference:
M24 6XJ

National Grid Reference:
386640, 408470

Slice:
A

Site Area (Ha):
0.17

Search Buffer (m):
250

Site Details:

Yew Tree Farm South
Middleton
MANCHESTER
M24 6XJ

Client Details:

Mr D Lord
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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Agency & Hydrological			
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes
Contaminated Land Register Entries and Notices			
Discharge Consents			
Prosecutions Relating to Controlled Waters			n/a
Enforcement and Prohibition Notices			
Integrated Pollution Controls			
Integrated Pollution Prevention And Control			
Local Authority Integrated Pollution Prevention And Control			
Local Authority Pollution Prevention and Controls			
Local Authority Pollution Prevention and Control Enforcements			
Nearest Surface Water Feature	pg 1		Yes
Pollution Incidents to Controlled Waters	pg 1		1
Prosecutions Relating to Authorised Processes			
Registered Radioactive Substances			
River Quality			
River Quality Biology Sampling Points			
River Quality Chemistry Sampling Points			
Substantiated Pollution Incident Register			
Water Abstractions			
Water Industry Act Referrals			
Groundwater Vulnerability	pg 1	Yes	n/a
Drift Deposits	pg 1	1	n/a
Bedrock Aquifer Designations	pg 1	Yes	n/a
Superficial Aquifer Designations	pg 1	Yes	n/a
Source Protection Zones			
Extreme Flooding from Rivers or Sea without Defences			
Flooding from Rivers or Sea without Defences			
Areas Benefiting from Flood Defences			
Flood Water Storage Areas			
Flood Defences			
OS Water Network Lines			

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Summary

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Waste			
BGS Recorded Landfill Sites			
Historical Landfill Sites			
Integrated Pollution Control Registered Waste Sites			
Licensed Waste Management Facilities (Landfill Boundaries)			
Licensed Waste Management Facilities (Locations)			
Local Authority Landfill Coverage	pg 2	1	n/a
Local Authority Recorded Landfill Sites			
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Registered Landfill Sites			
Registered Waste Transfer Sites			
Registered Waste Treatment or Disposal Sites			
Hazardous Substances			
Control of Major Accident Hazards Sites (COMAH)			
Explosive Sites			
Notification of Installations Handling Hazardous Substances (NIHHS)			
Planning Hazardous Substance Consents			
Planning Hazardous Substance Enforcements			

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Summary

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Geological			
BGS 1:625,000 Solid Geology	pg 3	Yes	n/a
BGS Estimated Soil Chemistry	pg 3	Yes	Yes
BGS Recorded Mineral Sites	pg 3		2
BGS Urban Soil Chemistry			
BGS Urban Soil Chemistry Averages			
CBSCB Compensation District			n/a
Coal Mining Affected Areas	pg 4	Yes	n/a
Mining Instability	pg 4	Yes	n/a
Man-Made Mining Cavities			
Natural Cavities			
Non Coal Mining Areas of Great Britain			
Potential for Collapsible Ground Stability Hazards	pg 4	Yes	
Potential for Compressible Ground Stability Hazards			
Potential for Ground Dissolution Stability Hazards			
Potential for Landslide Ground Stability Hazards	pg 4	Yes	
Potential for Running Sand Ground Stability Hazards	pg 4	Yes	
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	Yes	
Radon Potential - Radon Affected Areas			n/a
Radon Potential - Radon Protection Measures			n/a
Industrial Land Use			
Contemporary Trade Directory Entries			
Fuel Station Entries			
Points of Interest - Commercial Services			
Points of Interest - Education and Health			
Points of Interest - Manufacturing and Production	pg 5		2
Points of Interest - Public Infrastructure			
Points of Interest - Recreational and Environmental			
Gas Pipelines			
Underground Electrical Cables			

Summary

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
Sensitive Land Use			
Ancient Woodland			
Areas of Adopted Green Belt	pg 6	1	
Areas of Unadopted Green Belt			
Areas of Outstanding Natural Beauty			
Environmentally Sensitive Areas			
Forest Parks			
Local Nature Reserves	pg 6		1
Marine Nature Reserves			
National Nature Reserves			
National Parks			
Nitrate Sensitive Areas			
Nitrate Vulnerable Zones	pg 6		1
Ramsar Sites			
Sites of Special Scientific Interest			
Special Areas of Conservation			
Special Protection Areas			
World Heritage Sites			

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (S)	0	1	386637 408472
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (W)	215	1	386400 408472
	Nearest Surface Water Feature	A13NE (NE)	95	-	386688 408588
1	**Pollution Incidents to Controlled Waters** Property Type: Cattle (Dairy) Farming: Other Location: Yew Tree Farm, Oakenbank Road, MIDDLETON Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Fire water / Foam Note: Whittle Brook; Fire Water Incident Date: 17th October 1997 Incident Reference: 97621811 Catchment Area: Roch Receiving Water: Freshwater Stream/River Cause of Incident: Other Cause Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NW (W)	116	2	386500 408500
	Groundwater Vulnerability Soil Classification: Soils of Low Leaching Potential - Soils in which pollutants are unlikely to penetrate the soil layer because water movement is largely horizontal or they have large ability to attenuate diffuse pollutants. Lateral flow from these soils contribute to groundwater recharge elsewhere in the catchment Map Sheet: Sheet 11 South Pennines Scale: 1:100,000	A13NE (S)	0	2	386637 408472
	Drift Deposits Drift Deposit: Low permeability drift deposits occuring at the surface and overlying Major and Minor Aquifers are head, clay-with-flints, brickearth, peat, river terrace deposits and marine and estuarine alluvium Map Sheet: Sheet 11 South Pennines Scale: 1:100,000	A13NE (S)	0	2	386637 408472
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (S)	0	1	386637 408472
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NE (S)	0	1	386637 408472
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
	OS Water Network Lines None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Rochdale Metropolitan Borough Council - Has no landfill data to supply		0	3	386637 408472

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13NE (S)	0	1	386637 408472
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: 1.8 - 2.2 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (S)	0	1	386637 408472
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: 2.2 - 3.0 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (N)	1	1	386637 408500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (W)	115	1	386500 408472
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil and Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (W)	116	1	386500 408500
2	**BGS Recorded Mineral Sites** Site Name: Hopwood Sand Pit Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 96549 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	125	1	386510 408388
3	**BGS Recorded Mineral Sites** Site Name: Hopwood Sand Pit Location: Not Supplied Source: British Geological Survey, National Geoscience Information Service Reference: 96550 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sand Positional Accuracy: Located by supplier to within 10m	A13SW (S)	190	1	386557 408266

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NE (S)	0	4	386637 408472
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NE (S)	0	-	386637 408472
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	46	1	386703 408499
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (S)	0	1	386637 408472

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Points of Interest - Manufacturing and Production** Name: Tank Location: M24 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (S)	33	5	386646 408416
5	**Points of Interest - Manufacturing and Production** Name: Hatters Farm Location: Hatters Farm, Stott Lane, Middleton, Manchester, M24 6XL Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A13SE (SE)	250	5	386763 408229

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Areas of Adopted Green Belt** Authority: Rochdale Metropolitan Borough Council Plan Name: Rochdale Unitary Development Plan **Status: Adopted** Plan Date: 30th June 2006	A13NE (S)	0	7	386637 408472
7	**Local Nature Reserves** Name: Hopwood Woodlands Multiple Area: Y Area (m2): 425906.87 Source: Natural England Designation Date: 1st January 1992	A13NE (NE)	247	6	386837 408666
8	**Nitrate Vulnerable Zones** Name: River Irk (Moston Brook To River Irwell) Nvz Description: Surface Water Source: Environment Agency, Head Office	A13NE (E)	221	8	386872 408546

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Rochdale Metropolitan Borough Council - Environmental Health Department	October 2017	Annually
Discharge Consents Environment Agency - North West Region	April 2018	Quarterly
Enforcement and Prohibition Notices Environment Agency - North West Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - North West Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - North West Region	April 2018	Quarterly
Local Authority Integrated Pollution Prevention And Control Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Local Authority Pollution Prevention and Controls Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Rochdale Metropolitan Borough Council - Environmental Health Department	July 2014	Variable
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - North West Region	January 2000	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - North West Region	March 2013	As notified
Prosecutions Relating to Controlled Waters Environment Agency - North West Region	March 2013	As notified
Registered Radioactive Substances Environment Agency - North West Region	January 2015	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - North West Region - South Area	April 2018	Quarterly
Water Abstractions Environment Agency - North West Region	April 2018	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	October 2017	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	January 2018	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2018	Quarterly

Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	February 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	February 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	February 2018	Quarterly
Flood Defences Environment Agency - Head Office	February 2018	Quarterly
OS Water Network Lines Ordnance Survey	January 2018	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	April 2018	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North West Region - South Area	April 2018	Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North West Region - South Area	April 2018	Quarterly
Local Authority Landfill Coverage Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites Rochdale Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - North West Region - South Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	September 2017	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Rochdale Metropolitan Borough Council	February 2016	Variable
Planning Hazardous Substance Consents Rochdale Metropolitan Borough Council	February 2016	Variable
Geological	**Version**	**Update Cycle**
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2018	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Data Currency

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	February 2018	Quarterly
Fuel Station Entries Catalist Ltd - Experian	April 2018	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	March 2018	Quarterly
Points of Interest - Education and Health PointX	March 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	March 2018	Quarterly
Points of Interest - Public Infrastructure PointX	March 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	March 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	October 2017	Bi-Annually
Areas of Adopted Green Belt Rochdale Metropolitan Borough Council	February 2018	As notified
Areas of Unadopted Green Belt Rochdale Metropolitan Borough Council	February 2018	As notified
Areas of Outstanding Natural Beauty Natural England	February 2018	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	February 2018	Bi-Annually
Marine Nature Reserves Natural England	January 2018	Bi-Annually
National Nature Reserves Natural England	February 2018	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	February 2018	Bi-Annually
Sites of Special Scientific Interest Natural England	February 2018	Bi-Annually
Special Areas of Conservation Natural England	January 2018	Bi-Annually
Special Protection Areas Natural England	February 2018	Bi-Annually