



Contaminated Land Phase One Desk Study for proposed residential development on land at 418 Bury Road, Rochdale, OL11 5EU.

Prepared for

Building Design Services,
418 Bury Road,
Rochdale,
OL11 5EU.

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Summary

This report consists of a phase one contaminated land desk study produced in support of planning application for a residential dwelling on Land Adjacent to 418, Bury Road, Rochdale, OL11 5EU.

Following the site walkover and review of the available information it has been concluded that their contaminants present either on or off site that are likely to present a significant possibility of significant harm to the identified receptors and the site is safe and suitable for the intended use.

The report further recommends that a watching brief is maintained throughout the construction of the new dwellings and any signs of potential contamination found are fully investigated, with appropriate remedial action taken as necessary.



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Introduction

Martin Environmental Solutions has been commissioned, to carry out a phase one contaminated land desk study report in relation to a proposed residential development Land Adjacent to 418, Bury Road, Rochdale, OL11 5EU.

Aims and Objectives of the report

The aims and objectives of this report are as follows:

- Assess the likelihood of contamination affecting the site,
- Identify any likely receptors to be affected by the potential contamination,
- Identify the pathways by which the receptors will be exposed to any potential contamination,
- Identify any areas where further investigation will be required.

Scope of works

This report has been written in line with the 'BS 10175: 2011+A2: 2017 Investigation of potentially contaminated sites – Code of Practice' and Land Contamination Risk Management (LCRM).

The scope of this report covers the phase one desk study only. It will look at relevant information on: -

- the history of the site and surrounding area,
- the current use of the site and surrounding area,
- the geology and hydrogeology of the area,

A site walk-over survey has been undertaken in addition to consultations with the existing site owner, to identify any potential contamination issues.

Evaluation of the above information will be used to construct an initial conceptual model as appropriate, with the identification of any additional investigations that may be required.



The Site:

Site Address: Land Adjacent to 418, Bury Road, Rochdale, OL11 5EU.

Grid reference: 388211; 413031

An aerial photograph of the site is included in Figure 1.

Current Site use:

The site currently consists of a derelict building plot, formally part of the garden for 418 Bury Road. Residential properties are located to the east and west, and beyond the alleyway to the north. To the south is Bury Road and beyond further residential dwellings.

Research

Details of Research

This report has been based on information gathered from a number of reputable sources, covering details:

- on the historic and current use of the site,
- any known waste disposal activities in the area,
- any regulated industrial activities within the vicinity of the site including recorded industrial accidents,
- on the geology, hydrogeology, hydrology of the area,
- identification of any environmentally sensitive sites,
- any natural hazards.

Principle sources of this information have been:

- environmental data from Groundsure Limited
- the Local Planning Authority,
- historic maps (Groundsure Ltd),
- site walk-over survey and discussion with the current owners.

Site History

Information on the historic uses of the site has been obtained from historic mapping information (Appendix 2), and environmental data from Groundsure Limited.

Mapping Year	Changes on Site	Changes off Site
1851	The site forms part of a large field	Bury Road is shown to the south. A small sand pit is present on the opposite side of the road, approx. 90m southwest. Sparth Bottoms Colliery is shown 650m southeast. Oakenrod woollen mill is located 500m east of the site and the River Roch meanders along west to east with the closest point being ~255m away to the south. The intervening area is relative open countryside with the odd farm seen.
1890-91	An out building is shown to the northern boundary of the site.	Properties have been built to the immediate east and west of the site and beyond along Bury Road. Rochdale cemetery is shown to the northeast~120m away. The sand pit to the southeast is no longer shown with Nissi Villa having been built on top of it. Another sand it is shown 250m east at Malvern Street. A gas works is shown 800m to the east. A number of mills are also present along the opposite river back 500m southeast.
1908-10	No Change	Further residential development around the site. A tram way has been built along Bury Road. Properties have been built over the sand pit to the east.
1928-30	No change	Rochdale continues to expand in the east, no significant changes in the immediate locality.
1938	No change	More residential development in the wider area. A brick works is shown 650m to the east.

1956-60	No change	No significant changes – more housing in the area. The tramway is no longer present.
1975-80	No change	No significant changes – more housing in the area. A new sewage works is located on the far side of the river 450m south of the site.
1985-90	No change	No significant changes – more housing in the area. A garage is present 140, east of the site.
1991-93	No change	A disused tip is labelled 450m to the southeast.
2001-03	No Change	No significant changes
2010	No Change	No significant changes
2023	No Change	No significant changes
Aerial photos	No changes shown	No significant changes



Regulatory Information

Relevant information obtained from the Groundsure report (Appendix 1) is summarised below.

Seven permitted activities that has been identified within 500m of the site as defined in the Environmental Permitting (England and Wales) Regulations 2016 or previous legislation. Four of these are Part A1 processes and all relate to the same site located 337m southwest at the sewage works. The remaining three sites consist of a petrol station located 321m west and the crematorium located 329, northwest. These are unlikely to impact on the development site.

No pollution incidents have been identified in the surrounding area.

A former landfill site located 21m northeast has been identified as potential contaminated land and an investigation was undertaken in 2013. Rochdale Councils website contains further information on this site. Summarised below:

“The site was largely farmland in the 19th century with some sand extraction pits and a river flowing through the site. The area became increasingly developed with residential and commercial properties surrounding the site with Rochdale cemetery to the west.

Landfill activity began in the 1950s with some of the site in the north used as playing fields. The activity had ceased by the 1970s and the site was reinstated as it looks today.

The ground investigation began in November 2013. It lasted 2 weeks and was then followed by 6 months of monitoring.

The ground gas monitoring established the former landfill did not represent a risk to surrounding receptors. However, the soil sample analysis identified certain contaminants within the playing fields and some garden areas which required further risk assessment and intrusive works.

This work was completed and the conclusion was the playing fields and surrounding areas did not meet the legal definition of contaminated land.”



The full investigation report confirms that the development site is not affected by the landfill site and further concludes ground gas monitoring demonstrated it was unlikely that there is a significant risk from ground gas to the adjacent properties. A further 10-years has elapsed and so it is even less likely that there is any risk from ground gas from the site.

No discharge consents are reported.

The above identified sites are unlikely to impact on the development site.

No active landfill site records have been found in the area. Three historic landfill sites are recorded. The one to the northeast – Spotland, discussed above. Roch Valley Way located 290m southwest, identified on the historical mapping. This site accepted inert and industrial waste between 1986-88. The final site located 470m southeast at Corporation Road accepted industrial and commercial waste.

Five historic waste sites have also been identified, a waste rubber works 363m east a waste transfer site at Corporation Road 470m southeast and scrap yard 485m east and a waste water transfer station 494m east.

12 waste exemptions have been identified. The first located 29m southwest for the recovery of textiles, bailing and sorting waste, use of waste to manufacturer goods and recovery of scrap metal. No further information is provided but this site represents a domestic house and so is unlikely to be of any risk to the development site.

Other sites include Britannia Metals 374m east – scrap metal, Chadwick Street 390m east for the storage of waste and recovery of scrap metal and 424m east on Chadwick Street for the recovery of scrap metal.

Given the distances and nature and age of the both sites it is unlikely that the above sites will pose any risk to the development.

Current potentially contaminative sites identified include:

Electrical sub-station located 55m east, 87m south

Oakenrod Service Station 172m east,

these are unlikely to impact on the site.



Historical potentially contaminative land uses have been identified within 250m of the site from the purchased information; most of these have been identified from the historical mapping and include:

The sand pit 67m southwest in 1851, then built over by 1890.

The cemetery 118m northwest

Ground workings 128m east from 1928. This appears to be banking from the road into what becomes the Spotland landfill site.

The garage 139m east

A heap 169m north in 1968

Sewage Works 205m & 228m south

Refuse Heap 217m north in 1949

Sand pit 223m east (Spotland landfill)

Unspecified works 234m south

An obsolete petrol station is also noted 263m east.



Geology and Hydrogeology

Information from the British Geology Survey 1:50,000 mapping identifies the bedrock in the area as Pennine lower coal measures Formation of Mudstone, Siltstone and Sandstone overlaid with Glaciofluvial Deposits of Devensian, Sand and gravel.

The information obtained on the hydrogeology of the area identifies the site as having a Secondary A aquifer in the bedrock capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers, with a Secondary A aquifer in the superficial layer.

Five groundwater abstraction licenses have been identified, four of which are historical with the nearest being 668m northeast of the site. The only active site is located 1510m west at Rochdale golf course.

Five surface water abstraction licenses are identified covering two sites, both are historical with the nearest being 1455m north for general cooling water.

The site is not located within a Source Protection Zone.

The Groundwater vulnerability is described as high in the surface and superficial geological layers and low in the bedrock layer.

Hydrology

The nearest watercourse is located the River Roch located 259m southeast.

The site is not within a floodplain, and the risk of flooding is classified as low.

Environmental Sensitivity

Four Sites of Special Scientific Interest (SSSI) are identified, all being related to the Rochdale Canal. The closest point being 1788m southeast of the site. The same areas are also identified as Special Areas of Conservation (SAC).

The Healey Dell Local Nature Reserve is located 1817m north of the site and three ancient woodlands are identified, Springwood located 905m southwest, River Roch Wood, 907m southwest and the last 1459m southwest.

The Merseyside and greater Manchester Greenbelt lies 1413m southwest.

The site is unlikely to impact on the above sites.



The property is in an area identified as having less than 1% of properties above the action level of 200 Becquerel's per cubic metre, based on specific property search. Radon protection measures are not required in line with BR211.

No additional natural hazards have been identified & the site has very low/negligible risk of shrink swell, running sand, and compressible ground.

There are no mining activities identified in the immediate area although the site is located within a coal mining area as identified by the Coal Authority.



Site Walkover

A site walkover was undertaken on the 17th April 2024 and confirmed much of what had already been identified from the information obtained on the site. The photographs in Appendix 3 provide some indication of the current layout and condition of the site.

The site is accessed from Bury Road and consists of a rectangular roughly level piece of land between two existing dwellings. A path is located at the entrance to the site which is central and some wood and stone are located across the land which is predominantly covered by soil.

The site has been used as a garden for the adjacent property. Evidence of a single brick wall for a greenhouse were seen to the northern end of the plot.

No signs of contamination, discoloration or olfactory evidence, dead or dying vegetation were seen during the walkover.

The current owners are unaware of any issues on site which could have led to contamination and the site has been used as a garden since the property was purchased.



Conclusions

Potential Contaminants

Following a review of the information gathered on the history of the site and the surrounding area and following the site walk-over survey there are no contaminants identified on or off site that are likely to present a significant possibility of significant harm to any identified receptor.

Receptors and Pathways

Potential receptors which may be affected by any unknown contamination on site will include:

- Construction workers who are likely to be affected by any potential contamination as they will initially be working in the ground and are likely to be the ones who unearth any potential contaminants.
- Future users of the site, including residents, staff and visitors to the site. For the purpose of evaluating any effects from any contamination found during any intrusive investigation future users/visitors to the site should be regarded as the 0-6-year-old female child.
- Any building on site e.g., foundations which may be attacked by any contaminants in the ground or services.
- The underlying groundwater which may be contaminated by migrating pollutants present on the site. There is also the potential for further pollution of the groundwater or the watercourse from disturbing any potential contaminants on site.

The pathways by which these receptors may be exposed to any unforeseen potential contamination will include:

Construction workers

- Inhalation, of gases or vapours released during ground work or fine particles.
- Ingestion of the contaminants, principally from cross contamination with contaminated soil and inadequate hand washing before smoking and eating.
- Absorption through the skin following contact with contaminated soil.



Future users and visitors

- Inhalations of gas/vapours or fibres, particularly if these are allowed to enter the new structures through the ground and build up in an enclosed area.
- Ingestion of contaminants, through the ingestion of contaminated soil from the garden area via direct contact, e.g., playing in the garden.
- Absorption of contaminants from dermal contact with contaminated soil.

Buildings

Contaminants on site have the potential to affect the foundations to the new building or the services supplying it.

Watercourses

As discussed above, if they exist on site, there is a potential for any contaminants to migrate through the ground into the groundwater and aquifer or via run-off into the watercourse.

Neighbouring sites

If present on site contaminants have the potential to migrate to neighbouring sites through ground water or air blown transfer.



Conceptual Model

The table represents a basic conceptual model. It highlights the potential sources of pollutants identified from the gathered information, and potential pathways in which any contaminants could reach the identified receptors.

Pathway	Description	Identified sources	Receptor at risk	Likelihood
1	Run off and seepage into groundwater from any spillages	-	Watercourse/ Environment	V.Low
2	Migration of gases into the building.	-	Future users	V.Low
3	Inhalation of gases/ vapours outside	-	Construction workers/future users	V.Low
4	Inhalation of fine particles	-	Construction workers/future users	V.Low
5	Direct ingestion of contaminated soil	-	Construction workers	V.Low
6	In-direct ingestion of contaminated soil	-	Future users	V.Low
7	Absorption via direct dermal contact with contaminated soil	-	Construction workers/future users	V.Low



Recommendations

As a result of the investigation into the historical use of the site and surrounding area the no sources of contaminants likely to present a significant possibility of significant harm to the identified receptors have been identified.

As such the site is considered safe and suitable for the intended use.

It is further recommended that a watching brief is maintained throughout the construction of the new building and any signs of potential contamination found are fully investigated, with appropriate remedial action taken as necessary and the local planning authority informed of the findings.



Figure 1 – Aerial Photograph





Appendix 1 – Groundsure Data



Appendix 2 – Historical Mapping

Appendix 3 – Site Walkover Photographs

Looking south along the western boundary



Looking west and then east along the northern boundary





Looking south along the eastern boundary



Looking north across the plot



The southern boundary looking east





Appendix 4 Report limitations and exclusions

Basis of Risk Assessment

The methods used follow a risk-based approach with the potential risk assessed using the 'Source – pathway – receptor pollution linkage concept.

Limitations and Exceptions of this Report

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This report is prepared and written in the context of the purposes stated above and should not be used in a different context. Furthermore, new information, improved practices and legislation may necessitate an alteration to this report in whole or in part after its submission.

The conclusions and recommendations of this report are based on the development described, for any other development the report may require revision.

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The report should be read in its entirety, including all associated drawings and appendices.

Martin Environmental Solutions cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context.

This report does not comprise a geotechnical assessment of the strata underlying the site.

Any borehole data from the British Geological Survey sources is included on the following basis: 'The British Geological Survey accept no responsibility for omissions or misinterpretations of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation'.

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Any risks identified in a Phase I Desk Study Report are perceived risks. Actual risks can only be assessed following a physical investigation of the site.

The findings of this report are based on finite information obtained from research and consultations. Martin Environmental Solutions cannot guarantee the reliability of all such information and the searches should not be considered exhaustive. The findings of the report may need to be reviewed as any future exploratory investigations progress and in the event that additional archive information becomes available.

Notwithstanding the findings of this study (and any subsequent investigations), if any indication of contaminated soil (visual or olfactory) is encountered at any stage of the development further investigation may be required.



Arboricultural Survey and advice on arboricultural issues are considered to be outside the scope of this report except for their effect on the foundations to the proposed buildings.

Where identification of any species is made, especially invasive plants such as Japanese Knotweed, Himalayan Balsam or Giant Hogweed, this should only be considered as a preliminary assessment and subject to confirmation by a professional Arboriculturist. Martin Environmental Solutions takes no responsibility for failing to identify, or the incorrect identification of, any tree or plant species on site.

Our investigations exclude surveys to identify the presence or indeed absence of asbestos in buildings/infrastructure on site. If asbestos is suspected to be present, we recommend specialists in the identification and control / disposal of asbestos are appointed prior to commencement of any works on site or, if appropriate, purchase of the site. The presence of asbestos on site may have considerable effects on the cost / timescale in developing the site. There is good guidance in relation to Asbestos available on the Health and Safety Executive (HSE) web site.

Whilst a site walkover has been undertaken as part of this report, the survey does not constitute either an asbestos or structural survey and all areas of the site may not have been visited / inspected.