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Geo-Environmental Ltd

Consulting Geo-Environmental Engineers

Phase 1 Geo-Environmental Assessment and Coal Mining Risk Assessment

Land South of Hanson Close,
Middleton, M24 2HD

Report Ref:
19060-PWAG-00-ZZ-RP-G-1000-P01

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Prepared for:
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Executive Summary

PWA Geo-Environmental Ltd (PWAG) was commissioned by Middleton Sheet Metal Co Ltd to undertake a Phase 1 Geo-Environmental Assessment for a proposed industrial development located at Land South of Hanson Close, Middleton. This report highlights key geo-environmental considerations, with respect to ground conditions associated with the property in the context of the proposed development.

Key Details	
Site	The site is a vacant and overgrown block of land with bunds of demolition material along the northern and eastern boundary. Japanese Knotweed was observed at a number of locations on site and requires eradication. There is a brick wall along the southern margin of the site beyond which levels fall down to the site boundary coincident with the River Irk.
Site History	The site comprises agricultural fields from the earliest map of 1848. By 1891 the site is developed with Spring Vale Works (dyeing and finishing) that cuts into the slope of the northern boundary. The western third of the site appears to be a pit that is occupied by filter beds by 1907. By 1938 the mill has gone. By 1990 the site is identified as a depot with three small buildings and a sub-station. The cut slopes are no longer present, and the site has presumably been filled. By 2014 no buildings are shown on site.
Hydrogeology	Both superficial strata and bedrock are classified as Secondary (A) Aquifers.
Flooding	The southern margin of the site is identified as high Risk of Flooding from Rivers and the Sea (RoFRaS) and a Zone 2 floodplain. A flood risk assessment is recommended.
Hydrology	The River Irk forms the southern boundary of the site.
Site Sensitivity	Overall, the site setting is considered moderate sensitivity.

Geo-Environmental Findings	
Ground Conditions	The anticipated downward sequence comprises topsoil/ made ground over an unknown thickness of alluvium and/or glaciofluvial deposits. Bedrock comprises mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. The Lower Bent Mine coal seam is conjectured to subcrop beneath the south west corner of the site and dip in a south westerly direction.
Mining and Quarrying	The risk to the proposed development from shallow unrecorded mine workings in the Lower Bent Mine is assessed as low. Given the depth of superficial deposits and proximity of the adjacent River Irk, it is expected that any historical workings would have needed to overcome potentially significant inflows of groundwater present in granular alluvium deposits. Therefore, it is considered unlikely that this coal seam has been worked to any significant extent. However, as a precautionary measure, if future building footprints extend on or close to the development high risk area then further assessment is considered necessary. This should include removal of made ground to expose underlying natural soils so the ground can be inspected for possible evidence of former coal workings.
Ground Gas	Based on a review of geological conditions and environmental records, a moderate ground gas risk has been identified.
Radon	The property is within an area where basic radon protective measures are not considered necessary.
Potential Contamination	Made ground has been identified associated with historical land use (infilled pit, dyeworks and depot). Although significant contamination is not expected, confirmatory investigation is recommended.
Anticipated Foundations	At this stage, based on available information, it is anticipated that a piled foundation solution with suspended floor will be required. Alternative solutions may be feasible if the made ground is excavated and placed back in accordance with an engineered specification.

Contaminated Land Risk Assessment
Based on the information contained in this report, and with due regard to the proposed industrial development, the site represents a medium risk with respect to contaminated land liability issues. Subject to the findings of further investigation work, we anticipate that the site would represent a low risk with respect to contaminated land liability issues.

Recommendations
We recommend that copies of this report are passed to the appropriate regulator for review and comment. We also recommend that intrusive investigations should be undertaken to assess existing potential contamination conditions, evaluate potential ground gas issues and obtain geotechnical information for substructure design.

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Appendix A – Drawings

Drawing No.	Title
1936/01	Scheme Layout

Appendix B – Environmental Data Report

Appendix C – Historic Maps

Appendix D – Coal Authority Mining Report

1 FOREWORD

This report has been prepared for the sole use and reliance of Middleton Sheet Metal Co Ltd (the Client) and cannot be relied upon by any other parties without the express written authorisation of PWA Geo-Environmental Ltd. Any unauthorised third party relies on this report at their own risk and the authors owe them no duty of care.

The report presents observations and factual data obtained during our site walkover, along with information reviewed during the desk study and intrusive works and provides an assessment of geo-environmental issues with respect to information provided by the Client regarding the site. There may be other conditions on site not encountered during this investigation and which have not been examined. We cannot accept responsibility for any conditions not revealed by this investigation and confirmation of ground conditions between exploratory locations should be undertaken if considered necessary.

The report should be read in its entirety, including all associated drawings and appendices. PWA Geo-Environmental Ltd cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context.

The findings and opinions conveyed in this report (including review of any third party reports) are based on information obtained from the sources listed, which PWA Geo-Environmental Ltd understands are reliable. All reasonable skill, care and diligence has been applied in examining the information obtained. However, PWA Geo-Environmental Ltd accepts no responsibility for inaccuracies in the data supplied or for opinions based on any such inaccurate data.

Where the report refers to the potential presence of invasive weeds such as Japanese Knotweed, or the presence of asbestos containing materials, it should be noted that the observations are for information only and should be verified by a suitably qualified expert.

PWA Geo-Environmental Ltd reserves the right to amend their conclusions and recommendations in the light of further information that may become available.

2 INTRODUCTION

2.1 The Commission and Brief

PWA Geo-Environmental Ltd (PWAG) was commissioned by Middleton Sheet Metal Co Ltd to undertake a Phase 1 Geo-Environmental Assessment for a proposed development located at land south of Hanson Close, Middleton. We understand that the development proposal is likely to comprise a large industrial unit along with car parking and garden areas. A draft layout plan showing the site boundary is included in **Appendix A**. It is assumed that the development will comprise buildings not exceeding three storeys. Any changes to the proposed layout, site levels and/ or end use may require amendments to this report.

The overall objectives were to:

- Carry out a preliminary environmental risk assessment;
- Assess the level of risk associated with potential geo-environmental constraints; and
- Recommend further work where necessary.

2.2 Geo-Environmental Assessment Methodology

Key aspects of this Phase 1 are summarised as follows:

- Review the history of the site and surrounding area from historical Ordnance Survey (OS) maps and any available anecdotal information or historical reports.

- Review current activities and current condition of the site, based on information made available by the client, regulatory data relating to the site and the results of a site walkover survey.
- Assess environmental setting from a review of published geological, hydrogeological and hydrological information, and regulatory data.
- Assess anticipated ground conditions, including potential contaminants.
- Evaluate whether past mining or other extractive industries could have an influence on the surface stability of the site and undertake a coal mining risk assessment.
- Assess anticipated foundation issues associated with the proposed development.
- Preparation of a conceptual site model and preliminary risk assessment.
- Recommendations for further investigation if required.

This review relied on published information and information provided by the client and other parties, including anecdotal information, during the given time period. Regulatory data from the public register and historical OS maps were obtained from a Groundsure report and through consultation with the Environment Agency.

3 SITE PROFILE

3.1 Site Location and Details

Table 1. Site Location and Details		
Address	Land south of Hanson Close, Middleton, M24 2HD.	
National Grid Reference	Easting: 387518 Northing: 406084	
Area	Approximately 1.1 hectares.	
Location	The site is located approximately 500 m north east of Middleton Town centre. Figure 1 (reproduced from the Groundsure Report) is included as a site location plan. 	
Ground Cover	Ground Cover	Estimated percentage
	Hardstand and gravel fill	80%

Table 1. Site Location and Details		
	Overgrown riverbank and landscaped bank.	20%
Known services	The position of services is not known, and a full utilities survey should be undertaken.	
Current Use	Vacant.	
Proposed Use¹	Large industrial unit with associated parking and landscaping.	

3.2 Site Reconnaissance

Table 2. Site Description				
Summary The site is a vacant and overgrown block of land with bunds of demolition material along the northern and eastern boundary. Japanese Knotweed was observed at a number of locations on site and requires eradication. There is a brick wall along the southern margin of the site beyond which levels fall down to the site boundary coincident with the River Irk.				
Date of Inspection	15/05/2019.			
Access	Access to site is situated off Hanson Close.			
Topography	In general, the site is flat and likely levelled out from historical cut and fill activities. Along the southern margin the site slopes steeply down the riverbank to the River Irk. In addition, the western margin of the site also slopes down to Hanson Street.			
Description	The site comprises an overgrown block of vacant land. The most significant features are large overgrown bunds of made ground/ demolition material present along the northern and eastern boundary. The eastern bund was heavily overgrown with Japanese Knotweed. Japanese Knotweed was also observed at other locations across the site including the riverbank. Ground cover is mostly degraded asphalt hardstand penetrated by self-seeded shrubs and saplings. Rectangular areas of concrete likely corresponded to former building footprints. There is tree cover and dense vegetation to the west and along the southern riverbank.			
Site Boundaries	North	East	South	West
	The eastern section comprises a concrete post and panel wall. Much of the remaining boundary is not indicated and appears to follow the boundary between a narrow landscape strip and the pavement. Set back approximately 2.0 m from the boundary is a concrete post and panel wall in the east and a brick wall in the west.	Concrete post and panel wall.	Short wall forming the right bank of the River Irk.	Intersection of landscape strip with the pavement. A brick wall is set back approximately 5.0 m from the boundary.
Adjacent Land Uses	Hanson Park industrial estate.	Middleton Central Business Park.	River Irk with MSM works beyond.	Hanson Street with commercial/ industrial units beyond.
Building date	No buildings present.			
Potential Sources of Contamination	Potential sources of contamination identified during the site inspection include: Made ground including banded stockpiles/embankments.			

1. Different site uses may introduce changes to pollutant linkages that are not considered in this report.

3.3 Site Regulatory and Environmental Data

Information regarding environmental regulatory controls and pollution incidents in proximity to the site is taken from the Groundsure Enviro Insight Report presented in **Appendix B** and summarised in **Table 3**.

Table 3. Summary of Site Regulatory and Environmental Data				
Data Type	0-50m	51-250m	Details	Potential to impact site?
Historical Industrial Sites				
Potentially contaminative uses	26	117	Seven records relate to historical site activities including dye works, unspecified pit and unspecified mill. Nearby activities include unspecified mills, works, ground workings, refuse heaps and pits.	Moderate
Historical petrol and fuel sites	0	0	None listed.	No
Potentially infilled land	39	32	On site records relate to former ponds, reservoir and unspecified pits.	Moderate
Environmental Permits, Incidents and Registers				
IPC Authorisations	0	0	None listed.	No
IPPC Authorisations	0	0	None listed.	No
Red List Discharge Consents	0	0	None listed.	No
Radioactive Substance Authorisations	0	0	None listed.	No
Licensed Discharge Consents	5	7	The five closest relate to sewer storm overflows into the River Irk south of the site.	No
Record of COMAH or NIHHS Sites	0	0	None listed.	No
Recorded Pollution Incidents (List 2)	0	1	The closest incident was 200 m east and related to construction and demolition materials and wastes. The incident was dated 2001 and was category 3 (minor) land impact.	No
Recorded Pollution Incidents (List 1)	0	0	None listed.	No
Sites Determined as Contaminated Land	0	0	None listed.	No
Current Land Use				
Industrial Sites Data	14	57	Two records on site relate to an electricity substation and a container and storage depot.	Low
Petrol and Fuel Sites	0	1	The closest record is a petrol station located 120 m south.	No
IPC = Integrated Pollution Control; IPPC = Integrated Pollution Prevention & Control; LAPPC = Local Authority Pollution Prevention & Controls; APC = Air Pollution Control; COMAH = Control of Major Accident hazards; NIHHS – Notification of Installations Handling Hazardous Materials.				

3.4 Site History

A study of historical Ordnance Survey (OS) maps has been undertaken to identify potentially significant geo-environmental constraints on or near the site. Salient points relating to the history of the site and surrounding area are detailed in **Table 4**. A full copy of the historical maps is included in **Appendix C**.

Table 4. Site History Summary

Summary		
The site comprises agricultural fields from the earliest map of 1848. By 1891 the site is developed with Spring Vale Works (dyeing and finishing) that cuts into the slope of the northern boundary. The western third of the site appears to be a pit that is occupied by filter beds by 1907. By 1938 the mill has gone. By 1990 the site is identified as a depot with three small buildings and a sub-station. The cut slopes are no longer present, and the site has presumably been filled. By 2014 no buildings are shown on site.		
Date	Site	Surrounding Land
1848	Undeveloped field on the north bank of the River Irk.	Springvale Print Works is present on the opposite bank of the River Irk immediately south of the site. Surrounding land is mostly undeveloped.
1891-1893	There has been substantial development with Spring Vale Works (dyeing and finishing) occupying the eastern half of the site and covering the River Irk. Upstream of the site the River Irk is also diverted through a mill race that flows through the site. The northern boundary of the site is cut into the slope and the western third of the site is occupied by a pit. A slope is indicated alongside the River Irk suggesting land has been raised by cut and fill activities.	There has been substantial growth of Middleton. Spring Vale Works has changed from a print works to dyeing and finishing and expanded significantly. There are a series of reservoirs east of the site including a large reservoir immediately north east of the site. Townley Mill (cotton) is present west of the site. An old shaft is present approximately 300 m north east.
1907-1909	Some minor changes to the building footprint including the appearance of two chimneys. The most significant change is the appearance of filter beds in the pit at the western end of the site.	The most significant change is the appearance of the large Cromer Mill (cotton) 100 m to the north east. The old shaft is no longer present.
1932	No significant change.	No significant change.
1938	The filter beds remain in the west, otherwise the site has been cleared of most structures.	The most significant change is that Spring Vale Works (dyeing and finishing) is no longer present.
1954-1956	One of the filter beds is no longer present. A small rectangular building in the middle of the site is identified as a ruin.	A series of small buildings to the south of the site are identified as Spring Vale Sheet Metal Works. The River Irk channel is no longer covered.
1965-1970	The filter beds, small ruin and mill race are no longer present.	Land immediately north of the site is identified as a sports ground. Former reservoirs to the east of the site are identified as a refuse tip.
1975	No significant change.	No significant change.
1980-1982	No significant change.	Cromer Mill is identified as Cromer Industrial Estate and the building footprint has changed.
1990-1992	The site is identified as a depot with three small buildings and a sub-station. The cut slopes are no longer present, and the site has presumably been filled.	The reservoir to the north east and the refuse tip to the east are no longer present. The sports ground to the north is developed with a series of small units, a depot and a works.
2002	No significant change.	No significant change.
2014	No significant change.	No significant change.

3.5 Planning

Rochdale Borough Council planning portal identified four applications relating to the site including proposed residential and commercial developments. No further information was available.

4 ENVIRONMENTAL SETTING

4.1 Geology

Online British Geological Survey (BGS) published geological data and the Geo Insight report presented in **Appendix B** shows the following geological sequence.

Table 5. Mapped Geology	
Summary The anticipated downward sequence comprises topsoil/ made ground over an unknown thickness of alluvium and/or glaciofluvial deposits. Bedrock comprises mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. The Lower Bent Mine coal seam is conjectured to subcrop beneath the south west corner of the site and dip in a south westerly direction.	
Item	Description
Topsoil	Topsoil not shown on mapping but observed to be present in vegetated areas.
Made Ground	Shown on mapping to underlay entire site apart from a narrow strip in the west.
Superficial	The southern half of the site is indicated to be underlain by alluvium comprising clay, silt, sand and gravel with possible peat layers. These deposits are identified as a moderate hazard rating for compressible deposits. The northern half of the site is underlain by glaciofluvial sheet deposits comprising sand and gravel.
Bedrock	The site is underlain by mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation. The Lower Bent Mine coal seam is conjectured to subcrop in an approximately west to east direction beneath the southern corner of the site. A second coal seam (the Higher Bent Mine) is conjectured to subcrop in an approximately west to east direction approximately 20 m south of the site boundary. These strata dip away from the site in a southerly direction. Based on information within the geological memoir, the thickness of the Lower Bent Mine in the vicinity of Middleton is 0.8 m and the Higher Bent Mine is 0.66 m. There is a north south trending fault, approximately 70 m east of the site.
BGS Borehole Records	There are six BGS borehole records within approximately 50 m of the site. These identified between 1.6 m and >6.0 m of made ground, over silty sand with some gravel. A 1.0 m thick layer of peat was encountered in one borehole between 4.2 and 5.2 m below ground level (bgl). Groundwater was struck in all six boreholes between 1.35 m and 5.5 m bgl: the variation in depth is expected to be due to relative elevation of the borehole with the River Irk. Bedrock was not encountered in these boreholes at the maximum depth of 7.0 m. A borehole 107 m to the southwest was the closest to hit bedrock. Sandstone was encountered at 21.03 m bgl and 1.99 m of coal was encountered at 24.07 m bgl (presumed to be the Higher Bent Mine). Veins of coal were encountered at 140.2 m bgl otherwise no other coal was recorded.
Quarrying	The risk to the proposed development from former quarries is assessed as low and no further assessment is considered necessary.

4.2 Coal Mining Risk Assessment

The Coal Authority Interactive Map viewer, a Coal Authority mining report and historical OS maps were reviewed to determine potential risks associated with former coal mining activities. This Coal Mining Risk Assessment has been prepared in general accordance with the Coal Authority's guidance presented in their Risk Based Approach to Development Management, Guidance for Developers.

4.2.1 Summary

The risk to the proposed development from shallow unrecorded mine workings in the Lower Bent Mine is assessed as low. Given the depth of superficial deposits and proximity of the adjacent River Irk, it is expected that any historical workings would have needed to overcome potentially significant inflows of groundwater present in granular alluvium deposits. Therefore, it is considered unlikely that this coal seam has been worked to any significant extent. However, as a precautionary measure, if future building footprints extend on or close to the development high risk area then further assessment is considered necessary. This should include removal of made ground to expose underlying natural soils so the ground can be inspected for possible evidence of former coal workings.

4.2.2 Site History

There has been no coal mining recorded on historical Ordnance Survey maps on or within 500 m of the site. The closest historical mining activity was Tonge Colliery located approximately 500 m east of the site and present on the 1848 map but no longer identified by the 1891 map. Although an old shaft is shown approximately 300 m north east of the site on the 1893 historical OS map, this is not indicated on any other maps or associated with any nearby structures.

The 1893 map shows the site has been developed with Spring Vale Works (dyeing and finishing) and that the western third was occupied by a pit. Given that a BGS borehole located 107 m to the southwest of the site hit sandstone bedrock at 21.03 m bgl it is considered unlikely that this pit targeted the Lower Bent Mine.

4.2.3 Coal Authority

The Coal Authority Interactive Map viewer identifies that:

- The site is within a coal mining reporting area;
- A mine entry is identified approximately 300 m north east of the site. This appears to correspond to the old shaft is identified on the 1893 historical OS maps; and
- The southern extremity of the site is identified as a Development High Risk Area associated with the conjectured subcrop of the Lower Bent Mine and is an area of probable shallow coal mine workings.

Table 6 summarises potential risks identified by the Coal Authority mining report presented in **Appendix D**.

Table 6. Coal Mining Risk Assessment			
Issue	Yes	No	Risk Assessment
Past underground coal mining		No	The property is not within a surface area that could be affected by any past recorded underground coal mining. However, the property is in an area where the Coal Authority believes there is coal at or close to the surface that may have been worked at some time in the past.
Present underground coal mining		No	The property is not within a surface area that could be affected by present underground mining.
Future underground mining		No	The property is not in an area where the Coal Authority has received an application for underground mining.
Mine entries		No	There are no recorded coal mining entries within or within 20 m of the boundary of the property.
Coal mining geology		No	The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

Table 6. Coal Mining Risk Assessment			
Opencast coal mining		No	The property is not within the boundary of an opencast site from which coal has been removed, is being removed, or is licensed to be removed.
Coal mining subsidence		No	The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 m of the enquiry boundary since 31 October 1994.
Mine gas		No	The Coal Authority has no record of mine gas emission requiring action.
Hazards related to coal mining		No	The property has not been subject to remedial works, by or on behalf of the Coal Authority.
Withdrawal of support		No	The property is not in an area where a notice to withdraw support has been given.

4.2.4 Mining Geology

The 1:10,560 scale geological map (county map Lancashire 96 NE) indicates that the site is underlain by sandstone, mudstone and siltstone Coal Measures strata. The southern corner of the site is crossed in an east west direction by the conjectured sub crop of the Lower Bent Mine that dips in a southerly direction. The thickness of this coal seam is not indicated on the geological map but according to the geological memoir is up to 0.8 m thick in the Middleton area. There are no other named coal seams indicated to be present beneath the site within potential influencing distance of the surface.

The CA interactive map identifies a development high risk area and associated probable shallow coal mine workings in the south of the site. Based on a review of the geological map, these appear to be associated with the subcrop of the Lower Bent Mine.

For typical Coal Measures strata, it is generally accepted that there is a risk of surface instability where the thickness of competent bedrock above the worked coal seam is less than ten times the seam thickness. As the coal seam is conjectured to subcrop in the south of the site, insufficient cover is expected to be present. However, given the proximity of the adjacent River Irk, it is expected that any workings would need to overcome potentially significant inflows of groundwater present in granular alluvium deposits (shallow groundwater was recorded in nearby BGS borehole records). Furthermore, a nearby borehole indicates that superficial strata are deep (21.03 m), therefore, it is considered unlikely that this coal seam has been worked at this site.

The possibility of encountering unrecorded mine entries, bell pits and crop workings (not identified to date) is considered unlikely but cannot be fully discounted. Therefore, during site strip and preparatory earthworks activities as part of the redevelopment particular attention should be paid to circular features that could indicate the possible presence of bell pits/ mine entries/ crop workings, etc.

4.3 Hydrogeology

The following hydrogeological assessment is based upon data from the Groundsure report.

Table 7. Hydrogeology		
Summary		
Both superficial strata and bedrock are classified as Secondary (A) Aquifers.		
	Superficial Geology	Bedrock Geology
Aquifer status	Secondary (A) Aquifer.	Secondary (A) Aquifer.
Abstractions within 500m	None.	None.

Table 7. Hydrogeology		
Source Protection Zone (within 500 m)	None.	None.
Groundwater flow (based upon topography and location of surface water features)	Assumed to be to the south based upon topography and location of River Irk.	Not known.
Permeability	Permeable layers capable of supporting local water supplies.	Permeable layers capable of supporting local water supplies.
Rainwater infiltration - potential for soakaways	Expected to be potentially suitable where granular superficial deposits are present.	Unlikely to be suitable due to depth to bedrock.
Groundwater sensitivity	High – unconfined groundwater likely to be present and in direct connection with River Irk.	Medium – based on presence of overlying granular superficial deposits.

4.4 Hydrology

The following hydrological assessment is based upon data from the Groundsure report and the EA Catchment Data Explorer.

Table 8. Hydrology	
Summary The River Irk forms the southern boundary of the site.	
Item (within 250 m radius)	Comments
Nearest surface waterbody	The River Irk forms the southern boundary of the site and is classified as a main river.
Pollution Incidents	None to water recorded within 250 m.
Abstractions	None within 250 m.
Discharge consents	Twelve within 250 m relating to sewer storm overflow and surface water discharges into the River Irk and Whit Brook.
Latest ecological quality	Moderate.
Latest chemical quality	Good.
Surface water sensitivity	High given proximity to the site and likelihood of direct connection with underlying groundwater.

4.5 Flood Risk

The site is identified as high Risk of Flooding from Rivers and the Sea (RoFRaS). This indicates that there is a less than 1 in 30 chance of flooding in any given year. A Zone 2 floodplain is identified along the southern margin of the site.

The site is identified within 50m of a groundwater flooding susceptible area and a potential to flood at surface is also indicated.

Although no further consideration of flood risk is undertaken in this report, we recommend that a flood risk assessment is undertaken.

4.6 Radon

The property is not within a Radon Affected Area, as less than 1% of properties are above the action level. Radon protection measures are not required for developments undertaken in these areas. However, the requirement for radon protection measures for any proposed development should be confirmed with local building control.

4.7 Landfill and Ground Gas Risk

Information regarding landfills and other waste sites is taken from the Groundsure Report and summarised in Table 9.

Table 9. Summary of Landfill and Other Waste Sites				
Summary Based on a review of geological conditions and environmental records, a moderate ground gas risk has been identified.				
Data Type	0-250 m	251-500 m	Details	Potential for Impact on-site?
EA/NRW Registered Landfill Sites	0	0	None listed.	No
EA/NRW Historic Landfill Sites	0	1	The closest record is located 479 m south at Former Times Mill, Middleton. There was no information regarding last recorded input or waste type.	No
BGS/DoE Landfill Site	0	0	None listed.	No
Records of Historical Landfills	1	1	The closest record is 27 m east and relates to a refuse tip shown on 1967 mapping.	No
Waste Treatment, Transfer and Disposal Sites	3	0	The closest record is 70 m south west and was identified as a waste transfer site.	No
EA/NRW Licensed Waste Sites	12	3	The closest three records were all identified 35 m north west at land at Hanson Street for hydrochloric acid waste transfer station and treatment	Low
Geological Conditions	Natural alluvium could contain organic material and represent a potential source of ground gas. In addition, historical mapping identifies ponds, reservoirs and unspecified pits on site that have been infilled. Therefore, based on a review of geological conditions, a moderate ground gas risk is considered to be associated with the site.			
EA = Environment Agency; NRW = Natural Resources Wales; BGS = British Geological Survey; DoE = Department of the Environment.				

4.8 Unexploded Ordnance

A Zetica Unexploded Bomb Risk Map indicates the site to be in an area of low risk. In such cases Zetica advises that 'there is no greater probability of encountering UXO than anywhere else in the UK' and 'works can proceed with no special precautions'.

4.9 Environmentally Sensitive Sites

The site is identified within a Nitrate Vulnerable Zone. No other records of designated environmentally sensitive sites have been identified within 500m of the site.

4.10 Summary of Environmental Sensitivity

The environmental sensitivity of the site has been established based on the following reasons.

Table 10. Sensitivity of Environmental Receptors and Mitigating Aspects			
Summary Overall, the site setting is considered moderate sensitivity.			
Receptor Type	Receptor(s)	Sensitivity	Reasoning
Groundwater	Secondary (A) Aquifer	High	Unconfined groundwater likely to be present and in direct connection with River Irk.
Surface Water	River Irk	High	Potential for direct connectivity between the site and surface water.
Proposed land use	Future site users	Low	The site is proposed to be redeveloped with a large industrial building and associated hardstanding.
These factors are mitigated by: • Neighbouring commercial and industrial land use; and • The absence of groundwater and surface water abstractions.			

5 PREVIOUS REPORTS

A previous geoenvironmental report was made available for review by the client. This was:

- Letter report summarising the findings of a preliminary investigation of the site. Ford Consulting Group Ltd. 22nd August 2008. (It was considered that the report was incomplete as exploratory hole records and laboratory reports were not included).

Ford Consulting Group (FCG) was commissioned by Middleton Sheet Metal Group to undertake a preliminary site investigation. The objective was to evaluate whether the site may have significant residual contamination due to previous land use.

A desk study identified that the site has a long history of industrial development including pits, filter beds and use as a builder's merchants.

A site investigation identified between 3.0 m and 4.0 m of heterogeneous made ground or re-worked material above natural ground. Bedrock was not encountered. They identified the possibility of deep underground structures associated with former filter beds, mill race and other historical infrastructure. However, it was not possible to review ground conditions as the exploratory hole logs were not included with the report.

Investigations of the large fill embankment along the eastern boundary encountered stone, brick, paving slabs in a loose silty sandy matrix with wood and plastic fragments. Japanese Knotweed was observed to be well established along the southern third of this embankment.

Samples were scheduled for a suite of analysis including heavy metals, inorganic parameters, polycyclic aromatic hydrocarbons and total petroleum hydrocarbons. No evidence of asbestos containing materials was observed so no samples were analysed.

Five samples of made ground across the site and within the embankment that were analysed did not indicate the presence of significant contamination. Furthermore, in the context of industrial use, the concentrations of chemicals analysed were not considered to be of significance.

6 RISK ASSESSMENT

6.1 Preliminary Conceptual Site Model

Based on the desk study information, a preliminary conceptual site model (CSM) has been developed for the site. This section summarises the understanding of surface and sub-surface features, potential contaminant sources, receptors that could be affected (such as human health and controlled waters) and pathways linking the two.

Table 11. Potential Sources of Contamination	
On-site sources	- Made ground associated with former industrial land use. Potential contaminants could include a range of metals, organics (hydrocarbons), inorganic substances, plus asbestos. Limited chemical testing completed in 2008 did not identify significant contamination. - Potential for made ground and natural organic material in alluvium to generate ground gases (methane and carbon dioxide).
Off-site sources	Made ground associated with surrounding industrial land use. Potential contaminants could include a range of metals, organics (hydrocarbons), inorganic substances, plus asbestos.

Table 12. Potential Transport Pathways and Pollutant Linkages	
Pathways	- Direct exposure to potentially contaminated soils (direct contact, ingestion and dust inhalation). - Potential leaching of contaminants from made ground and the risk of infiltration into underlying groundwater. - Inhalation/ accumulation of ground gases. - Lateral migration in groundwater into surface water (River Irk). - Direct contact with conditions potentially aggressive to building materials and underground services (e.g. sulphates and hydrocarbons).

Table 13. Potential Receptors	
Controlled waters	- River Irk - Underlying Secondary A Aquifer.
Human Health	- Current site users. - Future site users. - Construction workers during redevelopment works. - Neighbouring land users.
Construction Materials	- Buried concrete in ground (foundations and building materials). - Underground services.

6.2 Qualitative Risk Assessment

The preliminary conceptual site model indicates that pollutant linkages are possible to a variety of receptors. Potential sources of contamination may pose potential risks to human health (future site occupants and construction workers) and construction materials.

A qualitative risk assessment has been undertaken for these potential pollutant linkages and is based on consideration of both:

- The likelihood of an event (probability – considers both the presence of the hazard and receptor and the integrity of the pathway); and

- The severity of the potential consequence (considers both the potential severity of the hazard and the sensitivity of the receptor).

Potential risks related to these plausible linkages are based on redevelopment of the site with a proposed residential end use assuming no mitigation is implemented. These are summarised in **Table 14**.

Table 14. Preliminary Environmental Risk Assessment						
Source	Pollutant / Hazard	Receptors	Pathways to Receptor	Associated Hazard [Potential severity]	Likelihood of Occurrence/ Potential Mitigation	Potential Risk
On-site: Made ground.	Heavy metals, hydrocarbons, inorganic substances and asbestos.	Current site users. Neighbouring land users.	Direct contact, ingestion and dust inhalation.	Effect on human health [Low - moderate]	Any made ground, if present, will either be removed from site or isolated beneath a cover system to minimise risks to future site users.	Low
		Future site users (workers). Construction workers during redevelopment works.			Any risks can be mitigated by appropriate site management during construction and use of suitable PPE during construction stage.	Low
		Controlled waters – ground water.	Leaching and infiltration into groundwater	Pollution of controlled waters [medium]	The underlying Secondary A Aquifer is considered vulnerable to site derived contamination.	Moderate
		Controlled waters – surface water.	Lateral migration in groundwater		The River Irk is considered vulnerable to site derived contamination.	Moderate
		New in ground services and construction materials.	Direct contact	Degradation [Low]	If made ground is present, any potential risks can be mitigated by use of appropriate construction materials, chemical resistant supply pipes and use of oversized service trenches and clean fill.	Low
On site: Made ground and natural organic material in alluvium.	Ground gases (methane and carbon dioxide).	Future site occupiers.	Inhalation of gases/ accumulation in confined spaces	Asphyxiation [severe]/ explosion [severe]	Accumulation of gases in confined spaces and migration into future buildings is plausible.	Moderate
		Construction workers.	Accumulation in confined spaces			Moderate
Off-site: Made ground.	Heavy metals, hydrocarbons, inorganic substances and asbestos.	Controlled waters – ground water.	Leaching and infiltration into groundwater	Pollution of controlled waters [medium]	The underlying Secondary A Aquifer is considered vulnerable to site derived contamination.	Moderate
		Controlled waters – surface water.	Lateral migration in groundwater		The River Irk is considered vulnerable to site derived contamination.	Moderate

7 CONCLUSIONS AND RECOMMENDATIONS

This Phase 1 Geo-Environmental Assessment has been performed for Land South of Hanson Close, Middleton. It is understood that consideration is being given to development of the site for industrial end use, including car parking and landscaped areas. For the purpose of this report we have assumed that proposed levels will not be significantly different to those existing. If any of these assumptions are incorrect then the conclusions in this report may require reassessment.

Geotechnical Conclusions	The main issues considered in this report are based upon a review of environmental data, historical maps and geological data. This report provides a brief assessment of geo-environmental issues and implications associated with the proposed industrial development: • Foundation solutions will be dependent on a number of parameters including finished levels, loadings, bearing capacity of the natural strata, depth to bedrock, groundwater levels, proximity of trees, etc. At this stage, based on available information, it is anticipated that made ground deposits are likely to be too deep for the cost effective use of spread foundations (i.e trench fill or pad) and a piled solution may be required. Before firm foundation, floor slab and pavement design recommendations can be provided an intrusive investigation should be undertaken. • Underlying ground conditions are anticipated to comprise a variable depth of made ground over superficial alluvium and glaciofluvial deposits. Bedrock comprises mudstone, siltstone and sandstone. • Made ground has potential for long term creep, consolidation and inundation settlement, which could also result in significant differential settlement. To mitigate this, ground improvement should be considered before commencement of construction works. • Evidence of movement of walls along the southern boundary was observed in the form of cracks. We expect this would be rectified as part of development works. However, this should be confirmed by a suitably qualified engineer. • The risk to the proposed development from shallow mine workings and former quarries is assessed as low. As a precautionary measure, if future building footprints extend on or close to the development high risk area further assessment is considered necessary. It is recommended that made ground is removed to expose underlying natural soils and the ground inspected for possible evidence of former coal workings. • The site is within an area where radon protective measures are not considered necessary. • Based upon the presence of alluvium and glaciofluvial deposits, it is considered possible that soakaways would be suitable for the disposal of surface water. This opinion may be revised following further intrusive investigations.
Environmental Conclusions	The preliminary environmental risk assessment undertaken for the site, based on existing desk study data, has identified: • The gas generation potential at the site is considered moderate and further work is recommended. • Historical use of the site as a dye works with a pit, and subsequently a depot, is likely to have resulted in the presence of made ground and localised areas of contamination. • A previous ground investigation completed in 2008 did not identify the presence of significant contamination in the context of industrial land use. Additional intrusive investigation of the site is recommended to recover information for geo-environmental and geotechnical purposes. The findings from these works will also provide additional certainty regarding the potential for ground contamination.
Contaminated Land Risk Assessment	Based on the information contained in this report, and with due regard to the proposed industrial development, the site represents a medium risk with respect to contaminated land liability issues. Subject to the findings of further investigation work, we anticipate that the site would represent a low risk with respect to contaminated land liability issues.
Preliminary Remediation Recommendations	At this preliminary stage, and based upon research to date, we have assumed that remediation is likely to require containment of made ground beneath the hard cover of the development or a clean cover system in landscape areas.
Unexpected Findings Protocol	If unexpected potentially contaminated materials (such as those with an unusual colour, odour or containing drums, chemicals or asbestos, etc) are encountered at any time during redevelopment then work should stop and a suitably qualified environmental consultant should be contacted to advise on the appropriate course of action.

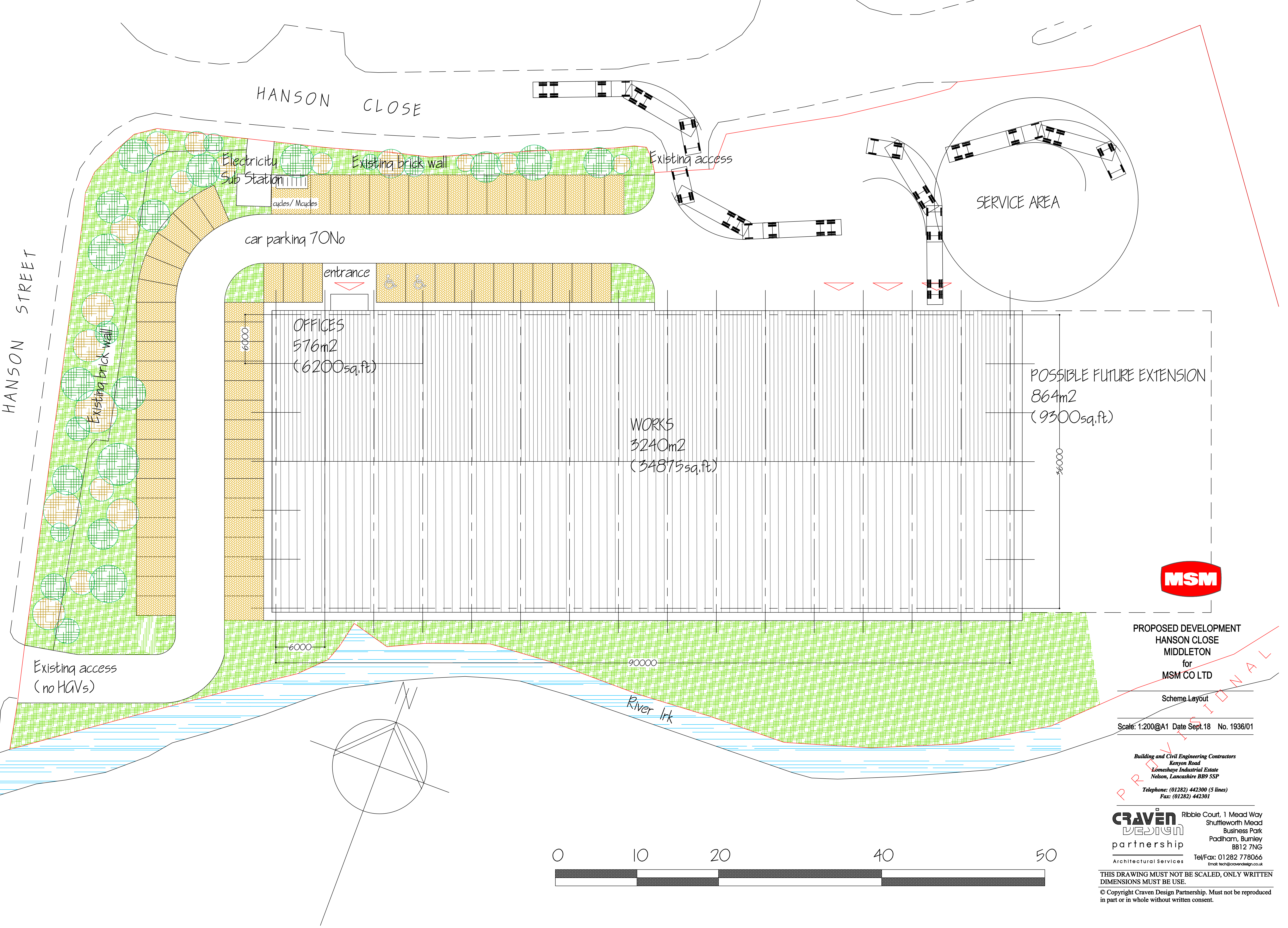
Other Considerations	Where it is necessary to remove material from site, this should be assessed for waste disposal, treatment or recycling requirements. Alternatively, subject to further evaluation, natural soils could be suitable for reuse on other developments where an approved materials management plan or exemption is in place.
Recommendations for further work	Intrusive investigations should be undertaken to assess existing conditions and provide geotechnical information for substructure design. This should include: • Trial pitting to confirm the depth and composition of made ground and investigate the presence of possible obstructions associated with former mill buildings; • Boreholes to confirm the depth to suitable founding strata and allow installation of ground gas monitoring wells; • Undertake a programme of gas monitoring; • Geochemical testing of representative samples to confirm suitability of reusing material on site; • Geotechnical testing of representative samples, to evaluate the characteristics of the natural deposits; and • Documentation of findings in a report.

8 REGULATORY APPROVALS

The conclusions and recommendations presented in this report are considered reasonable based on the information that was available. However, these are not guaranteed to gain approval from regulatory authorities. Therefore, we recommend that copies of this report are passed to the appropriate regulator for review and comment before undertaking any additional work.

Appendix A

Drawings



PROPOSED DEVELOPMENT
HANSON CLOSE
MIDDLETON
for
MSM CO LTD

Scheme Layout

Scale: 1:200@A1 Date Sept.18 No. 1936/01

Building and Civil Engineering Contractors
Kenyon Road
Lomeshaye Industrial Estate
Nelson, Lancashire BB9 5SP
Telephone: (01282) 442300 (5 lines)
Fax: (01282) 442301

CRAVEN Ribble Court, 1 Mead Way
Shuttleworth Mead
Business Park
Padiham, Burnley
BB12 7NG
partnership
Architectural Services Tel/Fax: 01282 778066
Email: tech@cravendesign.co.uk

THIS DRAWING MUST NOT BE SCALED, ONLY WRITTEN DIMENSIONS MUST BE USE.
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Appendix B

Environmental Data Report



PWA Geo-Environmental Ltd

SUMMIT HOUSE, THE CROSSINGS BUSINESS
PARK, RIPARIAN WAY, CROSS HILLS,
KEIGHLEY, BD20 7BW

Groundsure
Reference:

GS-6017600

Your Reference:

19060-107-19

Report Date

10 May 2019

Report Delivery
Method:

Email - pdf

Enviro Insight

Address: UNIT 1, HANSON CLOSE INDUSTRIAL ESTATE, HANSON CLOSE, MIDDLETON, M24 2HD

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: UNIT 1, HANSON CLOSE INDUSTRIAL ESTATE, HANSON CLOSE, MIDDLETON, M24 2HD
Date: 10 May 2019
Reference: GS-6017600
Client: PWA Geo-Environmental Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 11-Jun-2015
Grid Reference: 387518,406084
Site Size: 1.1039ha

Report Reference: GS-6017600
Client Reference: 19060-107-19

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	7	19	117	165
1.2 Additional Information – Historical Tank Database	1	7	28	61
1.3 Additional Information – Historical Energy Features Database	1	0	37	32
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	9	3
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	16	23	32	104
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	1	2	3
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	5	7	9
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	1
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	1	13
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	1	7	2
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	3
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	1	0	1	2	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	3	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	4	8	3	1	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	2	12	57	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	None identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site	Identified					
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site	Identified					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	4	0
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	6	1
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	Yes	No	Yes	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	4	8	36	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	High					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Low					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	1
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	1
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	1	2
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	2

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Moderate
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Very Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Moderate
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low
9.1.6 Maximum Running Sand hazard rating identified on the study site	Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licences, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

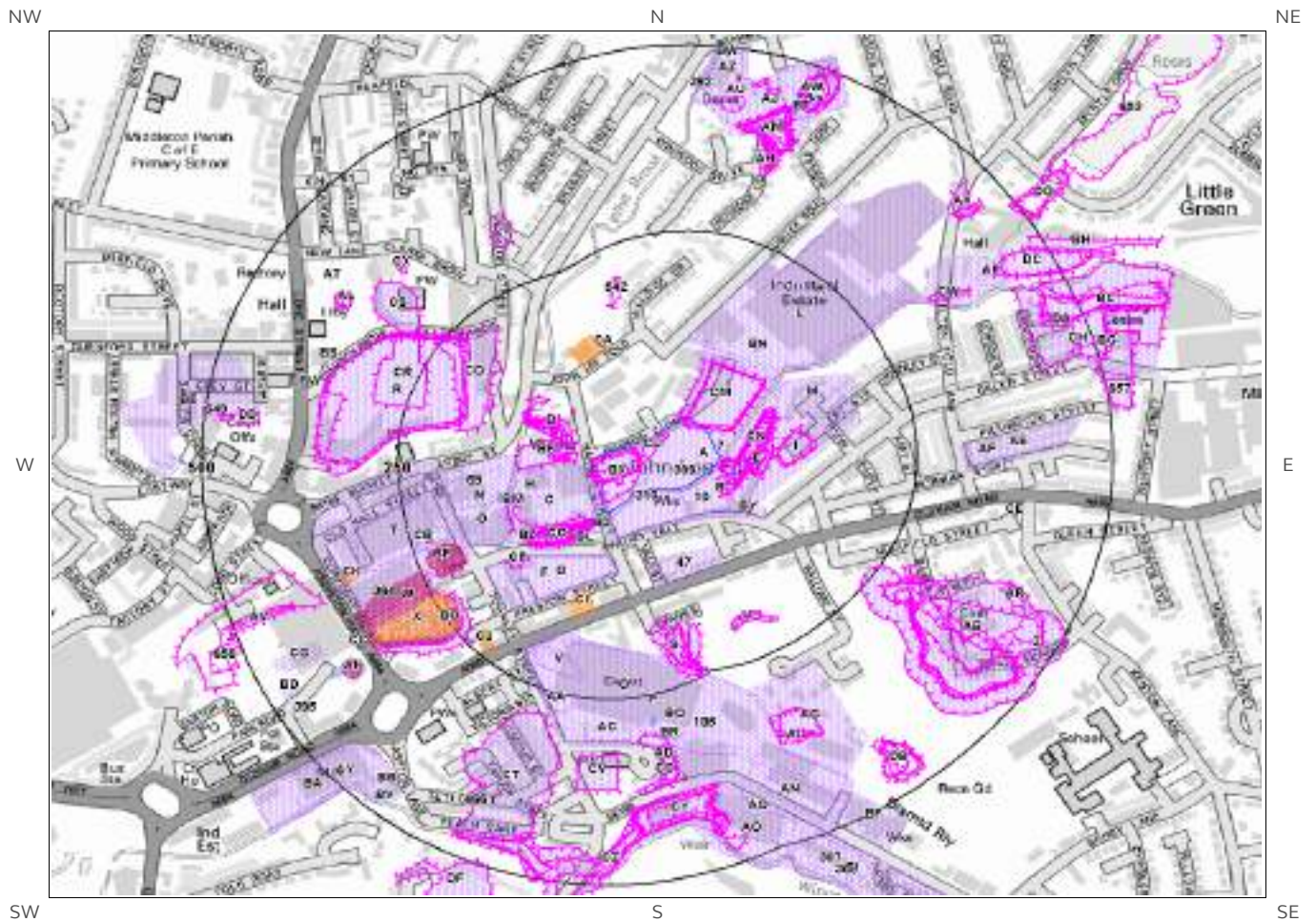
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

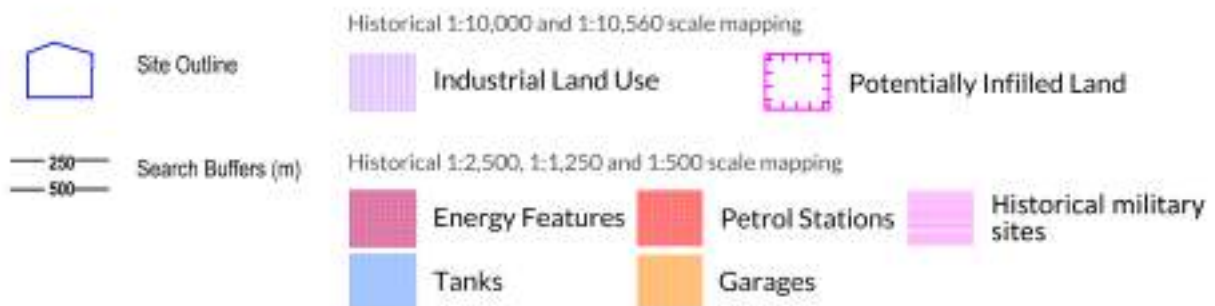
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 308

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Dye Works	1907
2A	0	On Site	Dye Works	1932
3A	0	On Site	Dye Works	1915
4BX	0	On Site	Unspecified Pit	1891
5CL	0	On Site	Unspecified Pit	1938
6A	0	On Site	Dye Works	1923
7	0	On Site	Unspecified Mill	1891
8B	1	SE	Unspecified Works	1975
9B	1	SE	Unspecified Works	1982
10	1	SE	Print Works	1851
11B	4	SE	Unspecified Works	1965
12C	5	W	Unspecified Mill	1891
13C	12	W	Unspecified Mill	1907
14C	12	W	Unspecified Mill	1932
15C	12	W	Unspecified Mill	1915
16C	14	W	Unspecified Mill	1938
17C	15	W	Unspecified Mill	1923
18BK	22	W	Unspecified Heap	1932
19J	28	SW	Refuse Heap	1932
20D	28	W	Unspecified Ground Workings	1907
21D	30	W	Unspecified Ground Workings	1915
22D	34	W	Unspecified Ground Workings	1923
23E	36	E	Unspecified Heap	1965
24E	36	E	Unspecified Heap	1955
25E	36	E	Refuse Heap	1975
26E	36	E	Refuse Heap	1982
27F	55	S	Unspecified Works	1975
28F	55	S	Unspecified Works	1982
29F	56	S	Unspecified Works	1965
30G	58	S	Unspecified Commercial/Industrial	1891
31G	58	S	Unspecified Mill	1938
32D	60	NW	Unspecified Pit	1938

33D	60	NW	Unspecified Ground Workings	1932
34G	60	S	Unspecified Mill	1915
35G	60	S	Unspecified Mill	1932
36G	60	S	Unspecified Mill	1923
37G	66	SW	Unspecified Mill	1907
38H	68	W	Unspecified Mill	1975
39H	68	W	Unspecified Mill	1982
40H	69	W	Unspecified Mills	1965
41I	69	E	Refuse Heap	1923
42I	73	E	Refuse Heap	1915
43I	73	E	Refuse Heap	1932
44J	80	W	Unspecified Tank	1975
45J	80	W	Unspecified Tank	1965
46J	80	W	Unspecified Tank	1982
47	82	SE	Unspecified Mill	1891
48L	82	N	Unspecified Mill	1938
49J	86	W	Unspecified Tank	1907
50J	86	W	Unspecified Tank	1932
51J	86	W	Unspecified Tank	1915
52J	87	W	Unspecified Tank	1938
53J	89	W	Unspecified Tank	1891
54M	89	NE	Unspecified Mill	1938
55K	91	N	Cotton Spinning Mills	1965
56K	91	N	Cotton Spinning Mills	1955
57L	91	N	Unspecified Mill	1932
58L	91	N	Unspecified Mill	1915
59L	91	N	Unspecified Mill	1907
60L	91	N	Unspecified Mill	1923
61M	92	NE	Unspecified Mill	1915
62M	92	NE	Unspecified Mill	1907
63M	92	NE	Unspecified Mill	1932
64M	92	NE	Unspecified Mill	1923
65K	99	N	Unspecified Mill	1975
66K	99	N	Industrial Estate	1982
67N	101	W	Unspecified Mills	1915
68N	101	W	Unspecified Mills	1932
69	106	W	Unspecified Mill	1938
70N	115	W	Unspecified Mill	1907
71CP	116	SW	Gravel Pit	1851
72O	119	W	Unspecified Mills	1938
73N	119	W	Unspecified Mill	1923
74O	119	W	Unspecified Mills	1907
75O	125	W	Unspecified Mills	1923
76CQ	147	NW	Sand Pit	1851
77O	157	W	Cotton Mill	1851

78P	158	S	Railway Sidings	1955
79P	158	S	Railway Sidings	1965
80S	161	S	Sand Pit	1907
81Q	170	S	Unspecified Depot	1975
82Q	172	S	Unspecified Depot	1982
83R	172	W	Cemetery	1915
84R	172	W	Cemetery	1932
85R	172	W	Cemetery	1907
86R	172	W	Cemetery	1923
87P	174	S	Railway Sidings	1891
88R	174	W	Cemetery	1891
89R	174	W	Cemetery	1938
90S	175	SE	Refuse Heap	1923
91S	175	SE	Refuse Heap	1915
92P	176	S	Railway Sidings	1907
93P	176	S	Railway Sidings	1915
94P	176	S	Railway Sidings	1932
95P	176	S	Railway Sidings	1923
96BQ	176	S	Railway Sidings	1938
97T	176	W	Unspecified Mills	1965
98T	176	W	Unspecified Mills	1975
99R	179	W	Burial Ground	1965
100R	179	W	Burial Ground	1975
101R	179	W	Burial Ground	1982
102S	184	SE	Unspecified Pit	1965
103S	184	SE	Unspecified Pit	1982
104U	186	SE	Unspecified Ground Workings	1975
105U	186	SE	Unspecified Ground Workings	1965
106U	186	SE	Unspecified Ground Workings	1982
107U	189	SE	Unspecified Ground Workings	1955
108V	193	SW	Railway Station	1965
109V	195	S	Railway Station	1955
110V	197	SW	Railway Station	1891
111W	198	SW	Unspecified Commercial/Industrial	1891
112W	198	SW	Unspecified Works	1938
113V	198	SW	Railway Station	1907
114V	198	SW	Railway Station	1932
115V	198	SW	Railway Station	1915
116V	198	SW	Railway Station	1923
117V	198	S	Railway Station	1938
118T	202	W	Unspecified Mill	1938
119T	203	W	Unspecified Mills	1923

120S	211	SE	Unspecified Ground Workings	1932
121T	215	W	Unspecified Mills	1907
122T	216	W	Unspecified Mills	1915
123T	218	W	Unspecified Mills	1932
124Y	220	SW	Unspecified Ground Workings	1932
125CR	229	W	Grave Yard	1851
126CB	229	W	Unspecified Tank	1965
127X	233	SW	Gas Works	1915
128X	233	SW	Gas Works	1907
129X	233	SW	Gas Works	1923
130W	234	SW	Unspecified Commercial/Industrial	1932
131X	237	SW	Unspecified Tanks	1938
132X	237	SW	Unspecified Tanks	1891
133Y	237	SW	Unspecified Tank	1932
134Y	237	SW	Gasometer	1907
135Y	237	SW	Gasometer	1915
136Y	237	SW	Gasometer	1923
137X	240	SW	Unspecified Tanks	1965
138X	240	SW	Unspecified Tanks	1975
139X	240	SW	Unspecified Tanks	1955
140Z	241	SE	Unspecified Pit	1932
141Z	241	SE	Unspecified Pit	1915
142AA	250	S	Railway Building	1955
143AA	250	S	Railway Building	1965
144AA	251	S	Railway Building	1938
145AA	251	S	Railway Building	1891
146AA	251	S	Railway Building	1932
147AA	251	S	Railway Building	1907
148AA	251	S	Railway Building	1915
149AA	251	S	Railway Building	1923
150X	264	SW	Unspecified Tanks	1982
151X	265	SW	Unspecified Tank	1932
152X	265	SW	Gasometer	1907
153X	265	SW	Gasometer	1915
154X	265	SW	Gasometer	1923
155AB	266	SE	Unspecified Pit	1907
156Z	272	SE	Old Sand Pit	1891
157AG	278	SE	Colour Works	1891
158AB	279	SE	Sand Pits	1851
159CS	279	NW	Grave Yard	1851
160CT	282	S	Sand Pit	1851
161AC	283	S	Railway Building	1955
162AC	283	S	Railway Building	1965
163AC	286	S	Railway Building	1938

164Z	287	SE	Unspecified Pit	1975
165Z	287	SE	Unspecified Pit	1955
166Z	287	SE	Unspecified Pit	1965
167Z	287	SE	Unspecified Pit	1982
168AC	288	S	Railway Building	1932
169AC	288	S	Railway Building	1915
170AC	292	S	Railway Building	1923
171X	299	SW	Ultramarine and Smalls Works	1932
172X	299	SW	Unspecified Tank	1907
173X	299	SW	Gasometer	1915
174X	299	SW	Gasometer	1923
175AD	302	S	Unspecified Ground Workings	1907
176AD	302	S	Unspecified Ground Workings	1915
177AD	302	S	Unspecified Ground Workings	1932
178AD	302	S	Unspecified Pit	1923
179AE	305	E	Tram Depot	1907
180AE	305	E	Tram Depot	1915
181AF	305	E	Railway Sidings	1915
182AE	305	E	Tram Depot	1923
183AF	305	E	Railway Sidings	1923
184CU	306	N	Sand Pit	1851
185	308	SE	Railway Building	1923
186AD	311	S	Unspecified Works	1975
187AD	311	S	Unspecified Works	1965
188AD	311	S	Unspecified Works	1982
189Z	315	SE	Unspecified Pit	1938
190AP	316	NE	Unspecified Mill	1891
191CD	319	S	Unspecified Heap	1955
192AD	320	S	Unspecified Ground Workings	1891
193CV	325	S	Grave Yard	1851
194AG	328	SE	Unspecified Pit	1982
195AG	330	S	Unspecified Pit	1975
196AG	330	S	Unspecified Pit	1965
197AG	330	S	Unspecified Pit	1955
198AH	336	N	Unspecified Pit	1891
199AQ	343	SE	Unspecified Mills	1965
200CX	345	NW	Unspecified Pit	1891
201AH	348	N	Unspecified Ground Workings	1915
202AH	348	N	Unspecified Pit	1907
203AH	348	N	Unspecified Ground Workings	1932
204AI	353	S	Unspecified Pits	1907

205AI	353	S	Unspecified Pit	1932
206AI	353	S	Unspecified Pit	1915
207AJ	360	N	Unspecified Mill	1891
208AJ	365	N	Unspecified Mill	1907
209AJ	365	N	Unspecified Mill	1923
210AJ	366	N	Unspecified Mill	1932
211AJ	368	N	Unspecified Mill	1915
212AM	370	N	Unspecified Pit	1891
213AK	372	SW	Unspecified Tank	1965
214AK	372	SW	Unspecified Tank	1975
215AK	372	SW	Unspecified Tank	1982
216AL	373	NW	Unspecified Pit	1932
217AL	373	NW	Unspecified Pit	1907
218AL	373	NW	Unspecified Pit	1915
219AL	374	NW	Unspecified Pits	1938
220AM	375	N	Unspecified Pit	1923
221AM	376	N	Unspecified Pit	1938
222AM	378	N	Unspecified Pit	1907
223AM	378	N	Unspecified Pit	1915
224AM	378	N	Unspecified Pit	1932
225AN	381	S	Unspecified Mills	1923
226AN	382	S	Unspecified Mills	1938
227AN	383	S	Unspecified Mills	1965
228AO	387	S	Unspecified Mills	1891
229AO	392	S	Unspecified Commercial/Industrial	1915
230AO	392	S	Unspecified Commercial/Industrial	1923
231AU	392	N	Unspecified Mill	1938
232AP	393	NE	Unspecified Disused Mill	1907
233AO	395	S	Unspecified Mills	1932
234AN	398	S	Unspecified Mills	1907
235AN	398	S	Unspecified Mill	1915
236AN	398	S	Unspecified Mills	1932
237AO	398	S	Unspecified Works	1982
238AQ	399	S	Unspecified Mills	1938
239DC	401	NE	Mills	1851
240AR	402	SE	Refuse Heap	1965
241AR	402	SE	Refuse Heap	1955
242CG	408	SW	Fire Engine Station	1938
243AS	409	S	Unspecified Heap	1907
244AS	409	S	Unspecified Heap	1915
245CZ	409	S	Unspecified Ground Workings	1932
246AS	411	S	Refuse Heap	1891
247AT	411	NW	Unspecified Tank	1932
248AT	411	NW	Unspecified Tank	1907

249AT	411	NW	Unspecified Tank	1915
250AU	414	N	Unspecified Heap	1907
251AV	417	W	Unspecified Ground Workings	1915
252AV	417	W	Unspecified Ground Workings	1932
253AV	417	W	Unspecified Ground Workings	1907
254AW	419	N	Bleach Works	1923
255DA	421	E	Brick Works	1907
256AW	426	N	Bleach Works	1915
257AW	426	N	Unspecified Works	1975
258AW	426	N	Unspecified Works	1965
259AW	426	N	Unspecified Works	1982
260AX	429	NE	Refuse Heap	1915
261AX	429	NE	Sand Pit	1907
262AX	429	NE	Unspecified Heap	1923
263BE	430	W	Dye Works	1891
264DD	430	W	Sand Pit	1907
265AX	431	NE	Unspecified Ground Workings	1932
266AY	433	SW	Cotton Mill	1965
267AY	433	SW	Cotton Mill	1975
268AY	433	SW	Cotton Mill	1982
269AY	434	SW	Unspecified Mill	1891
270AY	435	SW	Unspecified Mill	1938
271AZ	437	N	Unspecified Mill	1965
272AZ	437	N	Unspecified Mill	1975
273AZ	437	N	Unspecified Mill	1982
274AY	440	SW	Unspecified Mill	1923
275BU	448	N	Unspecified Ground Workings	1907
276BA	449	SW	Unspecified Mills	1915
277BA	449	SW	Unspecified Mill	1932
278BC	450	NE	Unspecified Pits	1938
279DE	451	S	Unspecified Ground Workings	1932
280BB	452	SW	Unspecified Tank	1965
281BB	452	SW	Unspecified Tank	1975
282BB	452	SW	Unspecified Tank	1982
283BC	459	NE	Refuse Heap	1975
284BD	459	SW	Fire Station	1965
285BD	459	SW	Fire Station	1955
286BF	459	SE	Unspecified Works	1975
287BD	461	SW	Fire Engine Station	1932
288BG	461	E	Unspecified Disused Mill	1932
289BE	461	W	Unspecified Ground Workings	1907

290AO	462	S	Unspecified Heap	1907
291BF	463	SE	Unspecified Works	1982
292BG	464	E	Unspecified Mill	1907
293BG	464	E	Unspecified Mill	1915
294BG	464	E	Unspecified Mill	1923
295BA	464	SW	Unspecified Mill	1907
296BH	479	NE	Unspecified Ground Workings	1932
297BH	479	NE	Unspecified Ground Workings	1915
298BI	483	S	Unspecified Mill	1938
299BG	484	E	Unspecified Mill	1891
300	487	S	Unspecified Mill	1923
301BI	488	S	Unspecified Mill	1915
302BI	488	S	Unspecified Mill	1932
303BI	489	S	Unspecified Mill	1975
304BI	489	S	Cotton Mill	1965
305BI	489	S	Unspecified Mill	1982
306BG	492	E	Colliery	1851
307	496	S	Unspecified Mill	1907
308DF	497	S	Unspecified Ground Workings	1891

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

97

ID	Distance (m)	Direction	Use	Date
309	0	On Site	Unspecified Tank	1922
310	10	S	Unspecified Tank	1893
311BJ	16	SW	Tanks	1954
312BJ	16	SW	Tanks	1954
313BJ	23	S	Tanks	1965
314BJ	24	S	Tanks	1954
315BJ	24	S	Tanks	1967
316BL	42	SW	Unspecified Tank	1932
317BK	53	W	Unspecified Tank	1990
318BK	53	W	Unspecified Tank	1978
319BL	54	SW	Tanks	1967
320BL	54	SW	Tanks	1954
321BL	54	SW	Tanks	1965
322J	91	W	Unspecified Tank	1893

323J	91	W	Unspecified Tank	1922
324J	91	W	Unspecified Tank	1909
325BM	109	W	Unspecified Tank	1954
326BM	109	W	Unspecified Tank	1954
327BM	119	W	Unspecified Tank	1954
328BM	120	W	Unspecified Tank	1954
329BN	122	NE	Unspecified Tank	1995
330BN	122	NE	Unspecified Tank	1996
331BP	215	W	Unspecified Tank	1922
332X	228	SW	Gas Depot	1991
333X	229	SW	Gas Depot	1996
334BO	234	SW	Unspecified Tank	1954
335BO	234	SW	Unspecified Tank	1967
336BO	235	SW	Unspecified Tank	1965
337X	237	SW	Gas Works	1909
338X	237	SW	Gas Works	1893
339X	238	SW	Gas Works	1922
340BP	238	W	Unspecified Tank	1893
341BO	244	SW	Gasometer	1922
342BO	244	SW	Unspecified Tank	1932
343BO	244	SW	Gasometer	1909
344BO	244	SW	Gasometer	1893
345BO	261	SW	Unspecified Tank	1967
346BO	261	SW	Unspecified Tank	1954
347BO	262	SW	Unspecified Tank	1965
348X	271	SW	Gasometers	1909
349X	271	SW	Gasometers	1922
350X	271	SW	Gasometers	1893
351X	271	SW	Tanks	1932
352BQ	281	S	Unspecified Tank	1991
353BQ	281	S	Unspecified Tank	1991
354BQ	281	S	Unspecified Tank	1991
355BQ	282	S	Unspecified Tank	1996
356W	290	W	Unspecified Tank	1954
357W	290	W	Unspecified Tank	1967
358W	290	W	Unspecified Tank	1965
359X	297	SW	Unspecified Tank	1954
360X	297	SW	Unspecified Tank	1967
361X	297	SW	Unspecified Tank	1965
362W	298	SW	Unspecified Tank	1932
363W	298	SW	Unspecified Tank	1922
364	304	SW	Unspecified Tank	1932
365X	304	SW	Unspecified Tank	1967
366X	304	SW	Unspecified Tank	1954
367X	305	SW	Unspecified Tank	1965
368BR	307	S	Tanks	1991

369BR	307	S	Tanks	1991
370BR	307	S	Tanks	1991
371BR	307	S	Tanks	1983
372BR	307	S	Tanks	1991
373BR	307	S	Tanks	1991
374BR	307	S	Tanks	1991
375BR	307	S	Tanks	1983
376BR	307	S	Tanks	1973
377BR	307	S	Tanks	1996
378BR	308	S	Tanks	1973
379BR	308	S	Tanks	1996
380BS	364	W	Unspecified Tank	1990
381BS	364	W	Unspecified Tank	1978
382AK	371	SW	Unspecified Tank	1954
383AK	372	SW	Gasometer	1984
384AK	381	SW	Tanks	1922
385AJ	429	N	Unspecified Tank	1922
386AJ	430	N	Unspecified Tank	1932
387BT	435	N	Unspecified Tank	1954
388BT	435	N	Unspecified Tank	1954
389AU	437	N	Unspecified Tank	1893
390BU	441	N	Unspecified Tank	1954
391BU	441	N	Unspecified Tank	1954
392	442	N	Tanks	1932
393AW	443	N	Tanks	1932
394AW	443	N	Tanks	1922
395	465	SW	Unspecified Tank	1893
396BV	469	SW	Tanks	1932
397BB	475	SW	Unspecified Tank	1954
398BB	475	SW	Unspecified Tank	1967
399BB	475	SW	Unspecified Tank	1965
400BV	485	SW	Unspecified Tank	1932
401BW	486	N	Unspecified Tank	1932
402BW	493	N	Unspecified Tank	1954
403BW	493	N	Unspecified Tank	1954
404BW	499	N	Unspecified Tank	1954
405BW	499	N	Unspecified Tank	1954

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

70

ID	Distance (m)	Direction	Use	Date
406BX	0	On Site	Electricity Substation	1990
407D	64	NW	Electricity Substation	1970
408D	65	NW	Electricity Substation	1978
409D	65	NW	Electricity Substation	1990
410BY	68	SE	Electricity Substation	1992
411BY	68	SE	Electricity Substation	1992
412BY	69	SE	Electricity Substation	1967
413BY	70	SE	Electricity Substation	1995
414BY	70	SE	Electricity Substation	1993
415BY	70	SE	Electricity Substation	1996
416BY	70	SE	Electricity Substation	1994
417BZ	102	W	Electricity Substation	1978
418BZ	102	W	Electricity Substation	1996
419BZ	104	W	Electricity Substation	1984
420BZ	104	W	Electricity Substation	1991
421CA	135	N	Electricity Substation	1970
422CA	136	N	Electricity Substation	1978
423CA	136	N	Electricity Substation	1990
424BP	190	SW	Electricity Substation	1967
425BP	190	SW	Electricity Substation	1954
426BP	190	W	Electricity Substation	1965
427BP	191	SW	Electricity Substation	1996
428BP	191	SW	Electricity Substation	1978
429BP	192	SW	Electricity Substation	1984
430BP	192	SW	Electricity Substation	1991
431BP	199	W	Electricity Generating Station	1909
432BP	199	W	Electricity Generating Station	1922
433CB	223	W	Electricity Substation	1967
434CB	223	W	Electricity Substation	1954
435CB	223	W	Electricity Substation	1965
436BO	228	SW	Gas Depot	1991
437BO	229	SW	Gas Depot	1996
438X	237	SW	Gas Works	1909
439X	237	SW	Gas Works	1893
440X	238	SW	Gas Works	1922
441BO	244	SW	Gasometer	1893
442BO	244	SW	Gasometer	1909
443BO	244	SW	Gasometer	1922
444X	271	SW	Gasometers	1909
445X	271	SW	Gasometers	1893
446X	271	SW	Gasometers	1922
447CC	358	SW	Electricity Substation	1954

448CC	358	SW	Electricity Substation	1967
449CC	359	SW	Electricity Substation	1965
450CD	364	S	Electricity Substation	1983
451CD	365	S	Electricity Substation	1973
452CD	367	S	Electricity Substation	1991
453CD	367	S	Electricity Substation	1991
454CD	367	S	Electricity Substation	1991
455CD	368	S	Electricity Substation	1996
456AK	372	SW	Gasometer	1984
457CE	377	E	Electricity Substation	1993
458CE	377	E	Electricity Substation	1994
459CE	377	E	Electricity Substation	1996
460CE	377	E	Electricity Substation	1995
461CE	377	E	Electricity Substation	1992
462CE	377	E	Electricity Substation	1992
463CE	377	E	Electricity Substation	1967
464CE	377	E	Electricity Substation	1954
465CE	378	E	Electricity Substation	1954
466	422	SW	Electricity Substation	1996
467CF	423	NW	Electricity Substation	1978
468CF	423	NW	Electricity Substation	1990
469CG	450	SW	Electricity Substation	1996
470AZ	456	N	Electricity Substation	1996
471AZ	457	N	Electricity Substation	1992
472AW	469	N	Electricity Substation	1996
473CH	476	E	Electricity Substation	1970
474CH	476	E	Electricity Substation	1990
475CH	476	E	Electricity Substation	1984

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 12

ID	Distance (m)	Direction	Use	Date
476CI	106	S	Garage	1996
477CI	106	S	Garage	1991
478CA	120	N	Garage	1970
479CA	120	N	Garage	1978
480CA	120	N	Garage	1990
481CJ	220	SW	Garage	1996
482CJ	221	SW	Garage	1991
483BO	228	SW	Gas Depot	1991
484BO	229	SW	Gas Depot	1996
485CK	321	W	Garage	1954
486CK	321	W	Garage	1967
487CK	321	W	Garage	1965

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary:

0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 175

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
488BX	0	On Site	Unspecified Pit	1891
489BX	0	On Site	Pond	1932
490BX	0	On Site	Pond	1907
491BX	0	On Site	Pond	1915
492CL	0	On Site	Unspecified Pit	1938
493CM	0	On Site	Pond	1965
494CM	0	On Site	Reservoir	1891
495CM	0	On Site	Reservoir	1932
496CM	0	On Site	Reservoir	1907
497CM	0	On Site	Reservoir	1915
498CM	0	On Site	Reservoir	1938
499BX	0	On Site	Pond	1923
500CM	0	On Site	Reservoir	1975

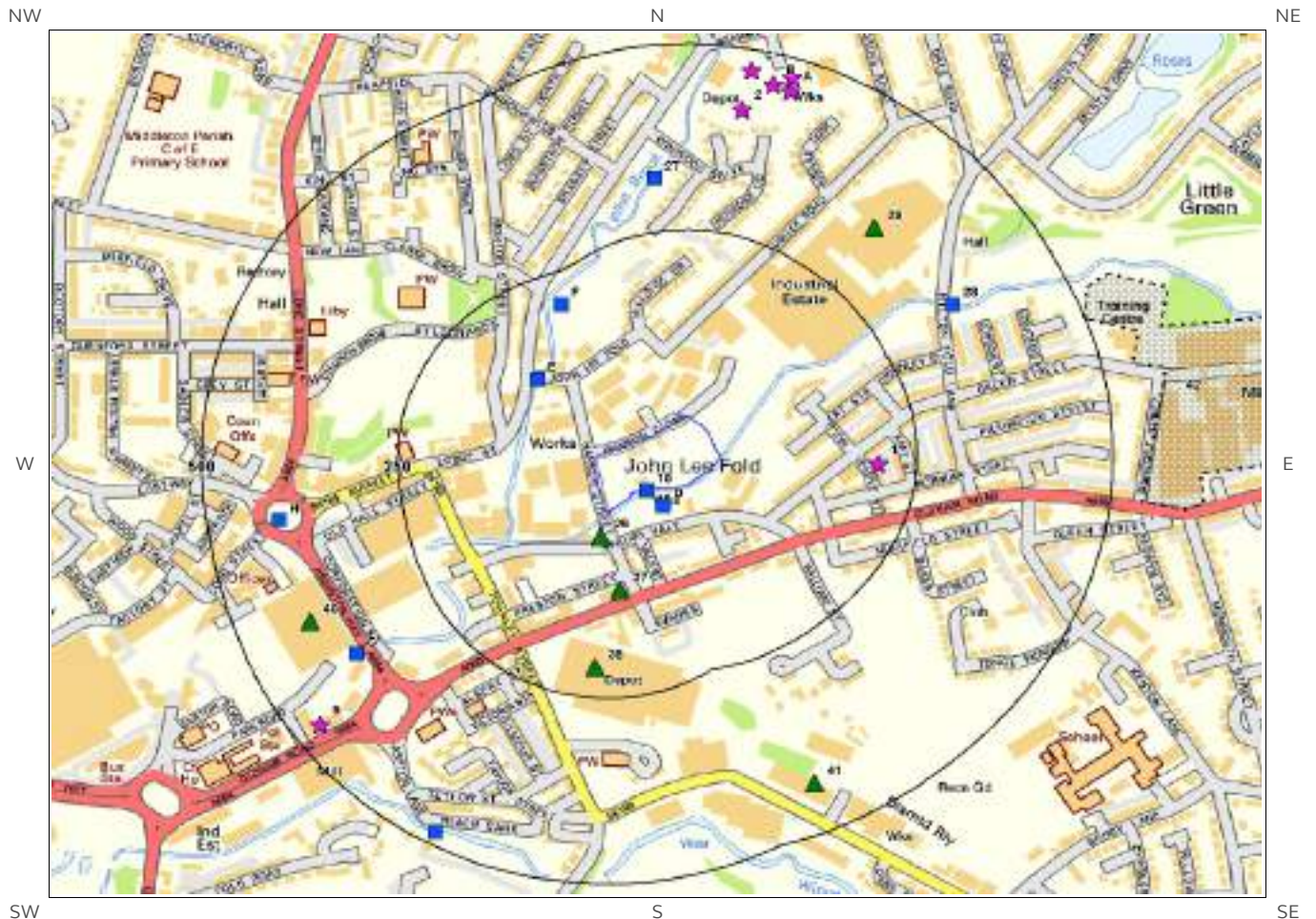
501CM	0	On Site	Reservoir	1955
502BX	0	On Site	Ponds	1938
503CM	0	On Site	Reservoir	1923
504E	5	SE	Ponds	1891
505E	8	SE	Reservoirs	1932
506E	12	SE	Reservoirs	1915
507E	12	SE	Reservoirs	1907
508E	12	SE	Reservoirs	1923
509BL	16	SW	Ponds	1965
510BL	19	SW	Reservoirs	1938
511BL	20	SW	Reservoirs	1932
512BK	22	W	Unspecified Heap	1932
513CO	22	SW	Ponds	1923
514E	22	SE	Ponds	1938
515CN	23	E	Ponds	1955
516CN	24	E	Ponds	1965
517CO	26	SW	Ponds	1907
518J	28	SW	Refuse Heap	1932
519D	28	W	Unspecified Ground Workings	1907
520J	29	SW	Ponds	1891
521D	30	W	Unspecified Ground Workings	1915
522D	34	W	Unspecified Ground Workings	1923
523E	36	E	Unspecified Heap	1955
524E	36	E	Unspecified Heap	1965
525E	36	E	Refuse Heap	1982
526E	36	E	Refuse Heap	1975
527CO	55	SW	Pond	1915
528D	60	NW	Unspecified Pit	1938
529D	60	NW	Unspecified Ground Workings	1932
530I	69	E	Refuse Heap	1923
531I	73	E	Refuse Heap	1932
532I	73	E	Refuse Heap	1915
533CP	116	SW	Gravel Pit	1851
534CQ	147	NW	Sand Pit	1851
535S	161	S	Sand Pit	1907
536R	172	W	Cemetery	1932
537R	172	W	Cemetery	1907
538R	172	W	Cemetery	1915
539R	172	W	Cemetery	1923
540R	174	W	Cemetery	1891
541R	174	W	Cemetery	1938
542	175	NW	Pond	1932
543S	175	SE	Refuse Heap	1923

544S	175	SE	Refuse Heap	1915
545R	179	W	Burial Ground	1965
546R	179	W	Burial Ground	1975
547R	179	W	Burial Ground	1982
548S	184	SE	Unspecified Pit	1982
549S	184	SE	Unspecified Pit	1965
550U	186	SE	Unspecified Ground Workings	1975
551U	186	SE	Unspecified Ground Workings	1982
552U	186	SE	Unspecified Ground Workings	1965
553U	189	SE	Unspecified Ground Workings	1955
554S	211	SE	Unspecified Ground Workings	1932
555Y	220	SW	Unspecified Ground Workings	1932
556CR	229	W	Grave Yard	1851
557Z	241	SE	Unspecified Pit	1915
558Z	241	SE	Unspecified Pit	1932
559AB	266	SE	Unspecified Pit	1907
560Z	272	SE	Old Sand Pit	1891
561Z	279	SE	Sand Pits	1851
562CS	279	NW	Grave Yard	1851
563CT	282	S	Sand Pit	1851
564Z	287	SE	Unspecified Pit	1975
565Z	287	SE	Unspecified Pit	1965
566Z	287	SE	Unspecified Pit	1982
567Z	287	SE	Unspecified Pit	1955
568AD	302	S	Unspecified Pit	1923
569AD	302	S	Unspecified Ground Workings	1915
570AD	302	S	Unspecified Ground Workings	1907
571AD	302	S	Unspecified Ground Workings	1932
572CU	306	N	Sand Pit	1851
573Z	315	SE	Unspecified Pit	1938
574CD	319	S	Unspecified Heap	1955
575CD	320	S	Unspecified Ground Workings	1891
576CV	325	S	Grave Yard	1851
577AG	328	SE	Unspecified Pit	1982
578AG	330	S	Unspecified Pit	1965
579AG	330	S	Unspecified Pit	1955
580AG	330	S	Unspecified Pit	1975
581CW	335	NE	Pond	1907
582CW	335	NE	Pond	1915

583CW	335	NE	Pond	1923
584AH	336	N	Unspecified Pit	1891
585CX	345	NW	Unspecified Pit	1891
586AH	348	N	Unspecified Ground Workings	1915
587AH	348	N	Unspecified Pit	1907
588AH	348	N	Unspecified Ground Workings	1932
589AI	353	S	Unspecified Pit	1915
590AI	353	S	Unspecified Pits	1907
591AI	353	S	Unspecified Pit	1932
592AM	370	N	Unspecified Pit	1891
593AL	373	NW	Unspecified Pit	1915
594AL	373	NW	Unspecified Pit	1907
595AL	373	NW	Unspecified Pit	1932
596AL	374	NW	Unspecified Pits	1938
597AM	375	N	Unspecified Pit	1923
598AM	376	N	Unspecified Pit	1938
599AM	378	N	Unspecified Pit	1932
600AM	378	N	Unspecified Pit	1907
601AM	378	N	Unspecified Pit	1915
602AV	381	W	Ponds	1851
603CY	387	S	Pond	1891
604CY	391	S	Reservoir	1938
605CY	392	S	Reservoir	1932
606CY	392	S	Reservoir	1907
607CY	392	S	Reservoir	1915
608CY	392	S	Reservoir	1923
609CY	395	S	Pond	1965
610AR	402	SE	Refuse Heap	1955
611AR	402	SE	Refuse Heap	1965
612AS	409	S	Unspecified Heap	1907
613AS	409	S	Unspecified Heap	1915
614CZ	409	S	Unspecified Ground Workings	1932
615AS	411	S	Refuse Heap	1891
616AU	414	N	Unspecified Heap	1907
617AV	417	W	Unspecified Ground Workings	1932
618AV	417	W	Unspecified Ground Workings	1915
619AV	417	W	Unspecified Ground Workings	1907
620DB	418	SE	Pond	1907
621DA	421	E	Brick Works	1907
622DB	423	SE	Pond	1932
623DB	424	SE	Pond	1938
624DC	425	NE	Pond	1851

625DB	427	SE	Pond	1915
626DB	427	SE	Pond	1923
627AX	429	NE	Unspecified Heap	1923
628AX	429	NE	Sand Pit	1907
629AX	429	NE	Refuse Heap	1915
630DD	430	W	Sand Pit	1907
631AX	431	NE	Unspecified Ground Workings	1932
632DB	431	SE	Pond	1965
633DB	431	SE	Pond	1955
634DC	433	NE	Pond	1891
635AW	436	N	Reservoir	1891
636AW	439	N	Reservoir	1938
637AW	441	N	Reservoir	1932
638AW	442	N	Reservoir	1915
639AW	442	N	Reservoir	1923
640AW	442	N	Reservoir	1907
641BC	447	NE	Pond	1907
642BC	447	NE	Pond	1923
643BU	448	N	Unspecified Ground Workings	1907
644BC	450	NE	Unspecified Pits	1938
645DE	451	S	Unspecified Ground Workings	1932
646BC	454	NE	Pond	1915
647BC	454	NE	Pond	1932
648BC	459	NE	Refuse Heap	1975
649	461	W	Unspecified Ground Workings	1907
650AO	462	S	Unspecified Heap	1907
651BH	479	NE	Unspecified Ground Workings	1932
652BH	479	NE	Unspecified Ground Workings	1915
653	490	NE	Reservoirs	1891
654BG	492	E	Colliery	1851
655DG	496	NE	Reservoir	1938
656DF	497	S	Unspecified Ground Workings	1891
657	498	E	Pond	1851
658	500	W	Reservoirs	1938
659DG	500	NE	Reservoir	1915
660DG	500	NE	Reservoir	1907
661DG	500	NE	Reservoir	1932
662DG	500	NE	Reservoir	1923

2. Environmental Permits, Incidents and Registers Map



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- | | | | | | |
|---|-------------------------------|---|--|---|---|
|  | Site Outline |  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |  | Part A(2) and Part B Authorised Processes |
|  | Dangerous Substances (List 2) |  | COMAH / NIHHS Sites |  | Sites Determined as Contaminated Land |
|  | Water Industry Referrals |  | Hazardous Substance Consents and Enforcements | | |
|  | Licenced Discharge Consents | | | | |
|  | Red List Discharge Consents | | | | |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

6

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
36	35	S	387452 405986	Address: VW & Audi Used Spares Ltd, Spring Vale, Middleton, Manchester, M24 2HQ Process: Waste Oil Burner <0.4 MW Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
37	109	S	387476 405912	Address: Mercury Forecourts, Middleton Service Station, 191 Oldham Road, Middleton, Manchester, M24 2LD Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
38	212	S	387444 405809	Address: Geometric Furniture Ltd, Townley Street, Middleton, Manchester, M24 1AT Process: Coating Processes Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
39	342	NE	387799 406399	Address: Milliken Chemical Elastomers, Hilton Fold Lane, Middleton, Manchester, M24 2HZ Process: Rubber Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
40	407	SW	387081 405870	Address: Tesco Petrol Station, Barton Road, Middleton, Manchester, M24 1HB Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
41	436	S	387723 405654	Address: Cytec Industrial Materials Ltd (Formerly Advanced Composites Group), Grimshaw Lane, Middleton, Manchester, M24 2AA Process: Coating Processes Status: Current Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

21

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
15	3	S	387510 406050	Address: HANSON ST BRIDGE SSO, 50M U/S HANSON STREET BRIDGE, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016950433 Permit Version: 1 Receiving Water: RIVER IRK Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 06-Sep-1983 Revocation Date: 27/02/2013
16D	23	S	387530 406030	Address: SPRING VALE MIDDLETON, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982642 Permit Version: 1 Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 30-Sep-1994 Revocation Date: 08/03/2005
17D	23	S	387530 406030	Address: SPRING VALE MIDDLETON, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01ROC0166 Permit Version: 1 Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 01/01/1995
18D	23	S	387530 406030	Address: SPRING VALE MIDDLETON, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982642 Permit Version: 2 Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 09/03/2005 Effective Date: 09-Mar-2005 Revocation Date: 19/05/2005
19D	23	S	387530 406030	Address: SPRING VALE MIDDLETON, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982642 Permit Version: 3 Receiving Water: RIVER IRK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 20/05/2005 Effective Date: 20-May-2005 Revocation Date: -
20E	128	NW	387370 406200	Address: JOHN LEE FOLD CSO, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982900 Permit Version: 3 Receiving Water: WHIT BROOK TRIB RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 11-May-1995 Revocation Date: 08/03/2005
21E	128	NW	387370 406200	Address: JOHN LEE FOLD CSO, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982900 Permit Version: 2 Receiving Water: WHIT BROOK TRIB RIVER IRK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 10/05/1995
22E	128	NW	387370 406200	Address: JOHN LEE FOLD CSO, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Receiving Water: WHIT BROOK TRIB RIVER IRK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Apr-1991

ID	Distance (m)	Direction	NGR	Details	
				Permit Number: 016982900 Permit Version: 1	Revocation Date: 31/12/1994
23E	128	NW	387370 406200	Address: JOHN LEE FOLD CSO, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982900 Permit Version: 4	Receiving Water: WHIT BROOK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 09/03/2005 Effective Date: 09-Mar-2005 Revocation Date: 19/05/2005
24E	128	NW	387370 406200	Address: JOHN LEE FOLD CSO, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982900 Permit Version: 5	Receiving Water: WHIT BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 20/05/2005 Effective Date: 20-May-2005 Revocation Date: -
25F	206	N	387400 406300	Address: MIDDLETON TRANSPORT LTD SWO, JOHN LEE ROAD, MIDDLETON, GREATER MANCHESTER Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991252 Permit Version: 1	Receiving Water: TRUB (WHIT) BROOK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Nov-1994 Revocation Date: 01/11/1994
26F	206	N	387400 406300	Address: H PICKUP AND SONS SWO, 6 BOARSHAW ROAD, MIDDLETON, GREATER MANCHESTER Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991160 Permit Version: 1	Receiving Water: WHITBROOK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Nov-1994 Revocation Date: 01/11/1994
27	322	N	387520 406470	Address: MIDDLETON SSO, OFF BRADSHAW ROAD, MIDDLETON, ROCHDALE, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016950217 Permit Version: 1	Receiving Water: WHIT BROOK Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: - Effective Date: 31-Jul-1981 Revocation Date: -
28	356	NE	387900 406300	Address: BILLINGTON BROS SWO, HILTON FOLD LANE, MIDDLETON, GREATER MANCHESTER Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991152 Permit Version: 1	Receiving Water: RIVER IRK Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Oct-1994 Revocation Date: 30/11/1994
29G	372	SW	387140 405830	Address: THE MARKET PLACE MN26, ROCHDALE, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01ROC0124 Permit Version: 1	Receiving Water: - Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Apr-1991 Revocation Date: 31/12/1994
30G	372	SW	387140 405830	Address: THE MARKET PLACE MN26, ROCHDALE, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01ROC0124 Permit Version: 2	Receiving Water: UNKNOWN Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 01-Jan-1995 Revocation Date: 16/03/2005
31H	410	W	387040 406010	Address: LONG STREET CSO, THE MARKET PLACE, OLDHAM Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY	Receiving Water: THE RIVER IRK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 20/05/2005 Effective Date: 20-May-2005

ID	Distance (m)	Direction	NGR	Details	
				Permit Number: 016993581 Permit Version: 1	Revocation Date: -
32H	410	W	387040 406010	Address: LONG STREET CSO, THE MARKET PLACE, OLDHAM Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01ROC0124 Permit Version: 3	Receiving Water: RIVER IRK Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: 17/03/2005 Effective Date: 17-Mar-2005 Revocation Date: 19/05/2005
33I	483	SW	387240 405590	Address: SSO DOWNSTREAM OF KIRKWAY, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 0169500343 Permit Version: 1	Receiving Water: - Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01-Apr-1991 Revocation Date: 31/12/1994
34I	483	SW	387240 405590	Address: SSO DOWNSTREAM OF KIRKWAY, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016950343 Permit Version: 1	Receiving Water: WINCE BROOK Status: PRE NRA LEGISLATION WHERE ISSUE DATE < 01-SEP-89 (HISTORIC ONLY) Issue date: - Effective Date: 02-Mar-1982 Revocation Date: 14/05/2002
35I	483	SW	387240 405590	Address: SSO DOWNSTREAM OF KIRKWAY, MIDDLETON, GREATER MANCHESTER Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016950343 Permit Version: 2	Receiving Water: WINCE BROOK Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 15/05/2002 Effective Date: 15-May-2002 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

1

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Company	Address	Operational Status	Tier
42	499	E	Vita Cellular Foams (UK) Limited	Vita Cellular Foams (UK) Limited, Manchester, Oldham Road, Middleton, Manchester, Greater Manchester, M24 2DB	Current COMAH Site	COMAH Lower Tier Operator

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

14

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	200	E	387804.0 406085.0	Incident Date: 23-Mar-2001 Incident Identification: 830.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
2	417	N	387631.0 406562.0	Incident Date: 20-Aug-2002 Incident Identification: 101838.0 Pollutant: Specific Waste Materials Pollutant Description: Other Specific Waste Material Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3A	457	N	387692.0 406588.0	Incident Date: 24-Aug-2001 Incident Identification: 26661.0 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4A	457	N	387692.0 406588.0	Incident Date: 24-Aug-2001 Incident Identification: 26661.0 Pollutant: Inert Materials and Wastes Pollutant Description: Specific Waste Materials Pollutant Description: Soils and Clay:Household Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
5A	457	N	387692.0 406588.0	Incident Date: 24-Aug-2001 Incident Identification: 26661.0 Pollutant: Specific Waste Materials Pollutant Description: Household Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
6B	459	N	387670.0 406596.0	Incident Date: 29-Apr-2002 Incident Identification: 75487.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
7B	459	N	387670.0 406596.0	Incident Date: 29-Apr-2002 Incident Identification: 75487.0 Pollutant: Atmospheric Pollutants and Effects:Inert Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

ID	Distance (m)	Direction	NGR	Details
				Pollutant Description: Fumes:Construction and Demolition Materials and Wastes
8B	459	N	387670.0 406596.0	Incident Date: 29-Apr-2002 Incident Identification: 75487.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Fumes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
9	466	SW	387092.0 405734.0	Incident Date: 17-Apr-2002 Incident Identification: 72609.0 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
10C	472	N	387643.0 406615.0	Incident Date: 24-Apr-2001 Incident Identification: 3264.0 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
11C	472	N	387643.0 406615.0	Incident Date: 24-Apr-2001 Incident Identification: 3264.0 Pollutant: Specific Waste Materials Pollutant Description: Commercial Waste Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
12A	475	N	387695.0 406606.0	Incident Date: 15-May-2002 Incident Identification: 78870.0 Pollutant: Atmospheric Pollutants and Effects:Inert Materials and Wastes Pollutant Description: Smoke:Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
13A	475	N	387695.0 406606.0	Incident Date: 15-May-2002 Incident Identification: 78870.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
14A	475	N	387695.0 406606.0	Incident Date: 15-May-2002 Incident Identification: 78870.0 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

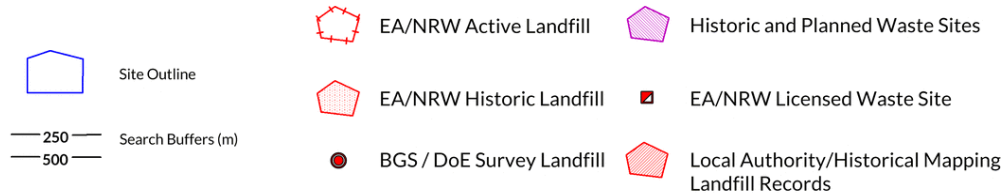
Database searched and no data found.

2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

10

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
7	479	S		Site Address: Former Times Mill, Grimshaw Lane, Moorclose, Middleton, Greater Manchester Waste Licence: - Site Reference: D099 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
8	526	NW		Site Address: Mirfield Drive, Mirefield Drive, Middleton, Manchester, Greater Manchester Waste Licence: - Site Reference: D069 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
9	563	NW		Site Address: Mellalieu Street Playing Fields, Mellalieu Street, Middleton, Manchester, Greater Manchester Waste Licence: - Site Reference: D068 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
10	663	E		Site Address: Morton Pits, Oldham Road, Higher Boarshaw, Middleton, Greater Manchester Waste Licence: - Site Reference: D109 Waste Type: - Environmental Permitting Regulations Licence Issue: - Licence Surrendered: - Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details
(Waste) Reference: -				
Not shown	761	SE		Site Address: Former Railway Cutting, Sedgley Street, Moorclose, Middleton, Greater Manchester Waste Licence: - Site Reference: D074 Waste Type: Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Borough of Middleton (Public Health and Cleansing Department) Licence Holder: - First Recorded: 31-May-1972 Last Recorded: -
12	765	NW		Site Address: Land off Higher Wood Street, Higher Wood Street, Middleton, Manchester, Greater Manchester Waste Licence: - Site Reference: D100 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	911	E		Site Address: Land off Don Street, Middleton, Manchester, Greater Manchester Waste Licence: Yes Site Reference: RD/LIC/331/84, D016, 0422 Waste Type: Inert, Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 09-Jul-1986 Licence Surrendered: 08-Mar-1989 Licence Holder Address: Oakland House, Talbot Road, Manchester Operator: - Licence Holder: North West Water Authority First Recorded: 01-Aug-1986 Last Recorded: 31-Dec-1988
Not shown	983	N		Site Address: Land at Stanycliffe Bridge, Rochdale Road, Middleton, Manchester, Greater Manchester Waste Licence: - Site Reference: D067 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1145	E		Site Address: Land at Mills Hill, Oldham Road, Mills Hill, Oldham, Greater Manchester Waste Licence: - Site Reference: G072 Waste Type: Inert, Industrial, Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Chadderton Urban District Council Licence Holder: - First Recorded: 31-Dec-1967 Last Recorded: 31-Dec-1972
Not shown	1187	SW		Site Address: Land off Manchester Old Road, Manchester Old Road, Middleton, Manchester, Greater Manchester Waste Licence: Yes Site Reference: D055 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 01-Jan-1974 Licence Surrendered: Licence Holder Address: - Operator: Borough of Middleton Licence Holder: Rochdale Metropolitan Borough Council First Recorded: 31-Dec-1967 Last Recorded: 09-Sep-1974

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

3

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1134	SE	388500.0 405400.0	Address: Pine Street, Middleton, BGS Number: 2595.0	Risk: No risk to aquifer Waste Type: N/A
Not shown	1200	E	388800.0 406200.0	Address: Council Tip, Middleton Rd, Chadderton, Lancs BGS Number: 2538.0	Risk: No risk to aquifer Waste Type: N/A
Not shown	1404	SW	386200.0 405400.0	Address: Manchester Old Road, Middleton BGS Number: 2596.0	Risk: No risk to aquifer Waste Type: N/A

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

4

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
33	27	E	387647 406112	Refuse Tip	1967 mapping	Polygon
34	478	E	388069 406302	Refuse Tip	1970 mapping	Polygon
Not shown	908	SE	388265 405433	Refuse Tip	1963 mapping	Polygon
Not shown	1000	N	387708 407225	Refuse Tip	1954 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

3

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
4B	70	SW	387405 405942	Type of Site: Waste Transfer Station Site Address: Hanson Street, Middleton, MANCHESTER, Greater	Planning Application Reference: 05/D45599 Date: -	Further Details: Scheme comprises of a waste transfer station. An application (ref: 05/D45599) for detailed planning permission was granted by Rochdale B.C. Planning decision obtained

ID	Distance (m)	Direction	NGR	Details		
				Manchester, M24 2HW		Data Source: Historic Planning Application Data Type: Point
5	76	S	387491 405924	Type of Site: Waste Transfer Station Site Address: Land At, Hanson Street, Middleton, Manchester, Greater Manchester, M24 2HW Planning Application Reference: 13/00649/FUL Date: 07/10/2013		Further Details: Scheme comprises use of land as extension to waste transfer station. Data Source: Historic Planning Application Data Type: Point
6	220	W	387219 405960	Type of Site: Waste Transfer Station Site Address: 21 Old Hall Street, Middleton, MANCHESTER, Greater Manchester, M24 Planning Application Reference: 07/D49909 Date: -		Further Details: Scheme comprises use of hall street (between rear of 21 townley street and spring vale waste transfer station) to provide extension to service yard and construction of 2.1m - 2.4m high fencing. Construction - fencing site works. An application (ref:49909) for detailed planning permission was granted by Rochdale B.C. Planning decision obtained Data Source: Historic Planning Application Data Type: Point

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

16

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

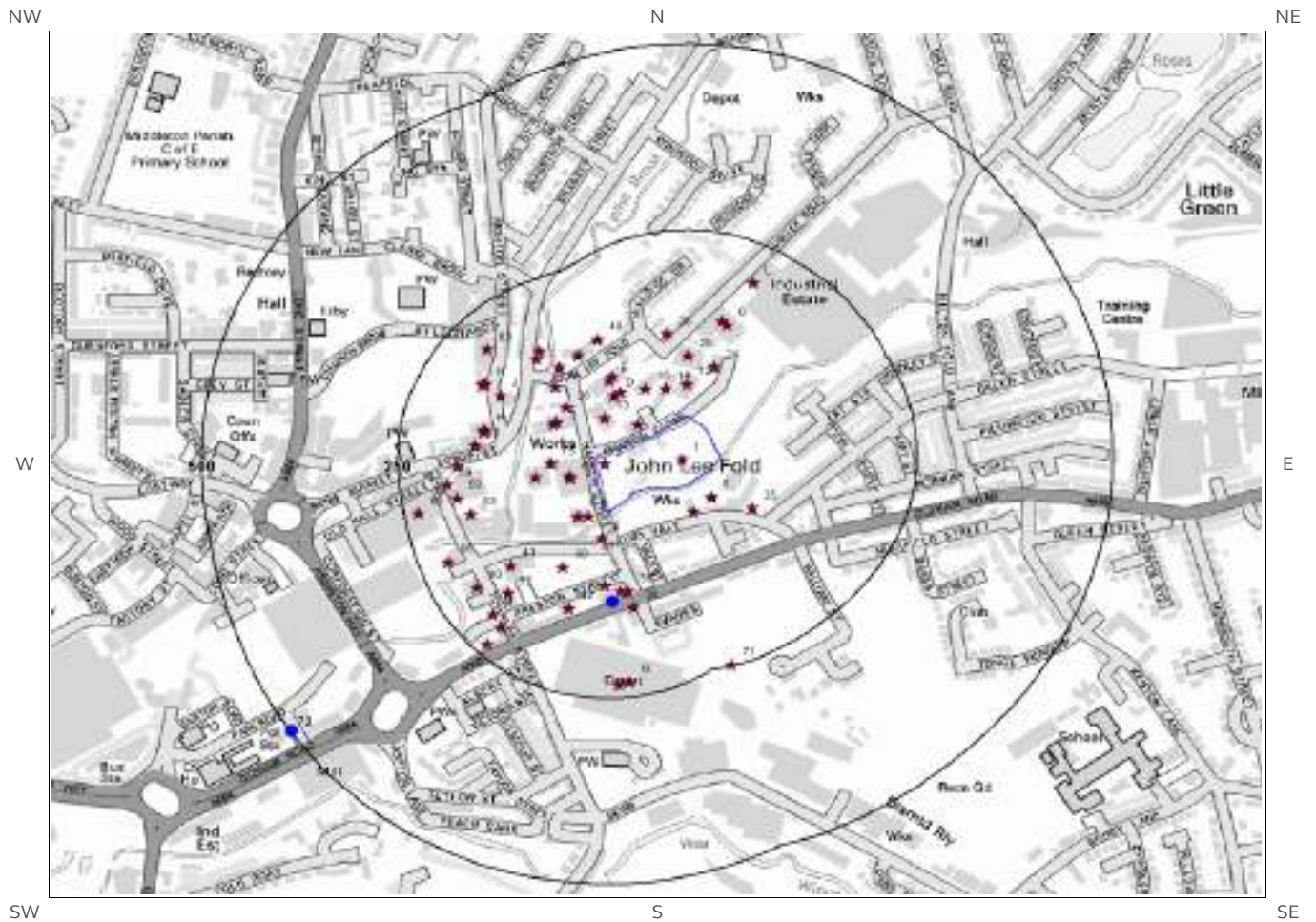
ID	Distance (m)	Direction	NGR	Details		
17A	35	NW	387413 406111	Site Address: Hanson Street, Middleton, Manchester, M24 2HW Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MWR004 EPR reference: EA/EPR/CB3007MU/T001 Operator: Middleton Waste And Recycling Limited Waste Management licence No: 50460 Annual Tonnage: 74999.0		Issue Date: 17/02/2007 Effective Date: 01/10/2014 Modified: 15/11/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: Land At Hanson Street Correspondence Address: -
18A	35	NW	387413 406111	Site Address: Land At, Hanson Street, Middleton, Manchester, M24 2HW Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HAL017 EPR reference: EA/EPR/YP3994CA/V002 Operator: Hall Steven		Issue Date: 17/02/2007 Effective Date: - Modified: 15/11/2013 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Land At Hanson Street

ID	Distance (m)	Direction	NGR	Details	
				Waste Management licence No: 50460 Annual Tonnage: 74999.0	Correspondence Address: -
19A	35	NW	387413 406111	Site Address: Land At, Hanson Street, Middleton, Manchester, M24 2HW Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: HAL017 EPR reference: EA/EPR/YP3994CA/A001 Operator: Hall Steven Waste Management licence No: 50460 Annual Tonnage: 25000.0	Issue Date: 17/02/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Land At Hanson Street Correspondence Address: -
20	38	S	387454 405983	Site Address: Land/ Premises At, Spring Vale, Middleton, Manchester, M24 2HR Type: ELV Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: VWA001 EPR reference: EA/EPR/ZP3095EU/A001 Operator: V W & Audi Used Spares Ltd Waste Management licence No: 100068 Annual Tonnage: 2499.0	Issue Date: 26/11/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: V W + Used Spares L T D Correspondence Address: -
21B	101	SW	387393 405944	Site Address: Spring Vale, Middleton, Manchester, M24 2HQ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW050 EPR reference: - Operator: Greater Manchester Waste Ltd Waste Management licence No: 50138 Annual Tonnage: 0.0	Issue Date: 26/03/2003 Effective Date: - Modified: 03/03/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Middleton Civic Amenity Site Correspondence Address: Po Box 151, Higher Swan Lane, Bolton, Lancashire, BL3 3WW
22B	101	SW	387393 405944	Site Address: Land/premises At, Spring Vale, Middleton, Manchester, M24 2HQ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW050 EPR reference: EA/EPR/YP3698CD/V003 Operator: Viridor Waste (Greater Manchester) Ltd Waste Management licence No: 50138 Annual Tonnage: 24999.0	Issue Date: 26/03/2003 Effective Date: - Modified: 26/05/2009 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Middleton Civic Amenity Site Correspondence Address: -
23B	101	SW	387393 405944	Site Address: Land/premises At, Spring Vale, Middleton, Manchester, M24 2HQ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW050 EPR reference: EA/EPR/YP3698CD/V003 Operator: Viridor Waste (Greater Manchester) Ltd Waste Management licence No: 50138 Annual Tonnage: 25000.0	Issue Date: 26/03/2003 Effective Date: - Modified: 26/05/2009 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Middleton Civic Amenity Site Correspondence Address: -
24B	101	SW	387393 405944	Site Address: Spring Vale, Middleton, Manchester, M24 2HQ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW050	Issue Date: 26/03/2003 Effective Date: - Modified: 03/03/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified

ID	Distance (m)	Direction	NGR	Details	
				EPR reference: - Operator: G M Waste Ltd Waste Management licence No: 50138 Annual Tonnage: 0.0	Site Name: Middleton Civic Amenity Site Correspondence Address: Po Box 151, Higher Swan Lane, Botlon, Lancashire, BL3 3WW
25B	101	SW	387393 405944	Site Address: Spring Vale, Middleton, Manchester, M24 2HQ Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW050 EPR reference: - Operator: Greater Manchester Waste Ltd Waste Management licence No: 50138 Annual Tonnage: 0.0	Issue Date: 26/03/2003 Effective Date: - Modified: 03/03/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Middleton Civic Amenity Site Correspondence Address: Po Box 151, Higher Swan Lane, Botlon, Lancashire, BL3 3WW
26B	101	SW	387393 405944	Site Address: Spring Vale, Middleton, Manchester, M24 2HQ Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW050 EPR reference: - Operator: Greater Manchester Waste Ltd Waste Management licence No: 50138 Annual Tonnage: 0.0	Issue Date: 26/03/2003 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Middleton Civic Amenity Site Correspondence Address: Po Box 151, Higher Swan Lane, Botlon, Lancs, BL3 3WW
27	131	NW	387325 406150	Site Address: Rear Of, 6, Morton Street, Middleton, Manchester, M24 6AN Type: Vehicle Depollution Facility <5000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: KEN066 EPR reference: EA/EPR/BB3035AE/A001 Operator: Mr Wayne Kenny & Mr Stephen Ramsey Waste Management licence No: 103157 Annual Tonnage: 4999.0	Issue Date: 28/10/2011 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: 3 Star Salvage Correspondence Address: -
28	209	SW	387270 405932	Site Address: Townley Street, Middleton, Manchester, M24 1AT Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GMW020 EPR reference: EA/EPR/SP3196CP/S002 Operator: G M Waste Ltd Waste Management licence No: 53677 Annual Tonnage: 25000.0	Issue Date: 01/02/1995 Effective Date: - Modified: - Surrendered Date: May 14 2003 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Middleton Civic Amenity Site Correspondence Address: -
29C	440	S	387590 405600	Site Address: Units 1-5 Linkway Trading Estate, Grimshaw Lane, Middleton, Manchester, M24 2AU Type: Physical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS136 EPR reference: EA/EPR/HP3598VD/S003 Operator: The Waste Exchange (U K) Ltd Waste Management licence No: 101689 Annual Tonnage: 0.0	Issue Date: 06/08/2010 Effective Date: - Modified: 24/06/2011 Surrendered Date: Aug 11 2014 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: The Waste Exchange Correspondence Address: -
30C	440	S	387590 405600	Site Address: Units 1-5 Linkway Trading Estate, Grimshaw Lane, Middleton, Manchester, Lancs, M24 2AU Type: Physical Treatment Facility Size: >= 75000 tonnes	Issue Date: 06/08/2010 Effective Date: - Modified: 24/06/2011 Surrendered Date: - Expiry Date: -

ID	Distance (m)	Direction	NGR	Details
				Environmental Permitting Regulations (Waste) Licence Number: WAS136 EPR reference: EA/EPR/HP3598VD/V002 Operator: The Waste Exchange Ltd Waste Management licence No: 101689 Annual Tonnage: 150000.0 Cancelled Date: - Status: Modified Site Name: The Waste Exchange Correspondence Address: -
31C	440	S	387590 405600	Site Address: Units 1-5 Linkway Trading Estate, Grimshaw Lane, Middleton, Manchester, Lancs, M24 2AU Type: Physical Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS136 EPR reference: EA/EPR/HP3598VD/V002 Operator: The Waste Exchange (uk) Ltd Waste Management licence No: 101689 Annual Tonnage: 150000.0 Issue Date: 06/08/2010 Effective Date: - Modified: 24/06/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: The Waste Exchange Correspondence Address: -
32	587	SE	387879 405564	Site Address: Peel Waste Limited, Grimshaw Lane, Middleton, Manchester, M24 2AE Type: 75kte HCl Waste TS + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PEE011 EPR reference: EA/EPR/NB3732RM/A001 Operator: Peel Waste Limited Waste Management licence No: 400109 Annual Tonnage: 74999.0 Issue Date: 26/03/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Peel Waste Limited Correspondence Address: -

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

71

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Depot	387554 406092	Greater Manchester, M24	Container and Storage	Transport, Storage and Delivery
2	0	On Site	Electricity Sub Station	387455 406086	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
3	22	N	Celect Tools	387497 406139	Unit F1 Hanson Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2QZ	Rubber, Silicones and Plastics	Industrial Products
4B	24	SW	Electricity Sub Station	387435 406016	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
5	30	SE	Works	387592 406042	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
6A	33	W	Hanson Street M O T Centre	387412 406067	Unit 1 Hanson Court, Hanson Street, Middleton, Manchester, Greater Manchester, M24 2YP	Vehicle Repair, Testing and Servicing	Repair and Servicing
7A	34	W	Works	387411 406070	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
8	35	S	V W & Audi Used Spares	387451 405986	Spring Vale, Middleton, Manchester, Greater Manchester, M24 2HR	Vehicle Parts and Accessories	Motoring
9	36	SW	Airsafe UK Ltd	387422 406015	Unit 4 Townley Park, Hanson Street, Middleton, Manchester, Greater Manchester, M24 2UF	Recycling, Reclamation and Disposal	Recycling Services
10B	36	SW	Middleton Scrap Metal Ltd	387422 406015	4 Hanson Street, Middleton, Manchester, Greater Manchester, M24 2UF	Scrap Metal Merchants	Recycling Services
11	37	S	Middleton Sheet Metal Co Ltd	387568 406021	Spring Vale, Middleton, Manchester, Greater Manchester, M24 2HS	Metalworkers Including Blacksmiths	Construction Services
12	43	N	Works	387561 406194	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
13	45	N	Depot	387455 406148	Greater Manchester, M24	Container and Storage	Transport, Storage and Delivery
14	45	NW	Hill Farm Forge	387534 406187	20, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2HD	Metals Manufacturers, Fabricators and Stockholders	Industrial Products
15	55	W	Tank	387387 406087	Greater Manchester, M24	Tanks (Generic)	Industrial Features

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
16	60	NW	A T L Transformers Ltd	387507 406188	Hanson Close, Middleton, Manchester, Greater Manchester, M24 2HD	Electrical Production and Manipulation Equipment	Industrial Products
17C	68	NW	Wrought Iron Centre	387394 406142	Unit 6 Hanson Street Works, Hanson Street, Middleton, Greater Manchester, M24 2UF	Metalworkers Including Blacksmiths	Construction Services
18C	69	NW	Restoration Services	387393 406142	Hanson Street Works, Hanson Street, Middleton, Manchester, Greater Manchester, M24 2UF	Vehicle Repair, Testing and Servicing	Repair and Servicing
19C	69	NW	Hi-spec	387393 406142	Hanson Street Works, Hanson Street, Middleton, Manchester, Greater Manchester, M24 2UF	Metalworkers Including Blacksmiths	Construction Services
20C	69	NW	Works	387391 406139	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
21D	69	NW	Wilson Potter Brewery	387467 406177	Unit E2 Hanson Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2QZ	Alcoholic Drinks	Foodstuffs
22D	69	NW	V T V Solutions Ltd	387467 406177	Unit F2 Hanson Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2QZ	Construction Completion Services	Construction Services
23D	70	N	G L Flow	387476 406182	Unit E1 Hanson Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2QZ	Measurement and Inspection Equipment	Industrial Products
24	74	NE	Metcraft Lighting	387595 406216	Unit B Jubilee Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2UH	Lampshades and Lighting	Consumer Products
25	75	SE	Electricity Sub Station	387644 406027	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
26	76	NW	Electricity Sub Station	387406 406162	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
27	76	W	Elevated Engineering Services Ltd	387368 406068	Unit 1 Townley Park, Hanson Street, Middleton, Manchester, Greater Manchester, M24 2UF	Industrial Engineers	Engineering Services
28	81	N	McKenna	387561 406231	Jubilee Road, Middleton, Manchester, Greater Manchester, M24 2LX	Plate Makers, Print Finishers and Type Setters	IT, Advertising, Marketing and Media Services
29E	90	NW	Depot	387462 406198	Greater Manchester, M24	Container and Storage	Transport, Storage and Delivery
30	92	SW	Viridor Ltd	387402 405947	Spring Vale, Middleton, Manchester, Greater Manchester, M24 2HR	Waste Storage, Processing and Disposal	Infrastructure and Facilities
31E	94	N	Adhesive Development s Ltd	387465 406204	Unit 4 John Lee Fold Warehouse, John Lee Fold, Middleton, Manchester, Greater Manchester, M24 2LR	Adhesives and Sealants	Industrial Products
32F	98	S	B P Car Wash	387455 405922	Oldham Road, Middleton, Manchester, Greater Manchester, M24 2LD	Vehicle Cleaning Services	Personal, Consumer and Other Services
33F	107	S	BP Service Station	387476 405915	Oldham Road, Middleton, Manchester, Greater	Petrol and Fuel Stations	Road and Rail

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
Manchester, M24 2LD							
34	107	NW	McGarry Car & Van Hire	387392 406189	4, John Lee Fold, Middleton, Manchester, Greater Manchester, M24 2LR	Vehicle Hire and Rental	Hire Services
35	109	S	Mercury Petrol Station	387485 405915	191 Oldham Road, Middleton, Manchester, Greater Manchester, M24 2LD	Petrol and Fuel Stations	Road and Rail
36	113	N	Granite Zone	387535 406260	1, Jubilee Road, Middleton, Manchester, Greater Manchester, M24 2LT	Stone Quarrying and Preparation	Extractive Industries
37	128	N	Works	387398 406215	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
38	132	S	Multiscaff	387493 405893	142, Oldham Road, Middleton, Manchester, Greater Manchester, M24 2LH	Construction and Tool Hire	Hire Services
39G	133	N	Car Dip UK Ltd	387611 406273	Unit A Jubilee Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2UH	Paints, Varnishes and Lacquers	Industrial Products
40G	134	N	Bollard & Ward	387604 406277	Jubilee Road, Middleton, Manchester, Greater Manchester, M24 2LX	Vehicle Repair, Testing and Servicing	Repair and Servicing
41	135	N	T P Tyres & Exhausts Ltd	387421 406232	John Lee Fold, Middleton, Manchester, Greater Manchester, M24 2LR	Vehicle Repair, Testing and Servicing	Repair and Servicing
42	137	S	Middleton M O T Centre Ltd	387409 405892	151, Oldham Road, Middleton, Manchester, Greater Manchester, M24 2LD	Vehicle Repair, Testing and Servicing	Repair and Servicing
43	143	SW	Drive 2000	387336 405949	Townley Street, Middleton, Manchester, Greater Manchester, M24 1AT	Vehicle Repair, Testing and Servicing	Repair and Servicing
44H	146	W	Works	387302 406132	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
45H	146	W	Brentex Sales	387301 406129	Pioneer Mill, Morton Street, Middleton, Manchester, Greater Manchester, M24 6AN	Adhesives and Sealants	Industrial Products
46H	146	W	N F S	387301 406129	Pioneer Mill, Morton Street, Middleton, Manchester, Greater Manchester, M24 6AN	Special Purpose Machinery and Equipment	Industrial Products
47J	147	NW	Works	387323 406178	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
48	147	N	Electricity Sub Station	387447 406254	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
49I	151	NW	Depot	387369 406227	Greater Manchester, M24	Container and Storage	Transport, Storage and Delivery
50	153	W	Works	387290 406111	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
51I	159	NW	Works	387372 406238	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
52	167	SW	Homeshield Shutters	387332 405912	21, Townley Street, Middleton, Manchester,	General Construction Supplies	Industrial Products

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
					Greater Manchester, M24 1AT		
53	167	W	Gantry	387285 406019	Greater Manchester, M24	Travelling Cranes and Gantries	Industrial Features
54J	172	NW	Burns Rubber Ltd	387303 406193	Systems House, Morton Street, Middleton, Manchester, Greater Manchester, M24 6AN	Vehicle Parts and Accessories	Motoring
55K	172	NW	Archway	387303 406193	Systems House, Morton Street, Middleton, Manchester, Greater Manchester, M24 6AN	Building and Component Suppliers	Construction Services
56K	174	NW	Works	387300 406193	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
57	175	W	Dave Hawkes Motorcycle Services	387267 406082	12-14, Lodge Street, Middleton, Manchester, Greater Manchester, M24 6AL	New Vehicles	Motoring
58	181	W	The Car Shop	387267 406040	9, Townley Street, Middleton, Manchester, Greater Manchester, M24 1AT	Vehicle Parts and Accessories	Motoring
59	189	W	Customize	387255 406058	7, Townley Street, Middleton, Manchester, Greater Manchester, M24 1AT	Clothing, Components and Accessories	Consumer Products
60	194	SW	Works	387293 405920	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
61L	198	NE	Brulimar Optical Group	387645 406330	Unit C-d Jubilee Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2UH	Photographic and Optical Equipment	Household, Office, Leisure and Garden
62L	198	NE	Alpha Environmental Consultants Ltd	387645 406330	Unit C-d Jubilee Park, Hanson Close, Middleton, Manchester, Greater Manchester, M24 2UH	Recycling, Reclamation and Disposal	Recycling Services
63	200	NW	Works	387306 406240	Greater Manchester, M24	Unspecified Works Or Factories	Industrial Features
64M	201	SW	Bar Preservation	387313 405882	46-48, Townley Street, Middleton, Manchester, Greater Manchester, M24 1AS	Construction Completion Services	Construction Services
65M	206	SW	M S R Furniture & Beds	387322 405866	50-52, Townley Street, Middleton, Manchester, Greater Manchester, M24 1AS	Furniture	Consumer Products
66	213	W	Electricity Sub Station	387256 405955	Greater Manchester, M24	Electrical Features	Infrastructure and Facilities
67N	229	S	Depot	387487 405793	Greater Manchester, M24	Container and Storage	Transport, Storage and Delivery
68N	232	S	Geometric Furniture Ltd	387474 405789	Geometric House, Townley Street, Middleton, Manchester, Greater Manchester, M24 1AT	Carpets, Flooring, Rugs and Soft Furnishings	Consumer Products
69	233	W	Comfy Quilts	387217 406019	Albany Mill, Old Hall Street, Middleton, Manchester, Greater Manchester, M24 1AG	Beds and Bedding	Consumer Products

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
70	234	SW	B Luft	387305 405843	5, Sharp Street, Middleton, Manchester, Greater Manchester, M24 1AD	Clothing, Components and Accessories	Consumer Products
71	248	S	Mast	387617 405816	Greater Manchester, M24	Telecommunications Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

2

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
72F	120	S	387465 405900	BP	191, Oldham Road, Middleton, Manchester, Greater Manchester, M24 2LD	No	Open
73	499	SW	387057 405726	TESCO EXTRA	Barton Road, Middleton, Manchester, Greater Manchester, M24 1HB	No	Open

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

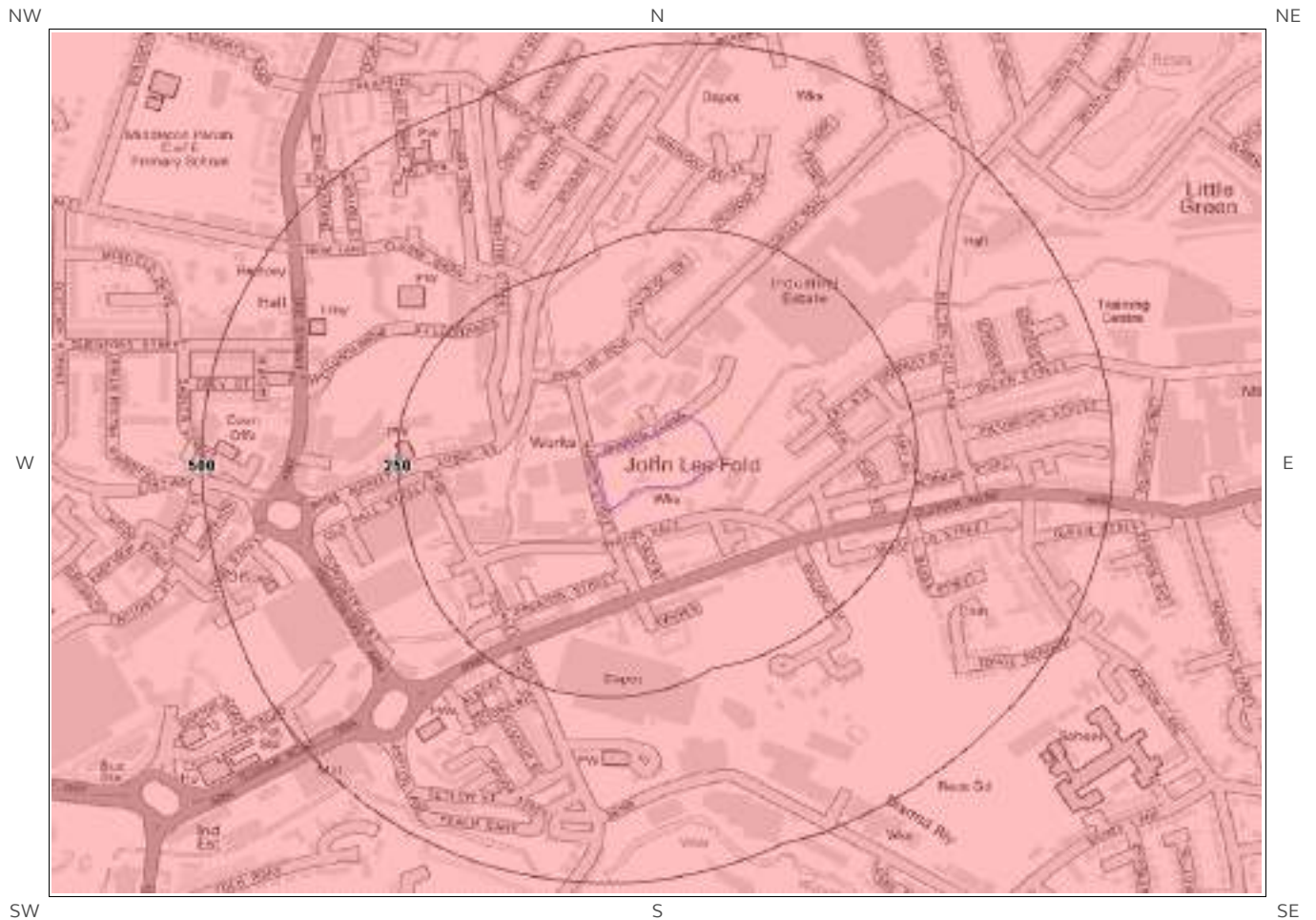
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

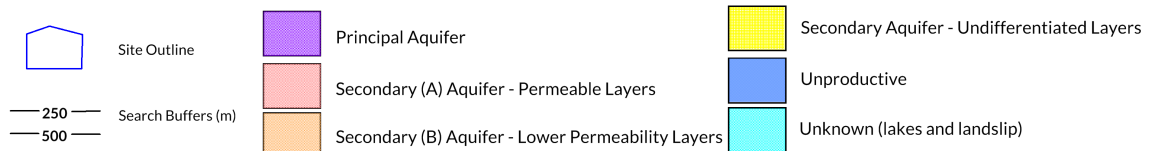
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

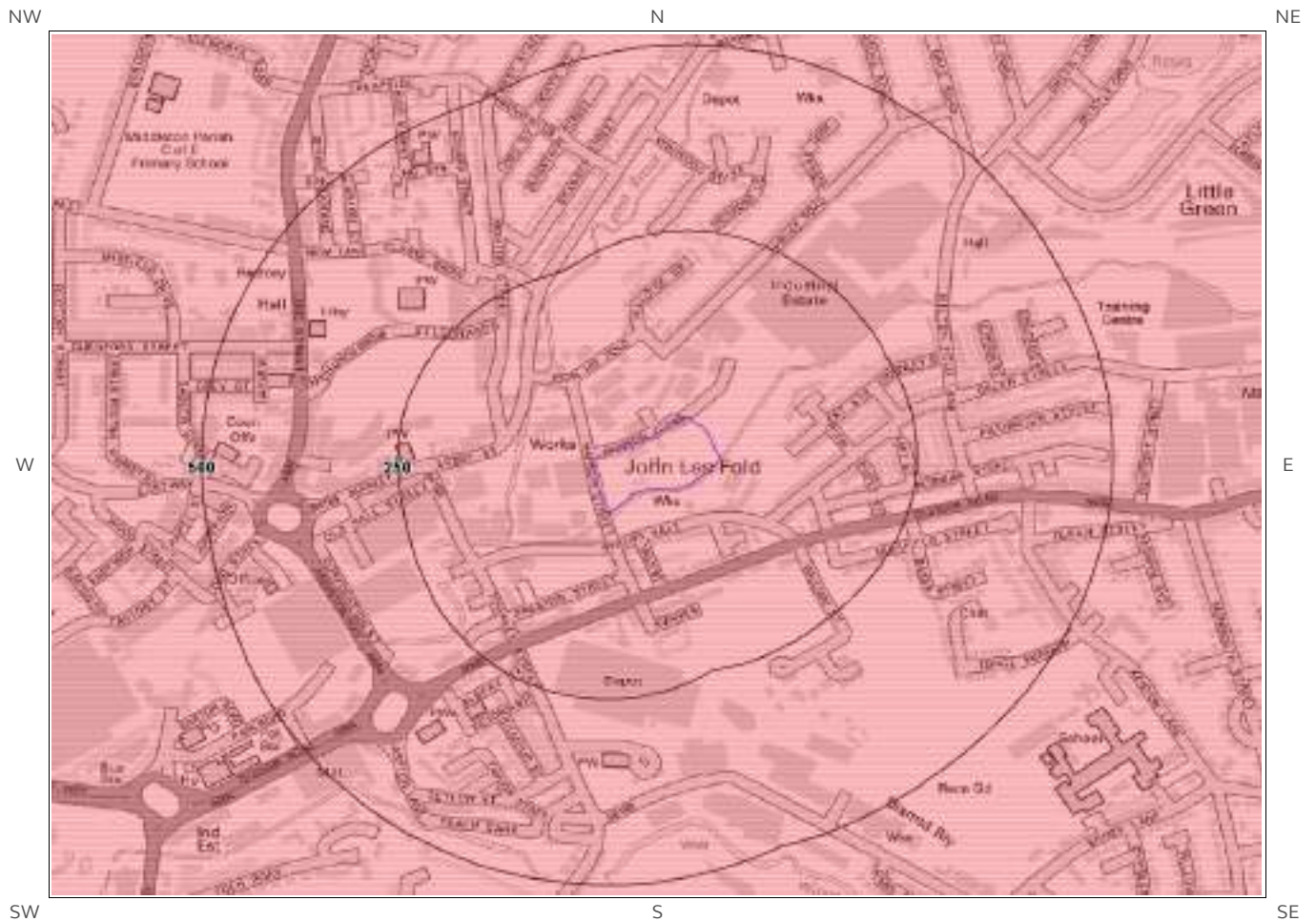
6a. Aquifer Within Superficial Geology



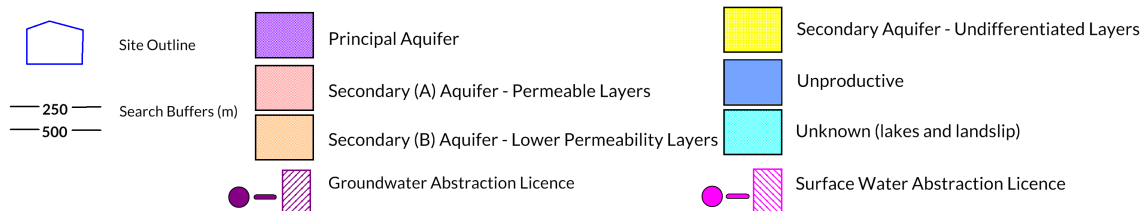
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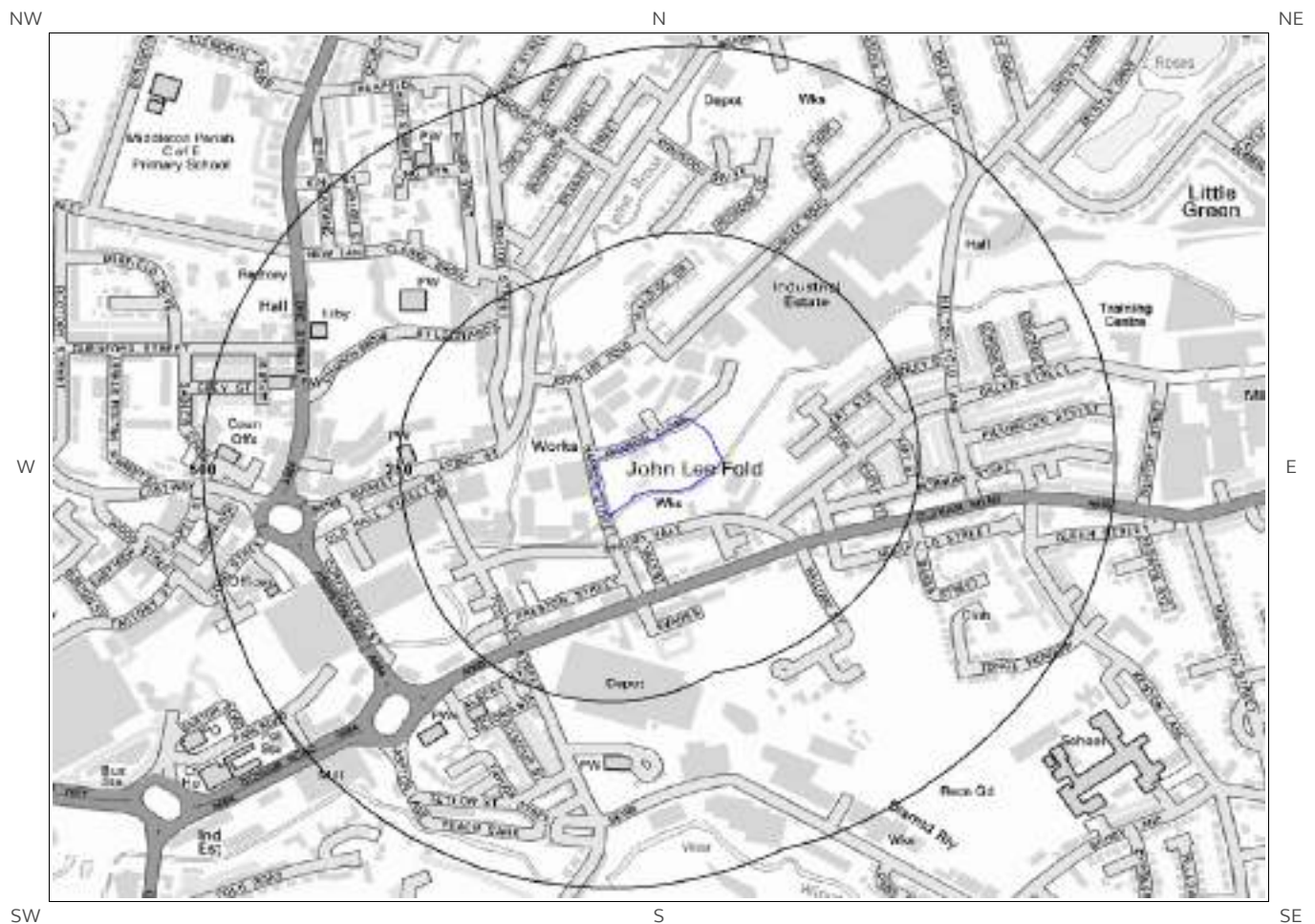
6b. Aquifer Within Bedrock Geology and Abstraction Licences



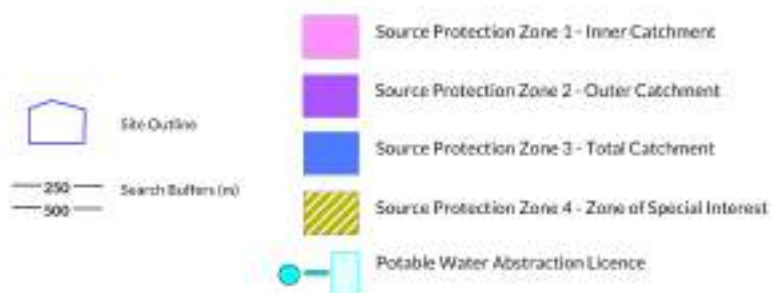
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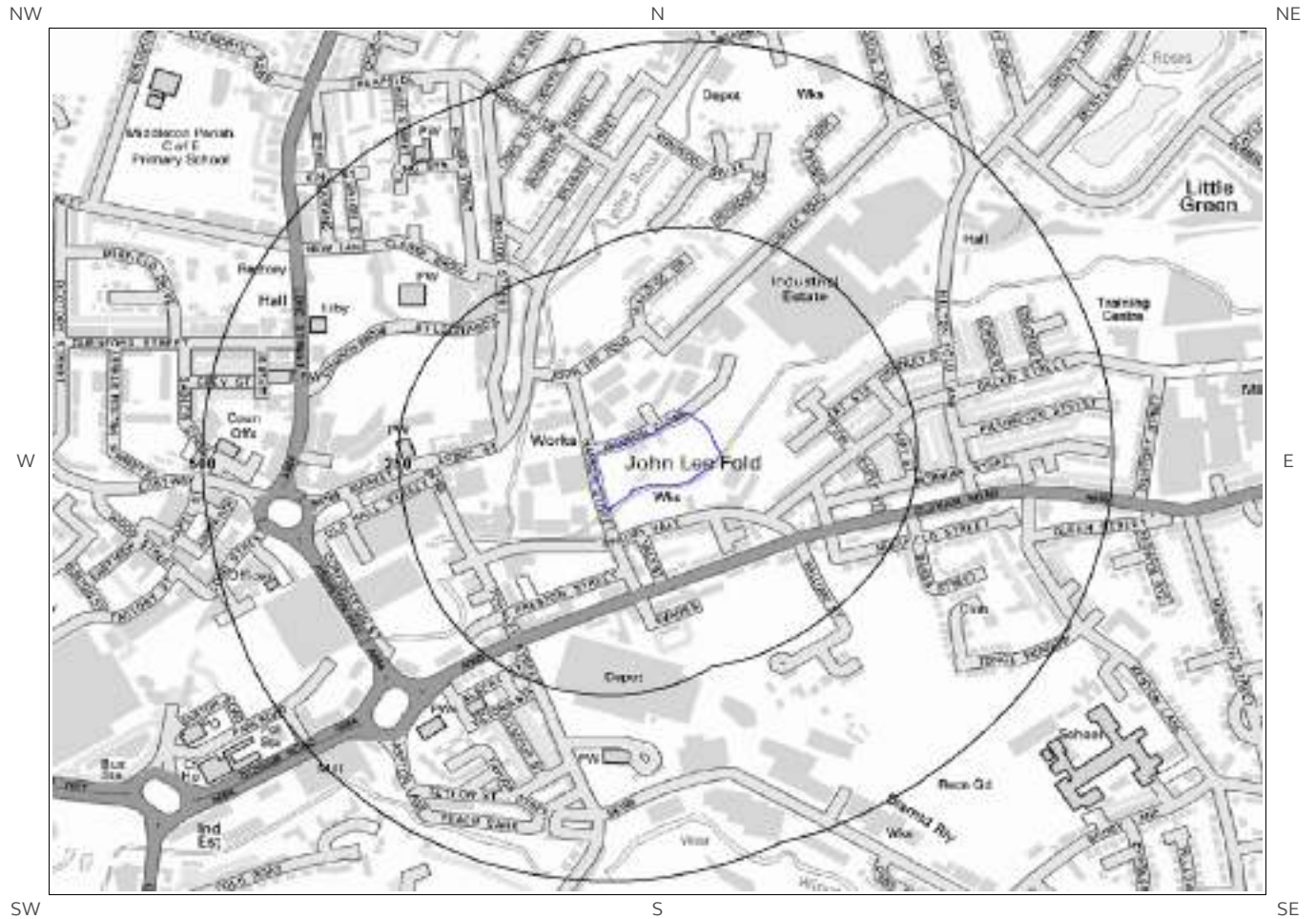
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



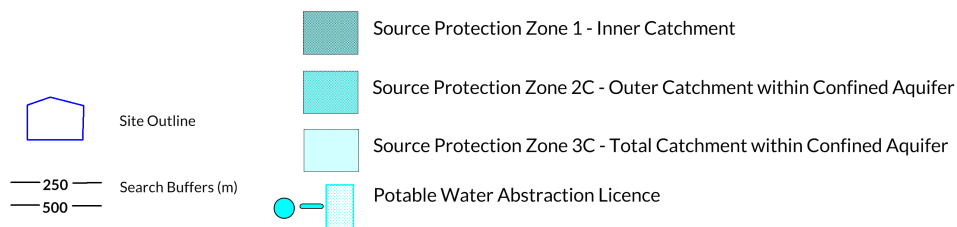
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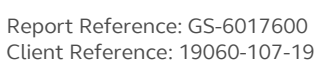
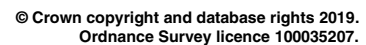


6d. Hydrogeology – Source Protection Zones within confined aquifer



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers 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. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers 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. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	722	E	388312 406242	Status: Historical Licence No: 2569005001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES DON MILL, DON STREET, MIDDLETON Data Type: Point Name: Vita Cellular Foams (UK) Limited trading as Vitafoam Limited Annual Volume (m³): 545520 Max Daily Volume (m³): 2182.08 Original Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 29/04/2010 Version End Date:
Not shown	730	E	388320 406240	Status: Historical Licence No: 2569005001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES DON MILL, DON STREET, MIDDLETON Data Type: Point Name: VITAFOAM LTD Annual Volume (m³): 545520 Max Daily Volume (m³): 2182.08 Original Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2007 Version End Date:
Not shown	730	E	388320 406240	Status: Historical Licence No: 2569005001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, DON MILL, DON STREET, MIDDLETON Data Type: Point Name: EASTLAND COMPOUNDING LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 31/03/2004 Version End Date:
Not shown	730	E	388320 406240	Status: Historical Licence No: 2569005001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, DON MILL, DON STREET, MIDDLETON" Data Type: Point Name: VITACOM LTD Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/01/1966 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not	867	E	388460	Status: Historical Annual Volume (m³): -

ID	Distance (m)	Direction	NGR	Details
shown			406240	Licence No: 2569005006 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R IRK AT PREMISES, DON MILL, DON STREET, MIDDLETON Data Type: Point Name: EASTLAND COMPOUNDING LTD Max Daily Volume (m³): - Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 101 Version Start Date: 31/03/2004 Version End Date: -
Not shown	867	E	388460 406240	Status: Historical Licence No: 2569005006 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRK AT PREMISES, DON MILL, DON STREET, MIDDLETON" Data Type: Point Name: VITACOM LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 18/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 23/11/1998 Version End Date: -
Not shown	957	SW	386600 405600	Status: Historical Licence No: 2569005035 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T" Data Type: Point Name: ROBERT McBRIDE LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/01/1995 Version End Date: -
Not shown	957	SW	386600 405600	Status: Active Licence No: 2569005035 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T Data Type: Point Name: ROBERT McBRIDE LTD Annual Volume (m³): 28867 Max Daily Volume (m³): 2182.08 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -
Not shown	957	SW	386600 405600	Status: Historical Licence No: 2569005035 Details: Boiler Feed Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T" Data Type: Point Name: ROBERT McBRIDE LTD Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/01/1995 Version End Date: -
Not shown	957	SW	386600 405600	Status: Active Licence No: 2569005035 Details: Boiler Feed Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT MIDDLETON, MANCHESTER(T Data Type: Point Name: ROBERT McBRIDE LTD Annual Volume (m³): 28867 Max Daily Volume (m³): 2182.08 Application No: - Original Start Date: 20/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -
Not shown	1588	W	385900 405700	Status: Active Licence No: 2569005055 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT NORTH MANCHESTER GOLF C Data Type: Point Name: THE NEW NORTH MANCHESTER GOLF Annual Volume (m³): 2273 Max Daily Volume (m³): 45.46 Application No: - Original Start Date: 21/02/1977 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2008 Version End Date: -

ID	Distance (m)	Direction	NGR	Details
CLUBLTD				

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site Identified

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
26	157	W	387300 406000	River Name: Wince Bk Reach: Qsl At Castleton Stw To Irk End/Start of Stretch: End of Stretch NGR	E	E	E	E	E
27A	519	S	387630 405530	River Name: Irk Reach: Wince Brook To Moston Bk. End/Start of Stretch: Start of Stretch NGR	E	E	E	E	E
Not shown	879	SW	386730 405530	River Name: Irk Reach: Royton Stw To Wince Brook End/Start of Stretch: End of Stretch NGR	E	E	E	E	E
Not shown	928	SW	386720 405460	River Name: Moston Bk Reach: Qsl At Foxdenton Lane To Irk End/Start of Stretch: End of Stretch NGR	E	E	E	E	E
Not shown	954	N	387650 407100	River Name: Whit Bk (irk) Reach: Qsl At Stake Hill To Trub Bk. End/Start of Stretch: End of Stretch NGR	E	E	E	E	E

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
31A	519	S	387630 405530	River Name: Irk Reach: Wince Brook To Moston Bk. End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	1 S	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.4
26	1 S	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.4
2	4 S	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
27	4 S	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	12 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.9
28	12 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.9
4	96 W	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.8
29	96 W	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.8
5	133 W	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
30	133 W	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.3
6	226 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.7
31	226 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.7
7	231 W	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
32	231 W	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	333 NE	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	333 NE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
33	333 NE	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
34	333 NE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	334 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
35	334 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	337 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.7
36	337	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	SW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.7
12	338 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
37	338 SW	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
13	349 N	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	349 N	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	355 NE	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.0
39	355 NE	River Irk	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.0
15	365 N	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
Not shown	365 N	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 4.0
16	427 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 8.2
Not shown	427 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 8.2
17	453 NE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	453 NE	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
18	468 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.2
Not shown	468 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 6.2
19	474 SW	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.9
Not shown	474 SW	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 5.9
20	475 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
Not shown	475 SW	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 3.4
21	485 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
22	485 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
23	485 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.1
Not shown	485 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	485 S	Wince Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	485 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 2.1

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
24	486 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	486 S	-	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
25	498 N	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	498 N	Whit Brook	Inland river not influenced by normal tidal action.	Catchment Area: Mersey Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

6.11 Surface Water Features

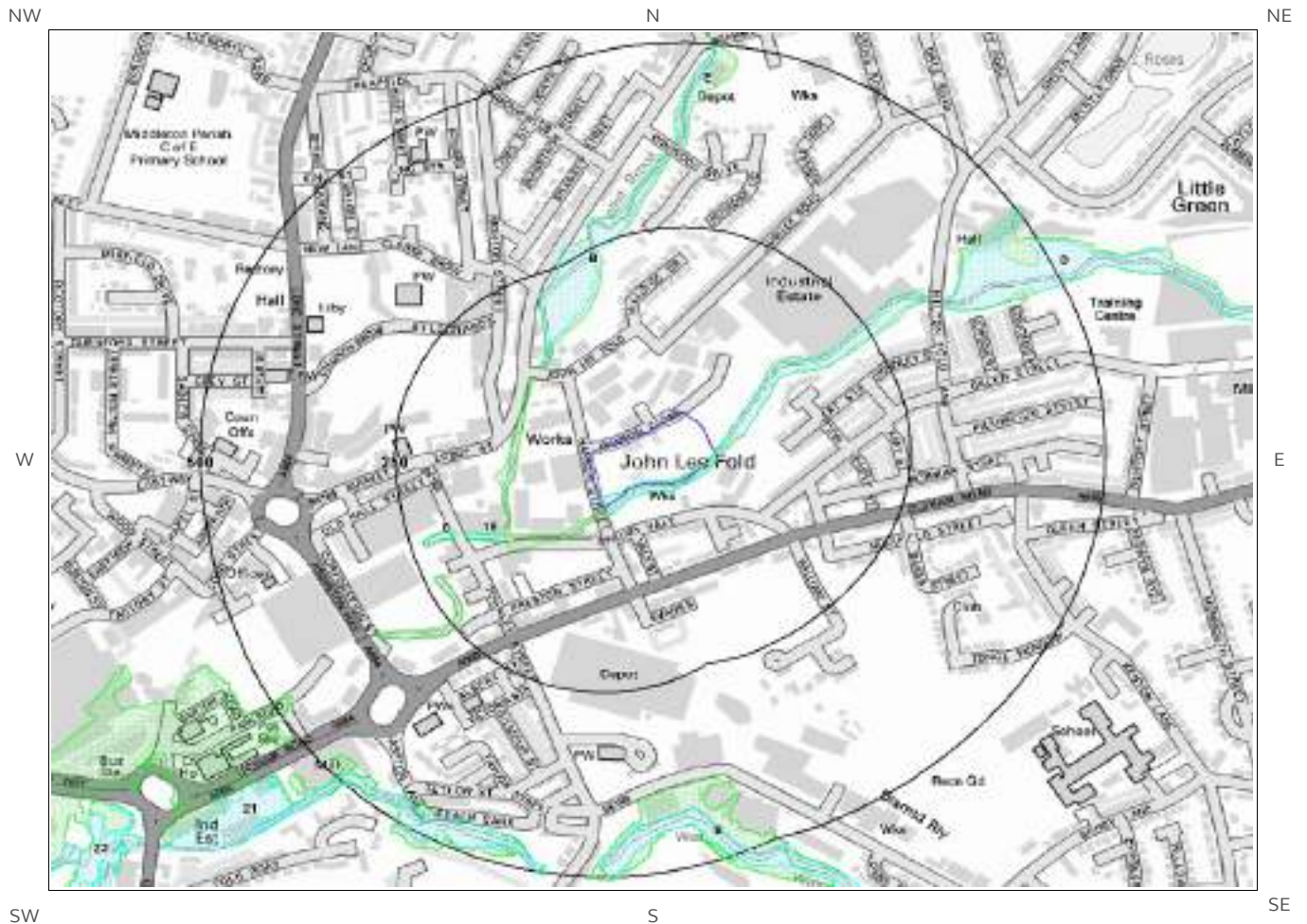
Surface water features within 250m of the study site

Identified

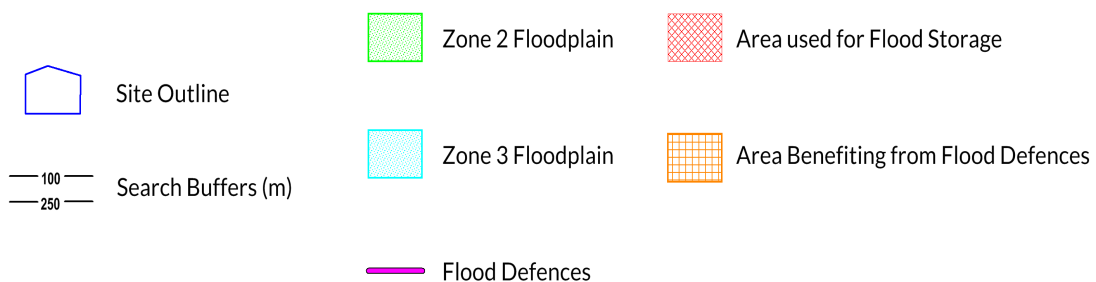
The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
10	SW
129	NW
193	W
222	SW

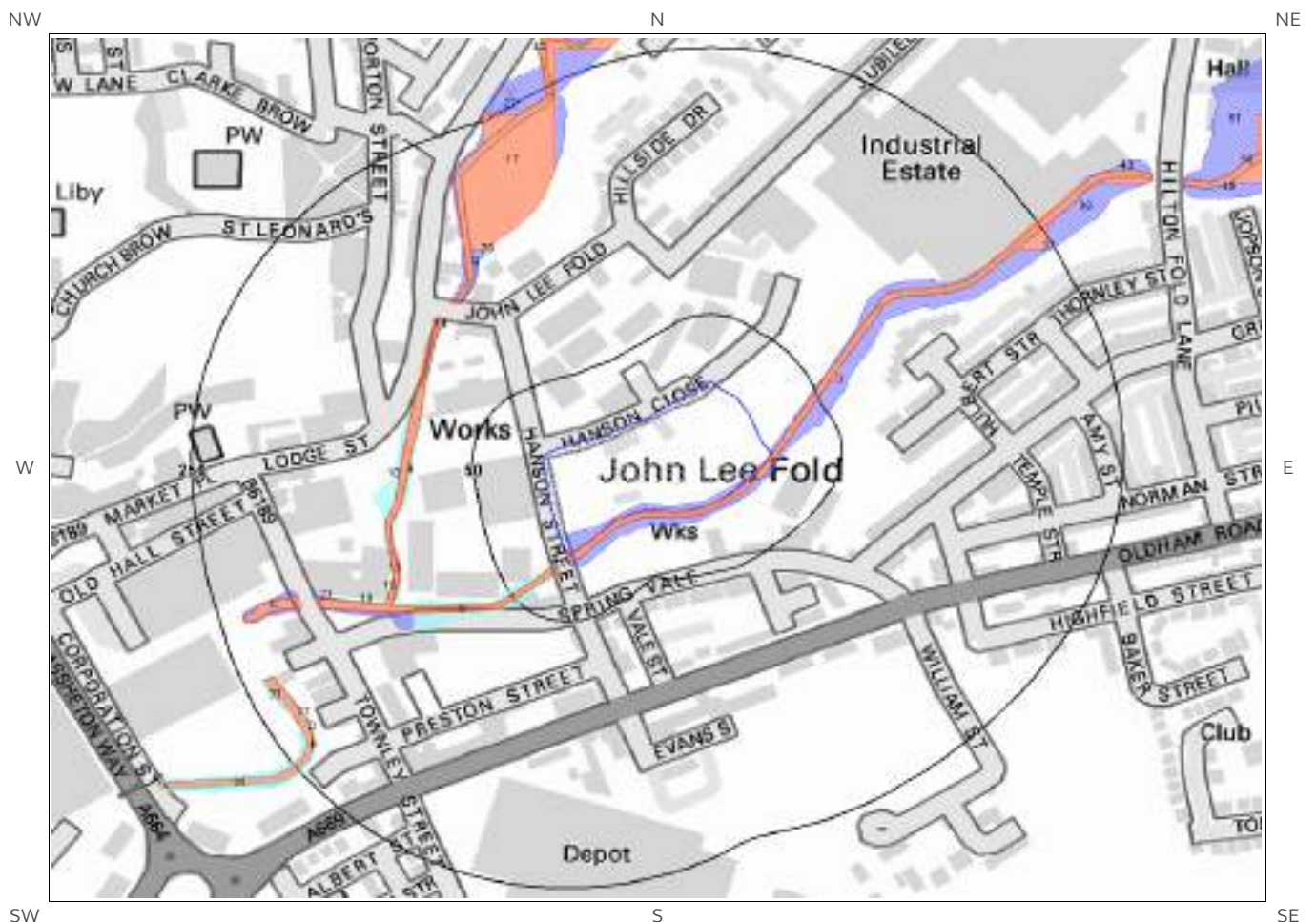
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



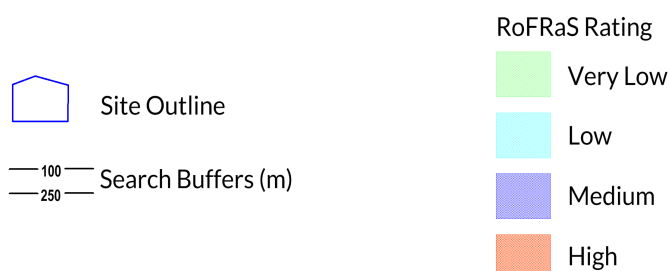
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
2	10	SW	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
3B	128	NW	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
4C	191	W	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)
5	222	SW	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
2	132	NW	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
3B	133	W	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)
4C	194	W	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite

High

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a High (1 in 30 or greater) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Medium
2	0.0	On Site	High
3	2.0	S	Medium
4A	10.0	SW	Medium
5	10.0	SW	High
6	11.0	SW	Low
7A	13.0	SW	Medium
8	17.0	SW	Low

7.4 Flood Defences

Flood Defences within 250m of the study site

None identified

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site

None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site

None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site Identified

Clearwater Flooding or Superficial Deposits Flooding Clearwater & Superficial Deposits Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

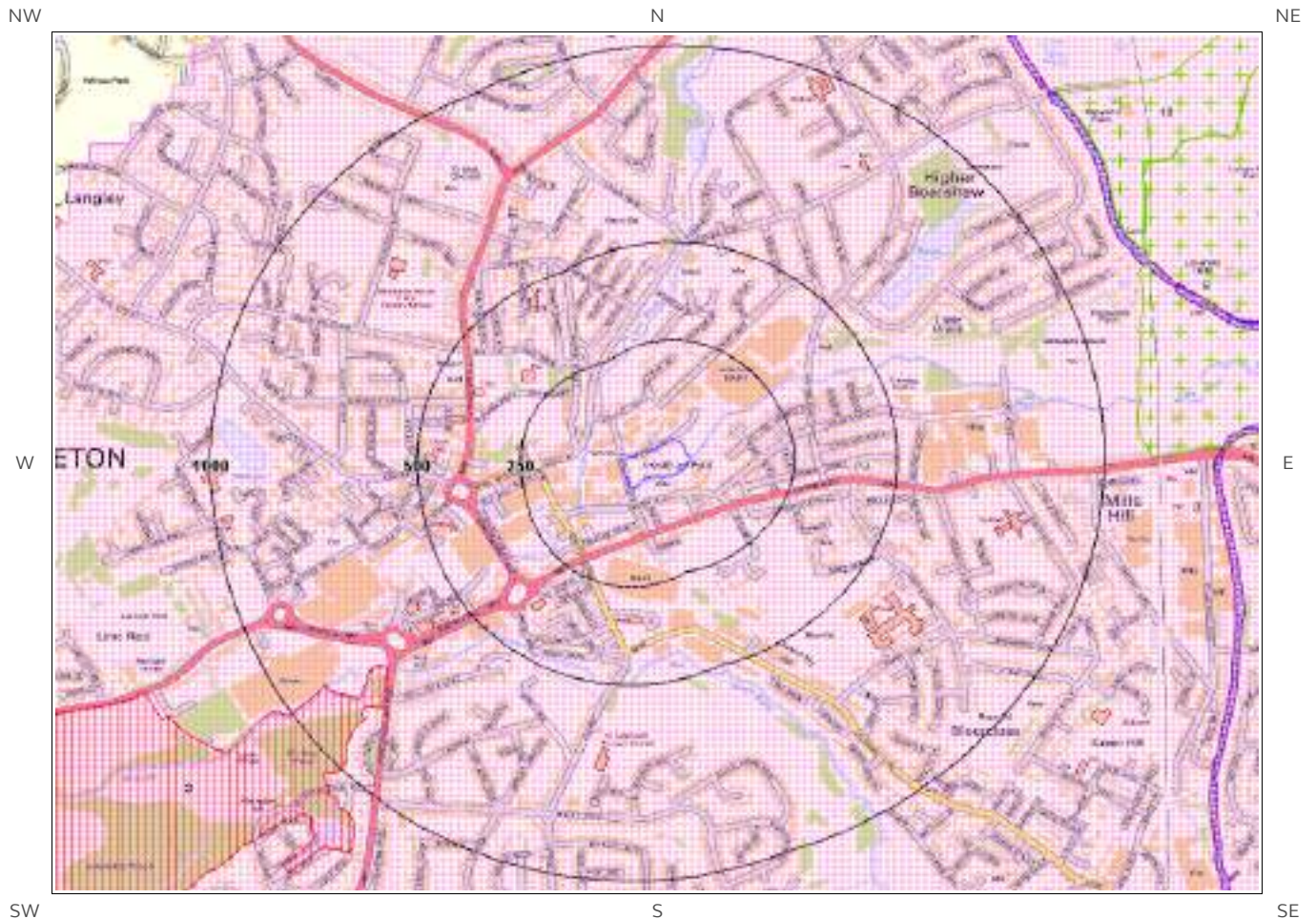
7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result Low

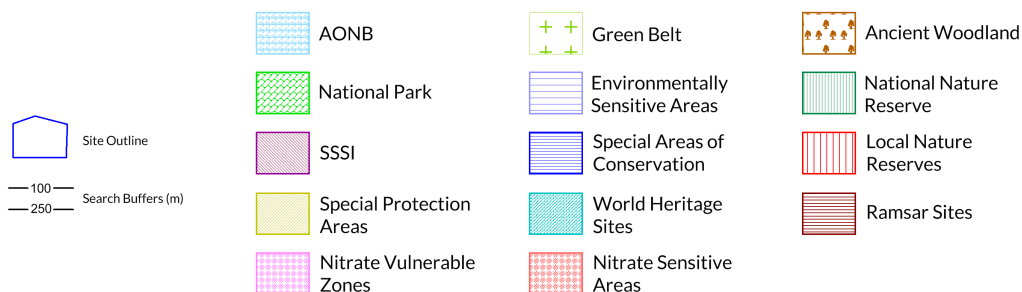
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

1

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
2A	1178	NE	Rochdale Canal	Natural England

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

1

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1A	1178	NE	Rochdale Canal	Natural England

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

2

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1535	N	HOPWOOD CLOUGH	Ancient and Semi-Natural Woodland
Not shown	1827	N	HOPWOOD CLOUGH	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

3

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
3	743	SW	Alkington Woods	Natural England
Not shown	1162	N	Hopwood Woodlands	Natural England
Not shown	1813	N	Hopwood Woodlands	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

1

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
6	0	On Site	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

2

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
9	1086	E	Liverpool, Manchester and West Yorks Greenbelt	Oldham District (B)
10	1130	N	Liverpool, Manchester and West Yorks Greenbelt	Rochdale

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Moderate

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com



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Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
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BGS Geological Hazards Reports and general geological enquiries:
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DX 716176 Mansfield 5
www.coal.gov.uk



Ordnance Survey
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Tel: 08456 050505



Local Authority
Authority: Rochdale Metropolitan Borough Council
Phone: 01706 647 474
Web: <http://www.rochdale.gov.uk/>
Address: Number One Riverside, Smith Street, Rochdale, Lancashire,

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
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Tel: 01252 845444



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<https://www.groundsure.com/terms-and-conditions-feb11-2019>

PWA Geo-Environmental Ltd

SUMMIT HOUSE, THE CROSSINGS BUSINESS
PARK, RIPARIAN WAY, CROSS HILLS,
KEIGHLEY, BD20 7BW

Groundsure
Reference:

GS-6017601

Your Reference: 19060-107-19

Report Date 10 May 2019

Report Delivery Method: Email - pdf

Geo Insight

Address: UNIT 1, HANSON CLOSE INDUSTRIAL ESTATE, HANSON CLOSE, MIDDLETON, M24 2HD

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: UNIT 1, HANSON CLOSE INDUSTRIAL ESTATE, HANSON CLOSE,
MIDDLETON, M24 2HD

Date: 10 May 2019

Reference: GS-6017601

Client: PWA Geo-Environmental Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 11-Jun-2015
Grid Reference: 387518,406084
Site Size: 1.1039ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

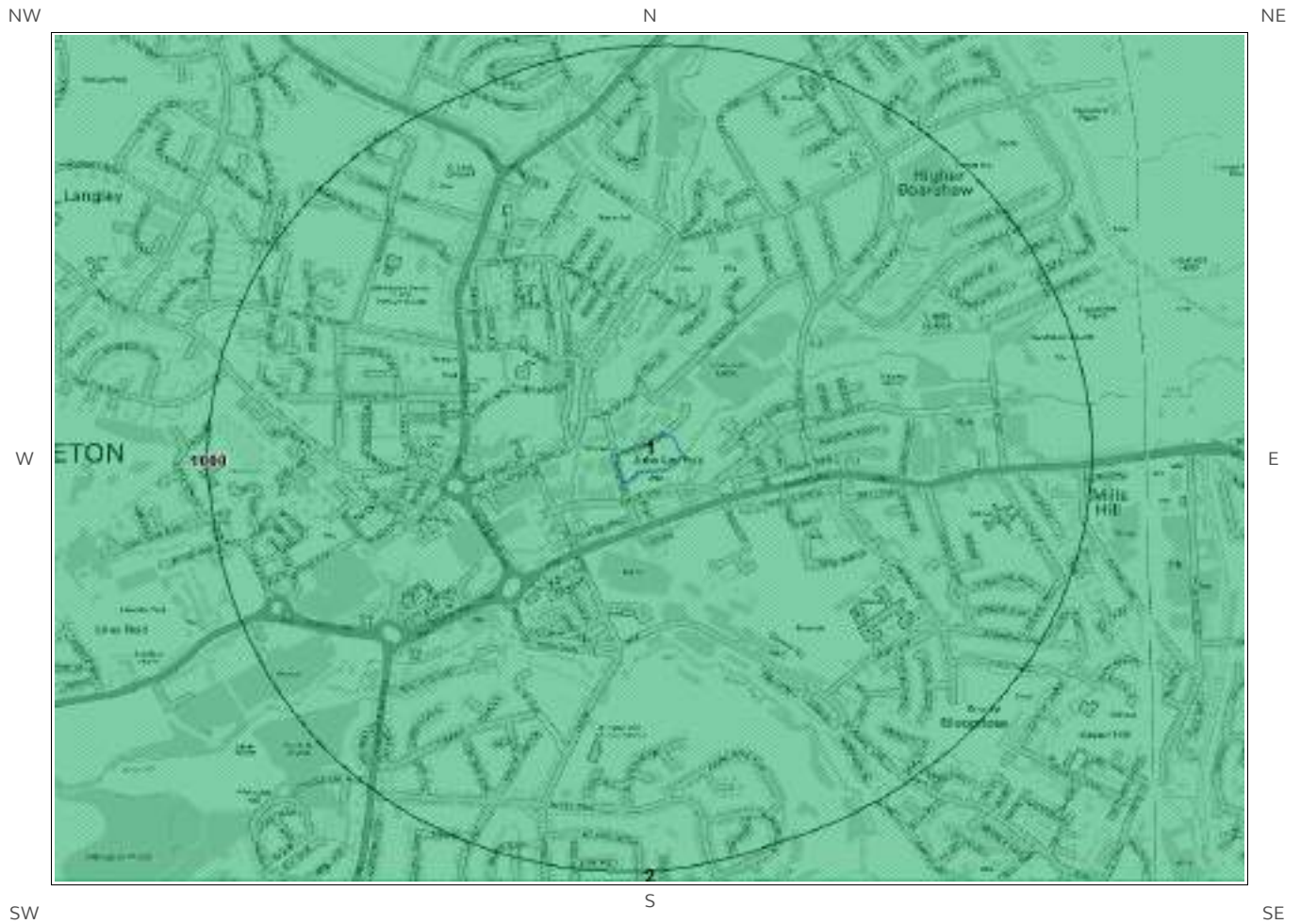
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	16	23	32	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	6
4.3 Current Ground Workings	0	0	0	3	2

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	6
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

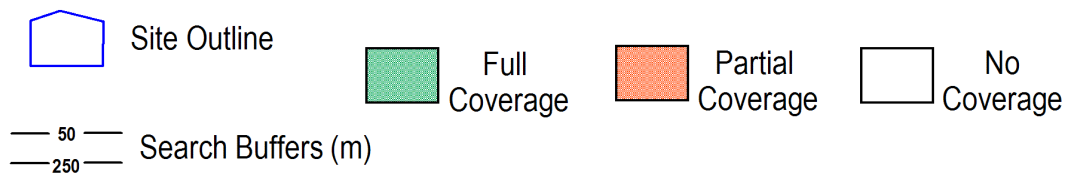
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Moderate				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	1	5	15		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	4	5	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	22	Not Searched	
9.3 Historical Railways	0	0	2	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	1020.0	Some deposits are mapped	Full	Full	Some deposits are mapped

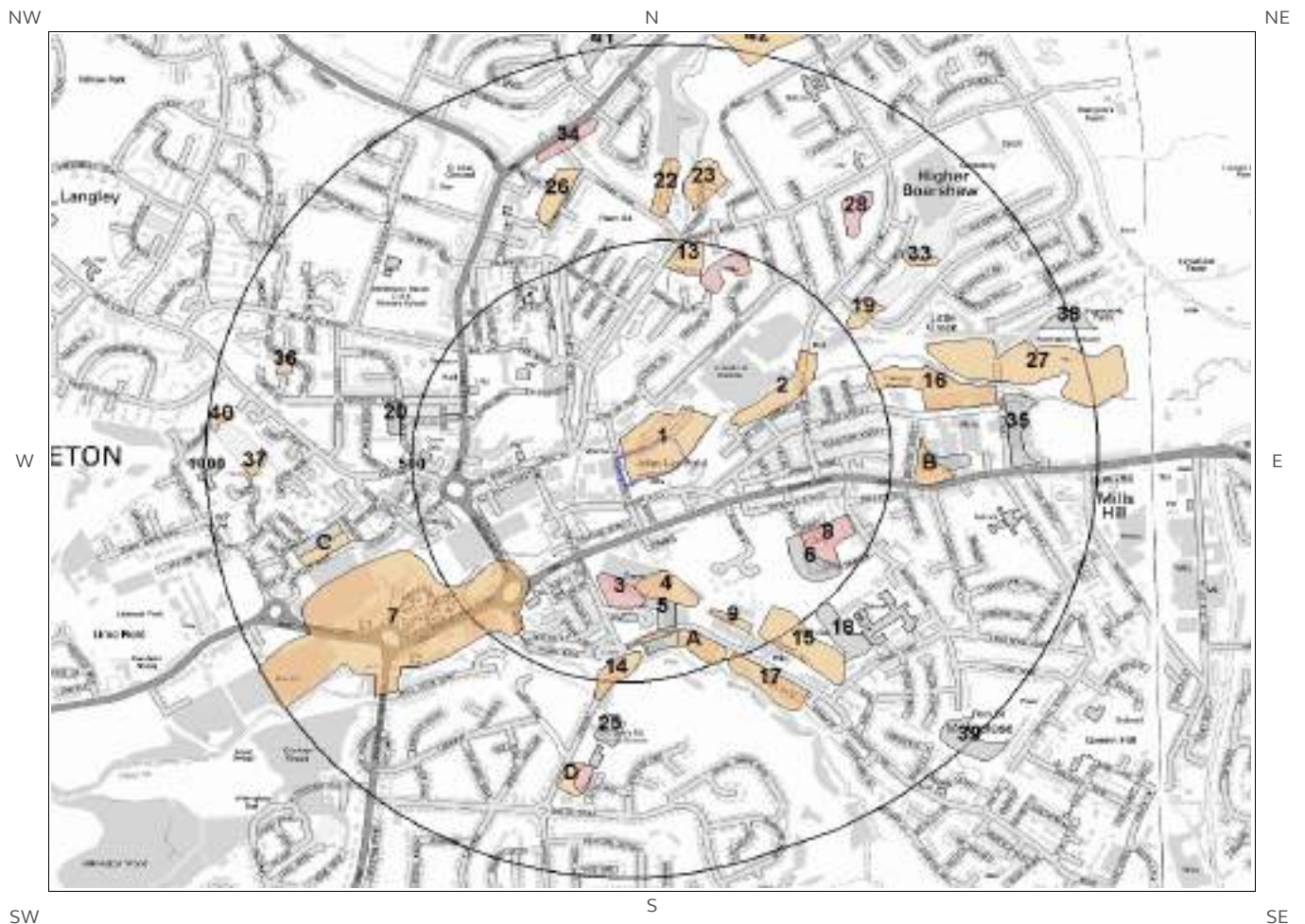
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

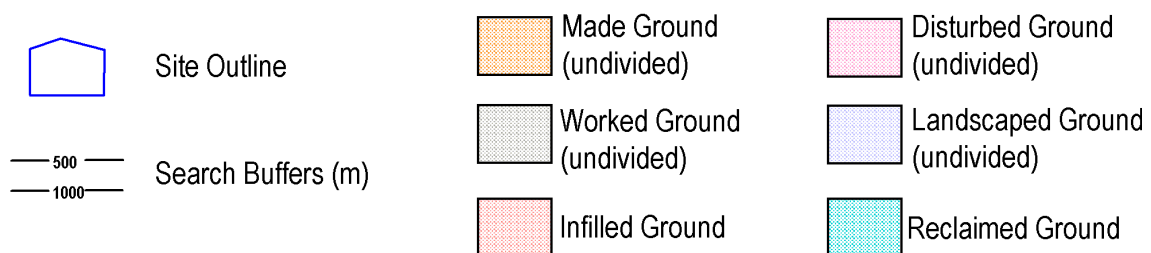
1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

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1. Geology 1:10,000 scale

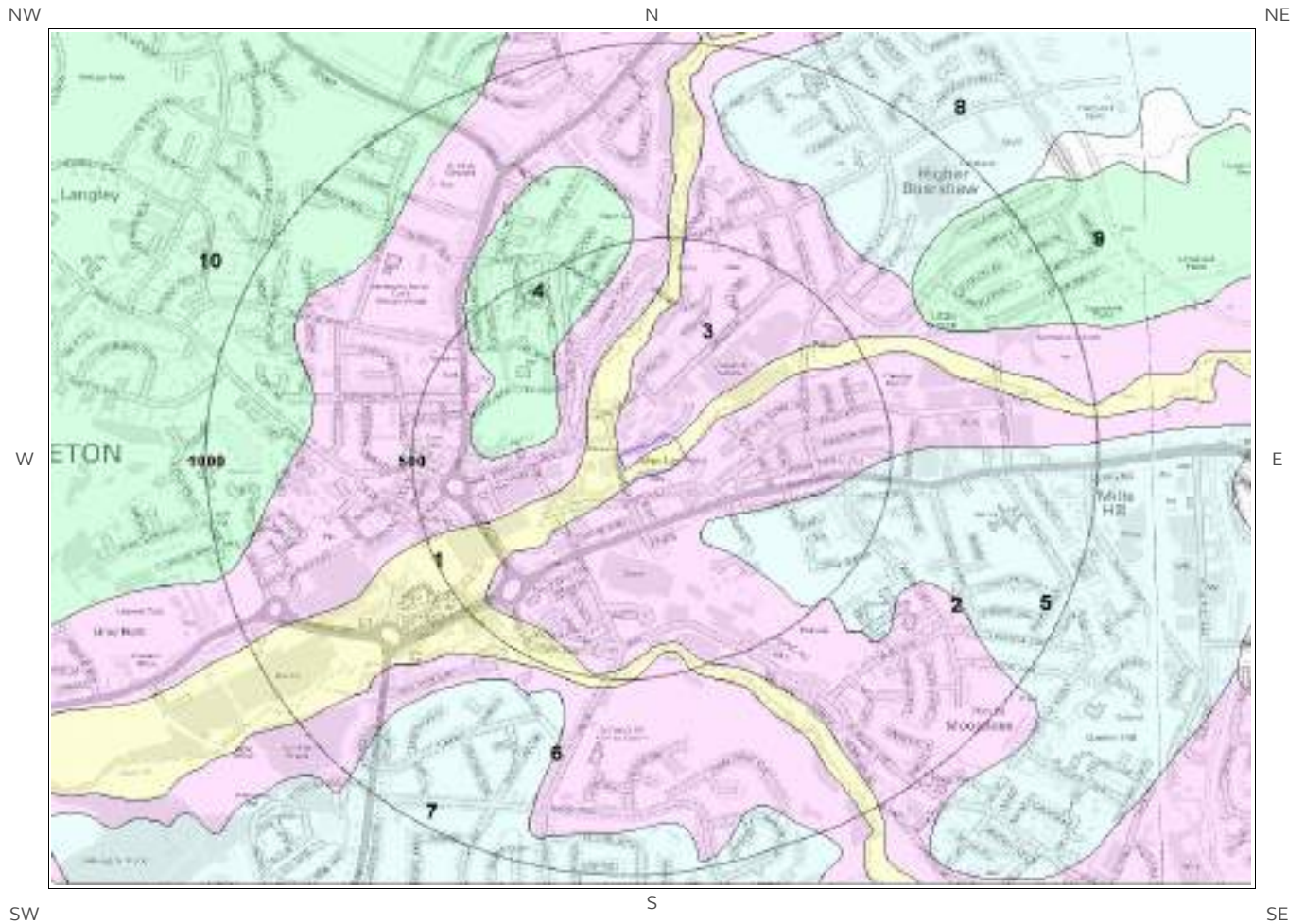
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

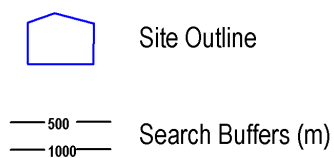
ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	139.0	NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	226.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	231.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	283.0	S	WGR-VOID	Worked Ground (Undivided)	Void
6	321.0	SE	WGR-VOID	Worked Ground (Undivided)	Void
7	330.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	342.0	SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
9	367.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10A	381.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11	381.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
12A	391.0	S	WGR-VOID	Worked Ground (Undivided)	Void
13	417.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
14	422.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
15	428.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
16	482.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
17	487.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
18	494.0	SE	WGR-VOID	Worked Ground (Undivided)	Void

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
2	0.0	On Site	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
3	0.0	On Site	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
4	162.0	W	HMGDD-DMTN	Hummocky (moundy) Glacial Deposits, Devensian - Diamicton	Diamicton
5	163.0	SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
6	438.0	S	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

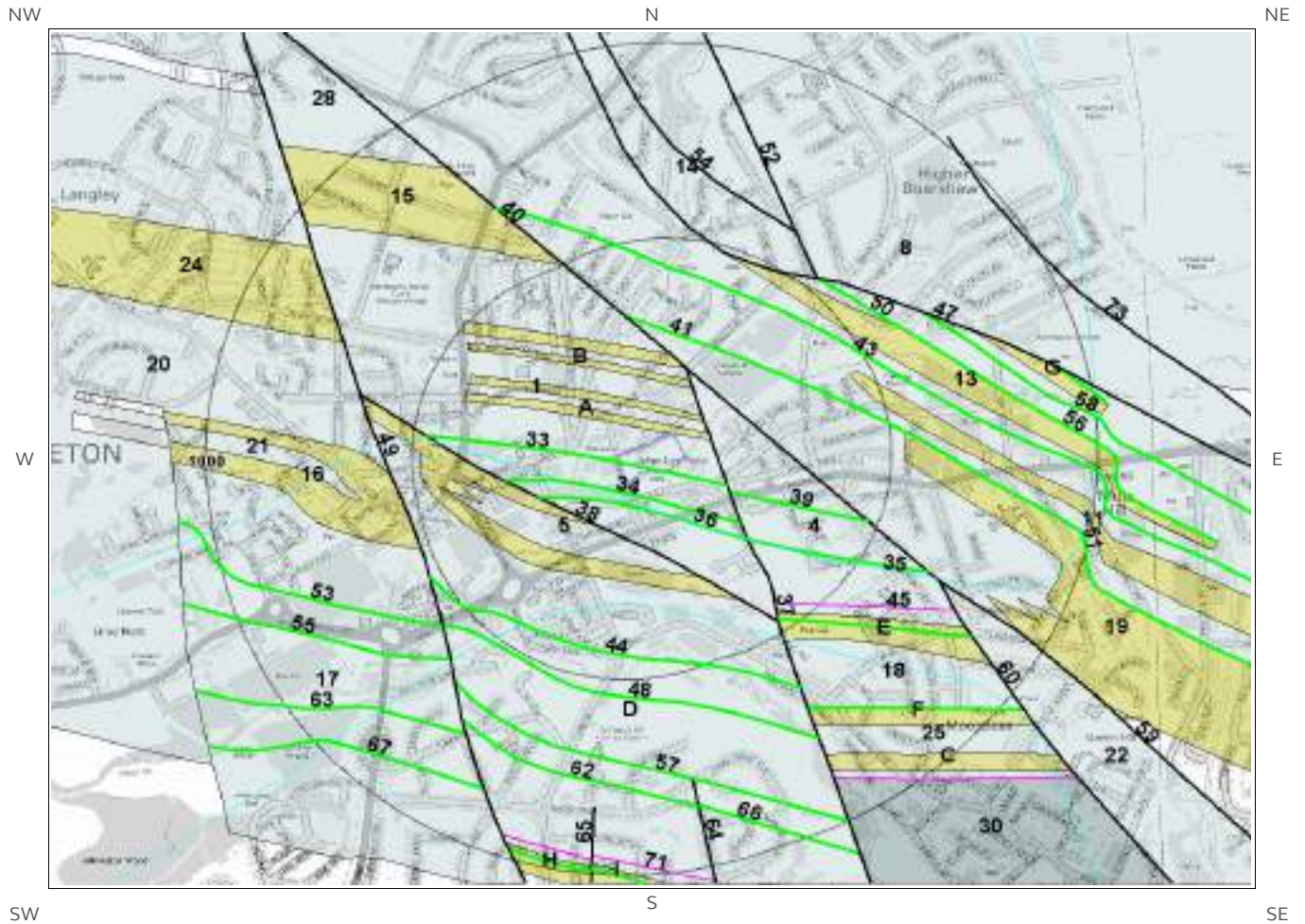
No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

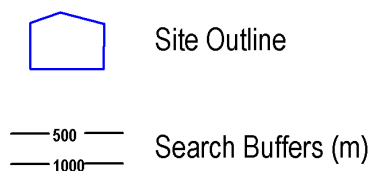
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2A	3.0	N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
3A	49.0	N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
4	71.0	E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
5	124.0	SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
6	125.0	SW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
7B	127.0	N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
8	152.0	NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
9B	173.0	N	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
10D	244.0	S	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
11	446.0	NE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
12E	452.0	SE	BLR-SDST	Blenfire Rock - Sandstone	Langsettian Sub-age
13	460.0	NE	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
14	481.0	N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
15	495.0	NW	RYS-SDST	Royley Sandstone - Sandstone	Langsettian Sub-age

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
33	0.0	On Site	ROCK	Coal seam, inferred
34	22.0	S	ROCK	Coal seam, inferred
35	40.0	S	LANDFORM	Buried channel or valley margin
36	50.0	S	ROCK	Coal seam, inferred

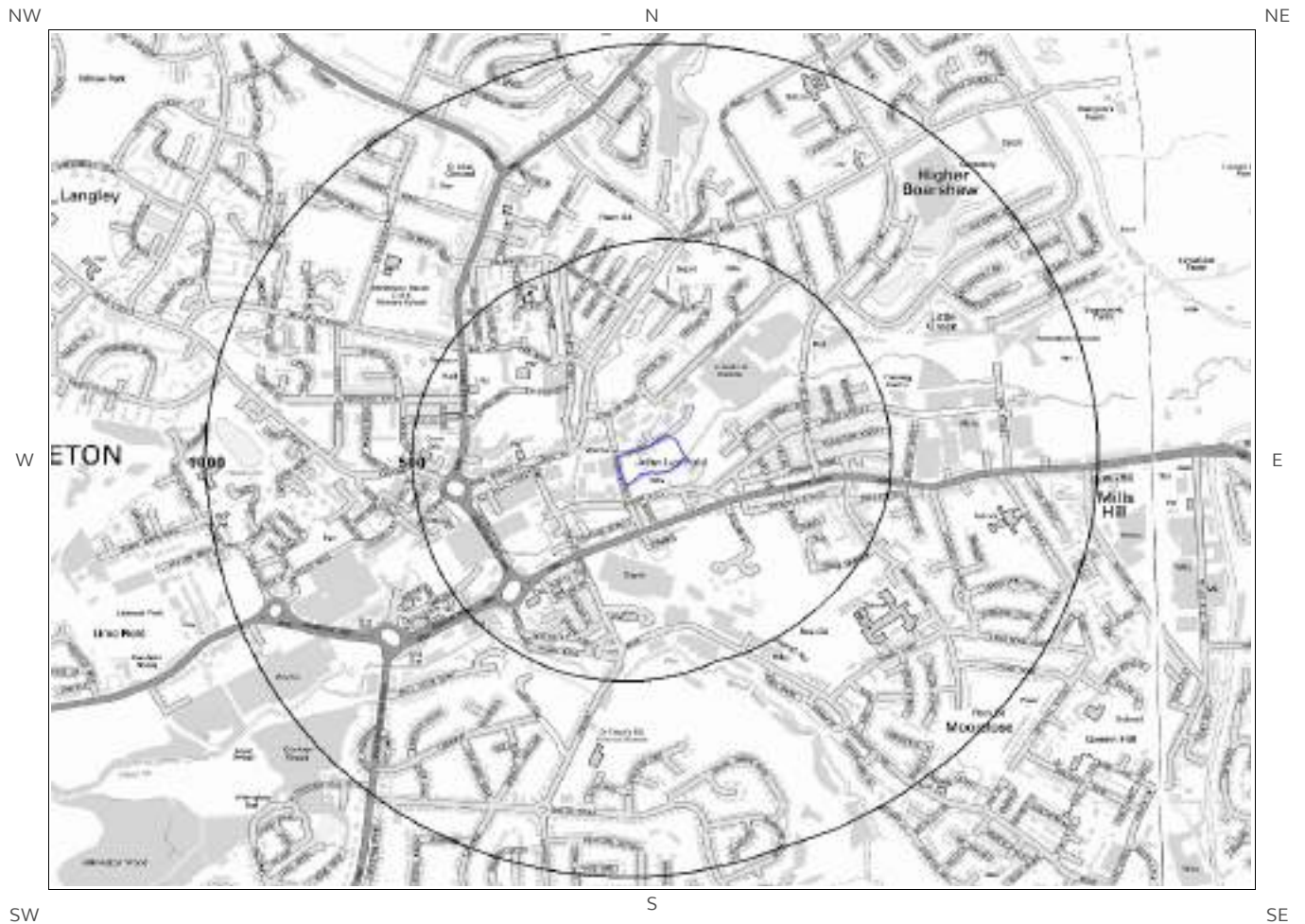
ID	Distance (m)	Direction	Category Description	Feature Description
37	71.0	E	FAULT	Normal fault, inferred; crossmarks on downthrow side
38	124.0	SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
39	143.0	SE	ROCK	Coal seam, inferred
40	152.0	NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
41	245.0	N	ROCK	Coal seam, inferred
42D	305.0	S	LANDFORM	Buried channel or valley margin
43	397.0	NE	ROCK	Coal seam, inferred
44	428.0	S	ROCK	Coal seam, inferred
45	429.0	SE	FOSSIL_HORIZON	Fossil horizon, mussel band
46E	464.0	SE	ROCK	Coal seam, inferred
47	481.0	N	FAULT	Normal fault, inferred; crossmarks on downthrow side

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

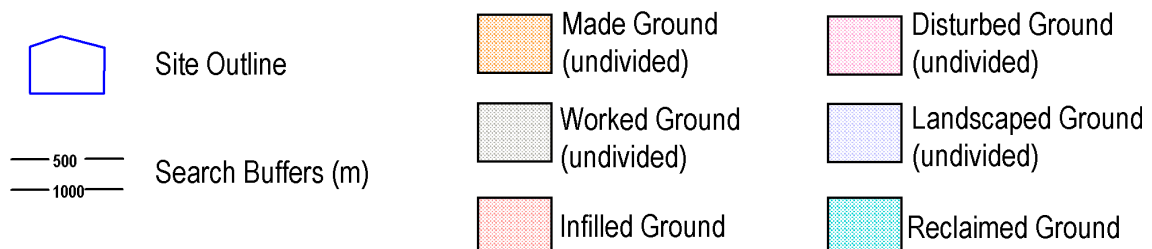
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? No

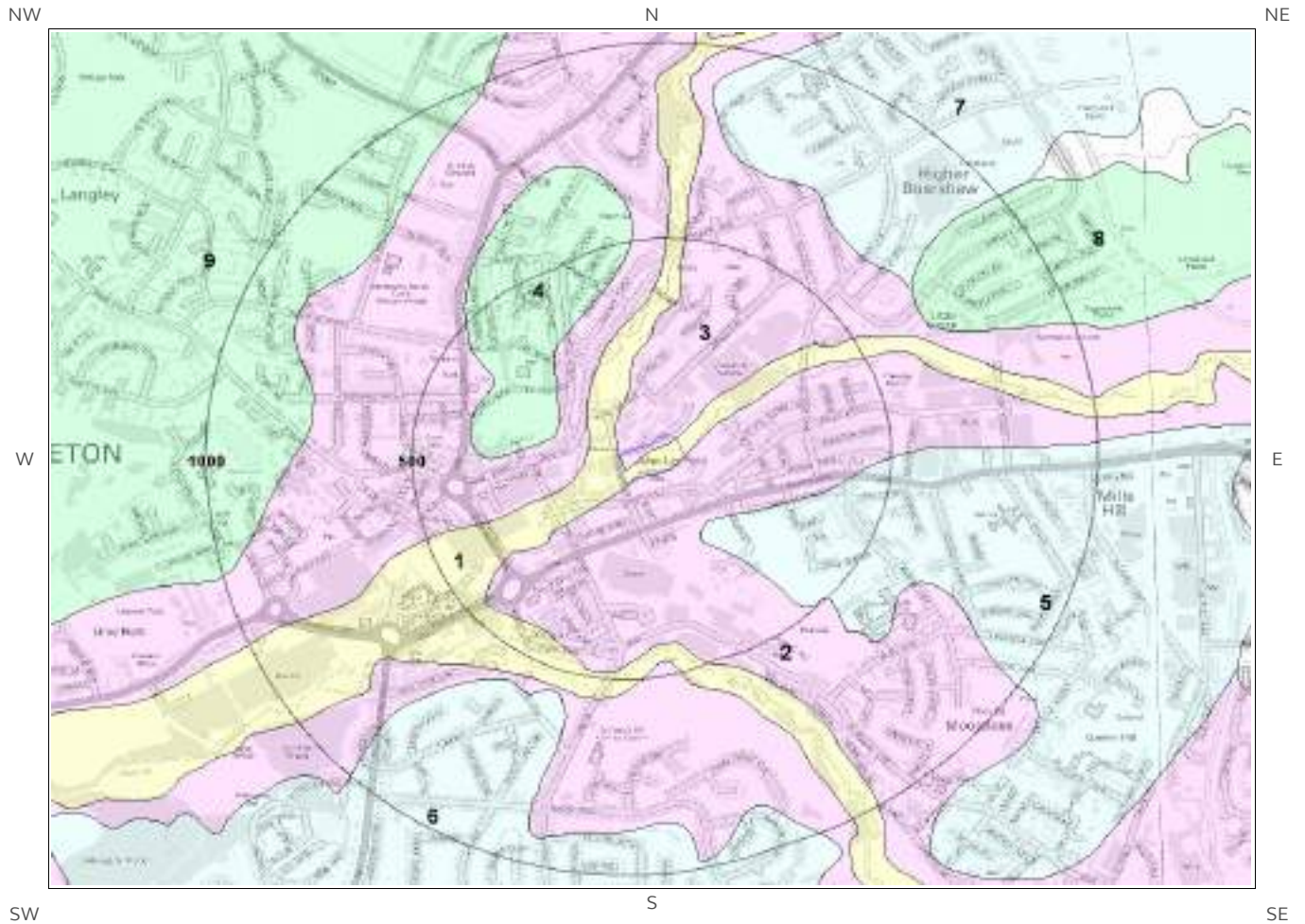
Database searched and no data found.

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

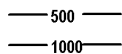
2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	0.0	On Site	GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	0.0	On Site	GFSDDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
4	162.0	W	HMGDD-DMTN	HUMMOCKY (MOUNDY) GLACIAL DEPOSITS, DEVENSIAN	DIAMICTON
5	164.0	SE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Very High	High
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Intergranular	Very High	High

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

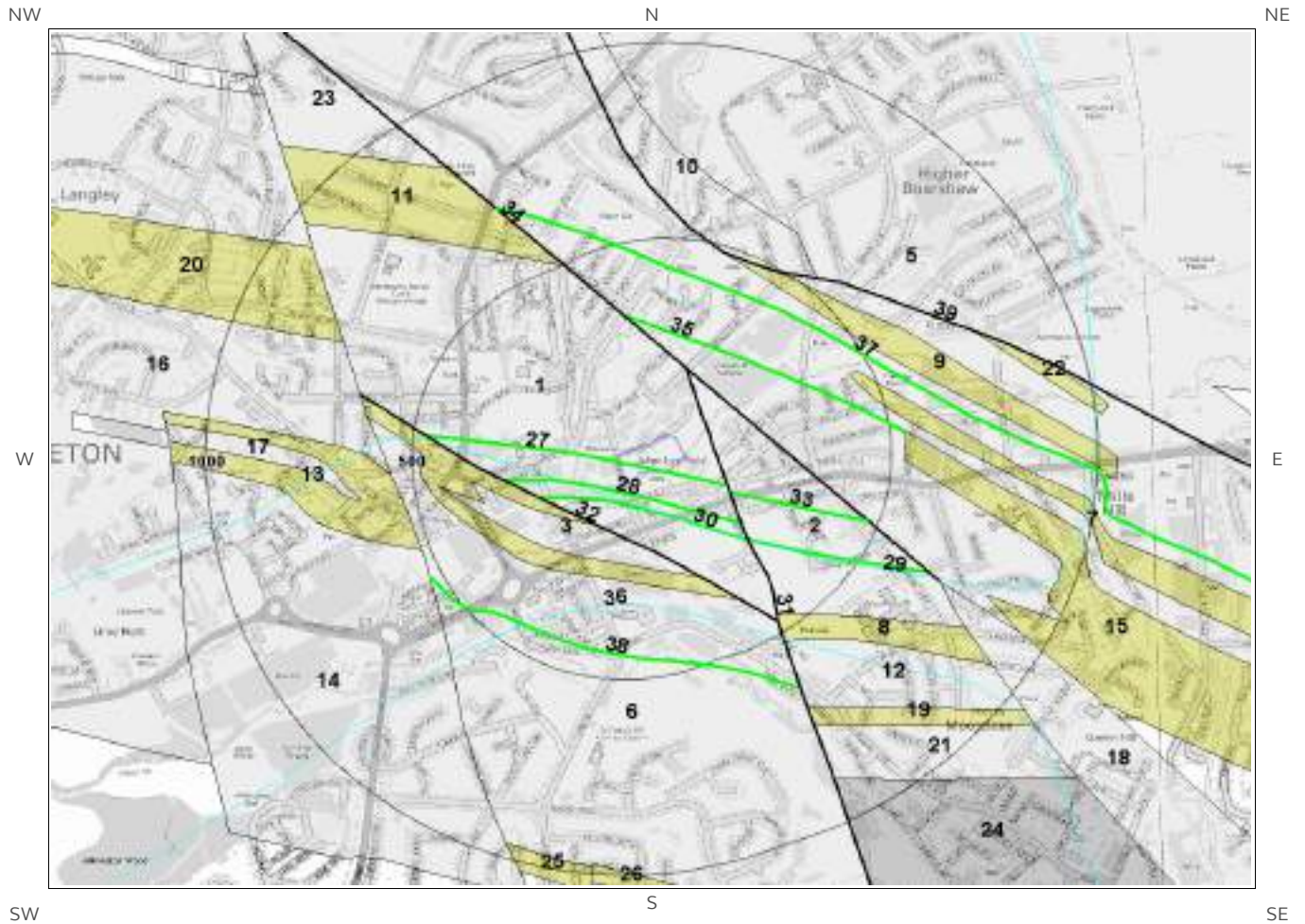
2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary?

No

Database searched and no data found.

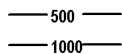
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 085

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	71.0	E	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	124.0	SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	125.0	SW	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
5	152.0	NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	243.0	S	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7	446.0	NE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
8	452.0	SE	BLR-SDST	BLENFIRE ROCK - SANDSTONE	WESTPHALIAN
9	460.0	NE	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
10	481.0	N	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
11	494.0	NW	RYSA-SDST	ROYLEY SANDSTONE - SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	High	Low

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary?

Yes

ID	Distance	Direction	Category Description	Feature Description
27	0.0	On Site	ROCK	Coal seam, inferred
28	22.0	S	ROCK	Coal seam, inferred
29	40.0	S	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
30	50.0	S	ROCK	Coal seam, inferred
31	71.0	E	FAULT	Fault, inferred
32	124.0	SW	FAULT	Fault, inferred
33	143.0	SE	ROCK	Coal seam, inferred
34	152.0	NE	FAULT	Fault, inferred
35	245.0	N	ROCK	Coal seam, inferred
36	304.0	S	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
37	397.0	NE	ROCK	Coal seam, inferred
38	428.0	S	ROCK	Coal seam, inferred
39	481.0	N	FAULT	Fault, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

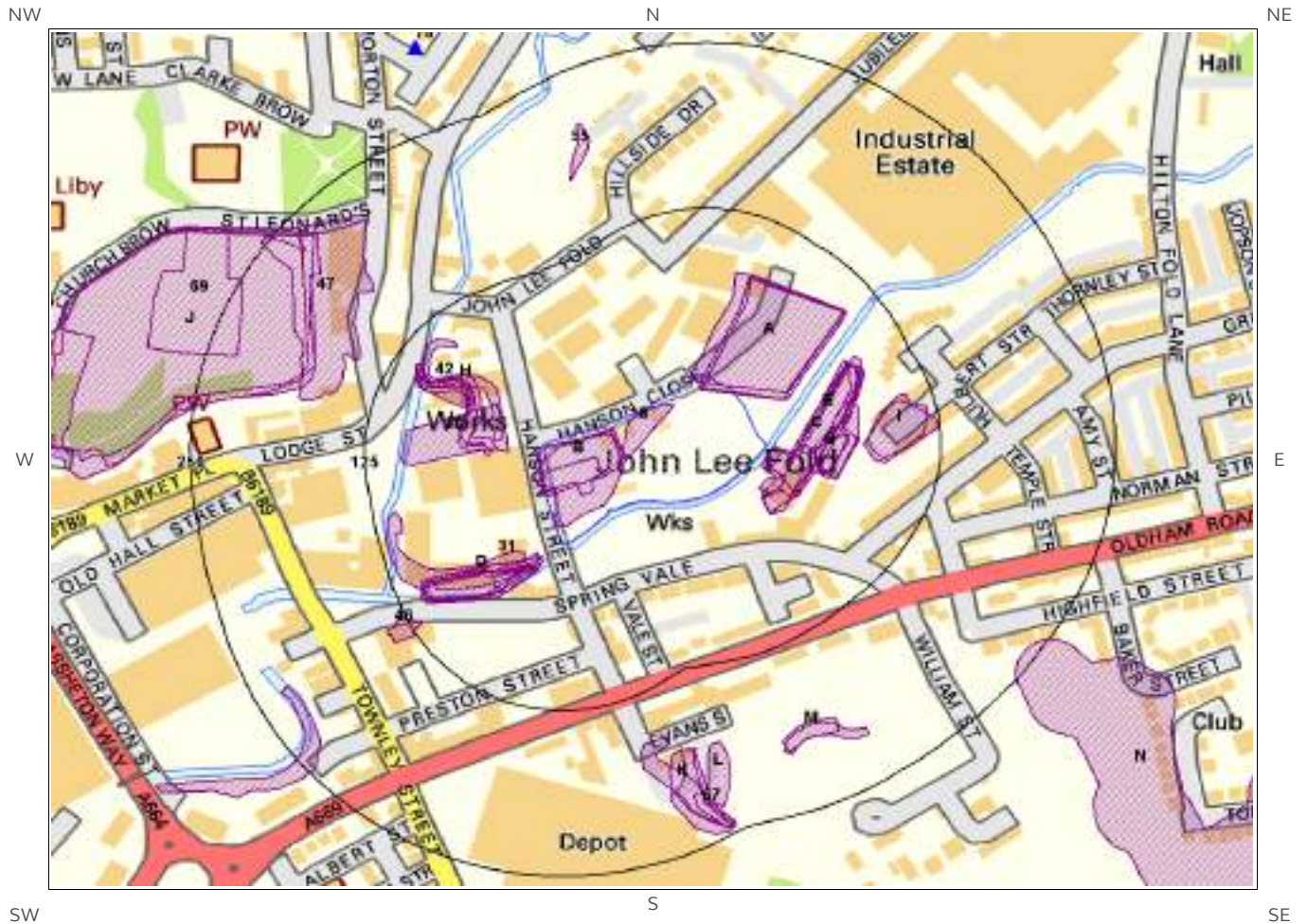
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

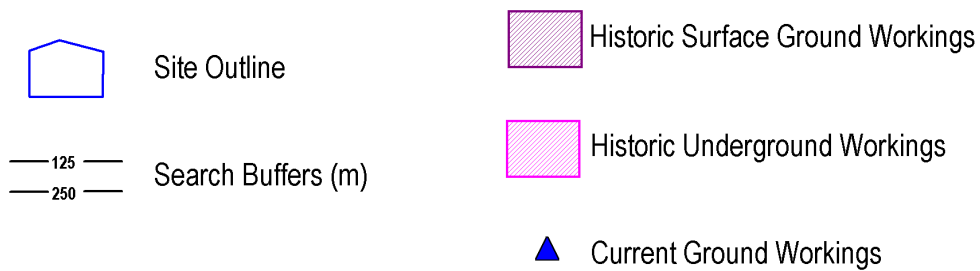
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1A	0.0	On Site	387608 406177	Reservoir	1938
2B	0.0	On Site	387471 406081	Pond	1923
3A	0.0	On Site	387610 406177	Reservoir	1923
4A	0.0	On Site	387605 406182	Pond	1965
5A	0.0	On Site	387608 406177	Reservoir	1891
6A	0.0	On Site	387610 406177	Reservoir	1915
7A	0.0	On Site	387610 406177	Reservoir	1932
8	0.0	On Site	387520 406106	Unspecified Pit	1938
9B	0.0	On Site	387471 406081	Pond	1907
10B	0.0	On Site	387471 406081	Pond	1915
11B	0.0	On Site	387471 406081	Pond	1932
12B	0.0	On Site	387470 406072	Unspecified Pit	1891
13A	0.0	On Site	387605 406182	Reservoir	1955
14A	0.0	On Site	387605 406182	Reservoir	1975
15B	0.0	On Site	387464 406073	Ponds	1938
16A	0.0	On Site	387610 406177	Reservoir	1907
17C	5.0	SE	387635 406108	Ponds	1891
18C	8.0	SE	387641 406107	Reservoirs	1932
19C	12.0	SE	387641 406107	Reservoirs	1923
20C	12.0	SE	387641 406107	Reservoirs	1907
21C	12.0	SE	387641 406107	Reservoirs	1915

ID	Distance (m)	Direction	NGR	Use	Date
22D	16.0	SW	387405 406000	Ponds	1965
23D	19.0	SW	387402 405995	Reservoirs	1938
24D	20.0	SW	387402 405997	Reservoirs	1932
25	22.0	W	387382 406104	Unspecified Heap	1932
26D	22.0	SW	387401 405992	Ponds	1923
27C	22.0	SE	387637 406101	Ponds	1938
28E	23.0	E	387646 406122	Ponds	1955
29E	24.0	E	387651 406128	Ponds	1965
30D	26.0	SW	387402 405992	Ponds	1907
31	28.0	SW	387338 406016	Refuse Heap	1932
32H	28.0	W	387407 406138	Unspecified Ground Workings	1907
33D	29.0	SW	387396 405994	Ponds	1891
34F	30.0	W	387396 406121	Unspecified Ground Workings	1915
35F	34.0	W	387393 406117	Unspecified Ground Workings	1923
36G	36.0	E	387652 406089	Unspecified Heap	1965
37G	36.0	E	387652 406089	Unspecified Heap	1955
38G	36.0	E	387655 406100	Refuse Heap	1982
39G	36.0	E	387655 406100	Refuse Heap	1975
40D	55.0	SW	387387 405990	Pond	1915
41H	60.0	NW	387374 406138	Unspecified Pit	1938
42	60.0	NW	387363 406140	Unspecified Ground Workings	1932
43I	69.0	E	387701 406107	Refuse Heap	1923
44I	73.0	E	387699 406110	Refuse Heap	1915
45I	73.0	E	387699 406110	Refuse Heap	1932
46	116.0	SW	387345 405956	Gravel Pit	1851
47	147.0	NW	387283 406200	Sand Pit	1851
48K	161.0	S	387549 405841	Sand Pit	1907
49J	172.0	W	387192 406170	Cemetery	1923
50J	172.0	W	387192 406170	Cemetery	1932

ID	Distance (m)	Direction	NGR	Use	Date
51J	172.0	W	387192 406170	Cemetery	1907
52J	172.0	W	387192 406170	Cemetery	1915
53J	174.0	W	387183 406164	Cemetery	1938
54J	174.0	W	387183 406164	Cemetery	1891
55	175.0	NW	387471 406318	Pond	1932
56K	175.0	SE	387558 405835	Refuse Heap	1923
57K	175.0	SE	387561 405836	Refuse Heap	1915
58J	179.0	W	387181 406175	Burial Ground	1982
59J	179.0	W	387181 406175	Burial Ground	1965
60J	179.0	W	387181 406175	Burial Ground	1975
61L	184.0	SE	387571 405847	Unspecified Pit	1982
62L	184.0	SE	387571 405847	Unspecified Pit	1965
63M	186.0	SE	387636 405877	Unspecified Ground Workings	1982
64M	186.0	SE	387636 405877	Unspecified Ground Workings	1975
65M	186.0	SE	387636 405877	Unspecified Ground Workings	1965
66M	189.0	SE	387628 405874	Unspecified Ground Workings	1955
67	211.0	SE	387566 405821	Unspecified Ground Workings	1932
68	220.0	SW	387279 405872	Unspecified Ground Workings	1932
69	229.0	W	387195 406211	Grave Yard	1851
70N	241.0	SE	387868 405854	Unspecified Pit	1932
71N	241.0	SE	387868 405854	Unspecified Pit	1915

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	930.0	S	387235 405114	Unspecified Old Shaft	1891
Not shown	930.0	S	387235 405114	Unspecified Old Shaft	1938
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1932
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1915
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1907
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1923

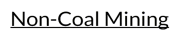
4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
78	313.0	N	387353 406397	Sand	Brook Hill Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	358.0	S	387366 405675	Sand	Little Park Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	444.0	SE	387966 405839	Sand	Tonge Hall Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	570.0	NE	388100 406379	Clay & Shale	Little Green Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	792.0	E	388396 406136	Clay & Shale	Mills Hill Clay Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? Yes

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
Not shown	930.0	S	387235 405114	Unspecified Old Shaft	1891
Not shown	930.0	S	387235 405114	Unspecified Old Shaft	1938
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1923
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1915
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1907
Not shown	931.0	S	387238 405112	Unspecified Old Shaft	1932

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

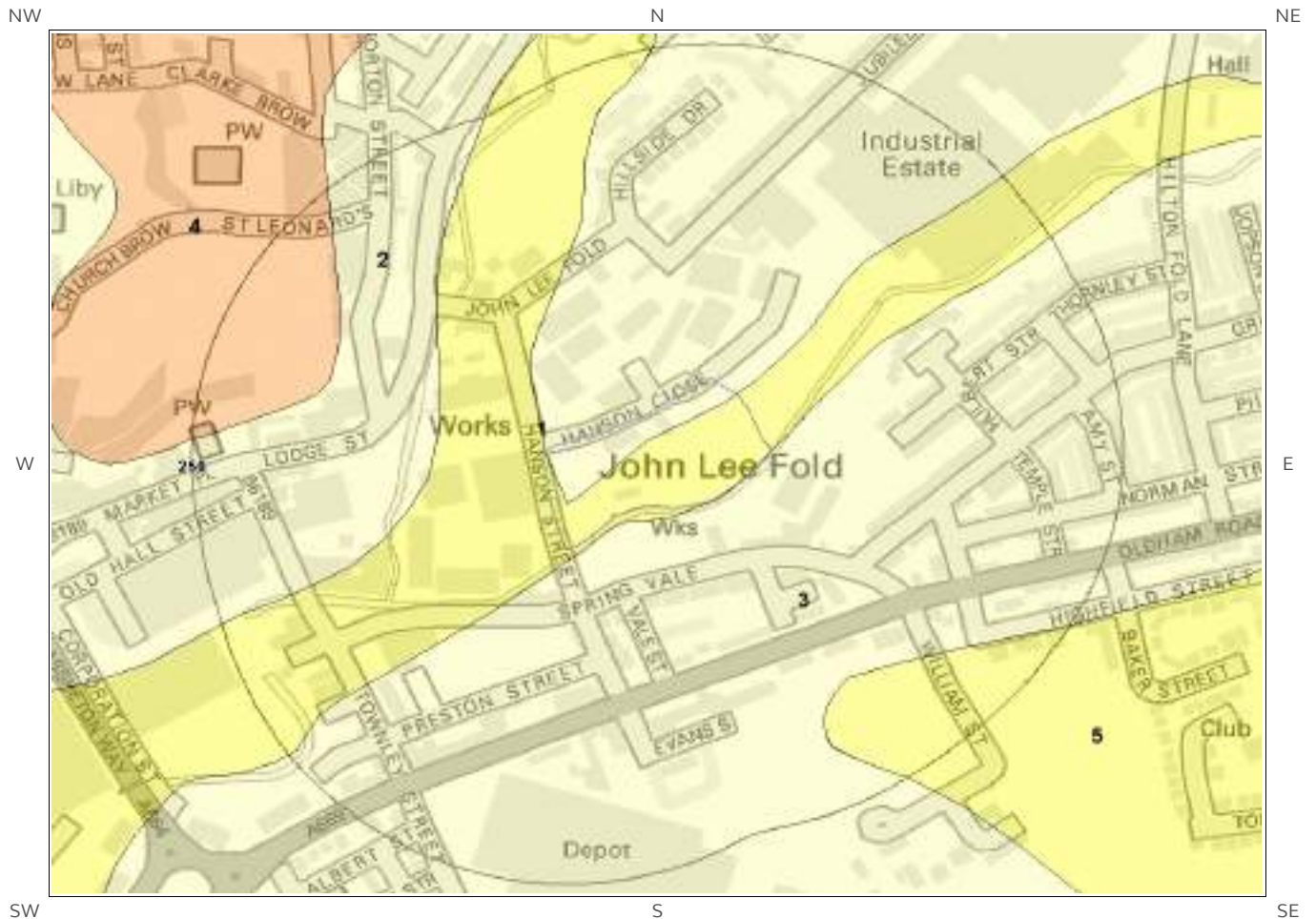
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

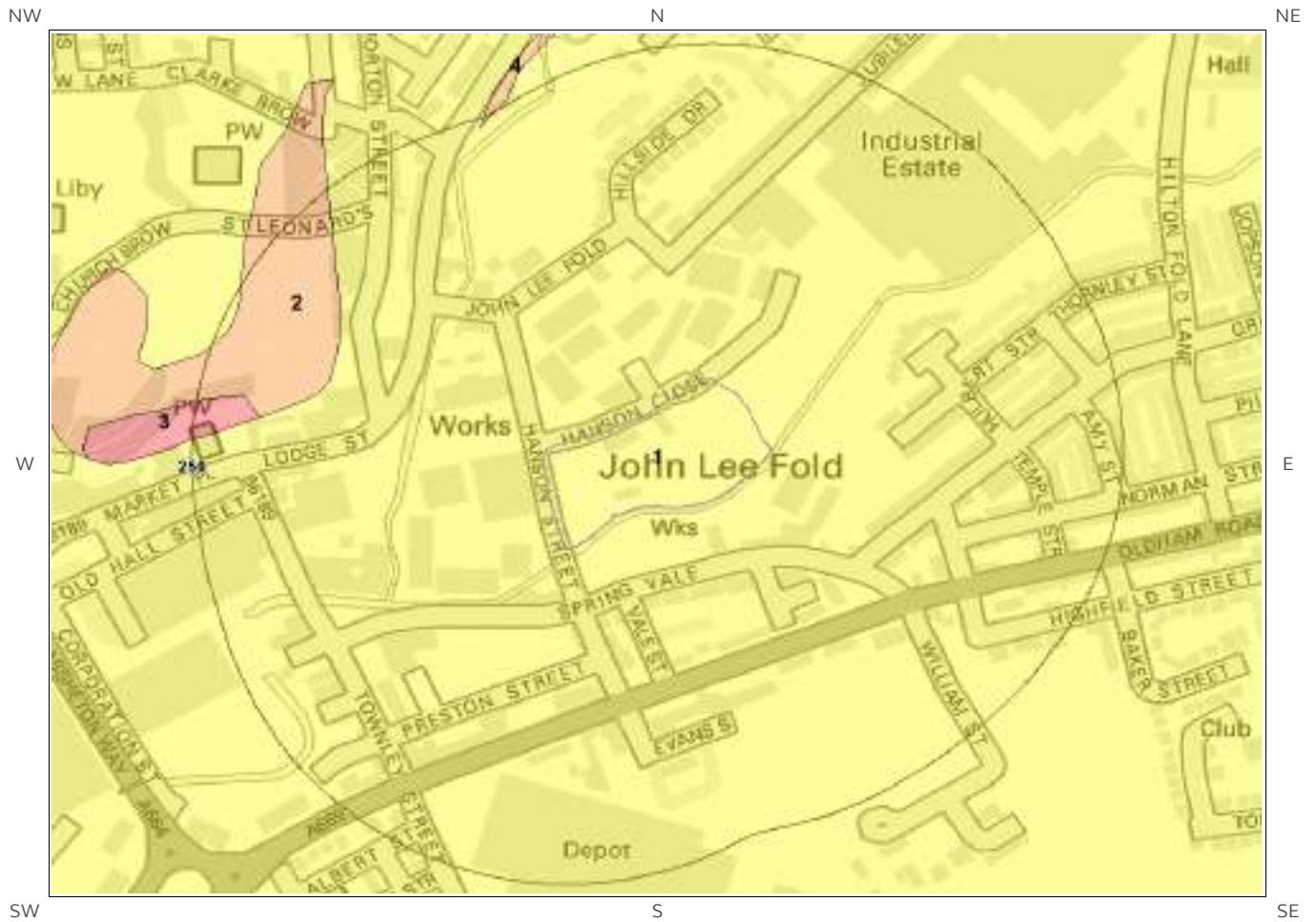


Shrink Swell Clay Legend

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6.2 Landslides map

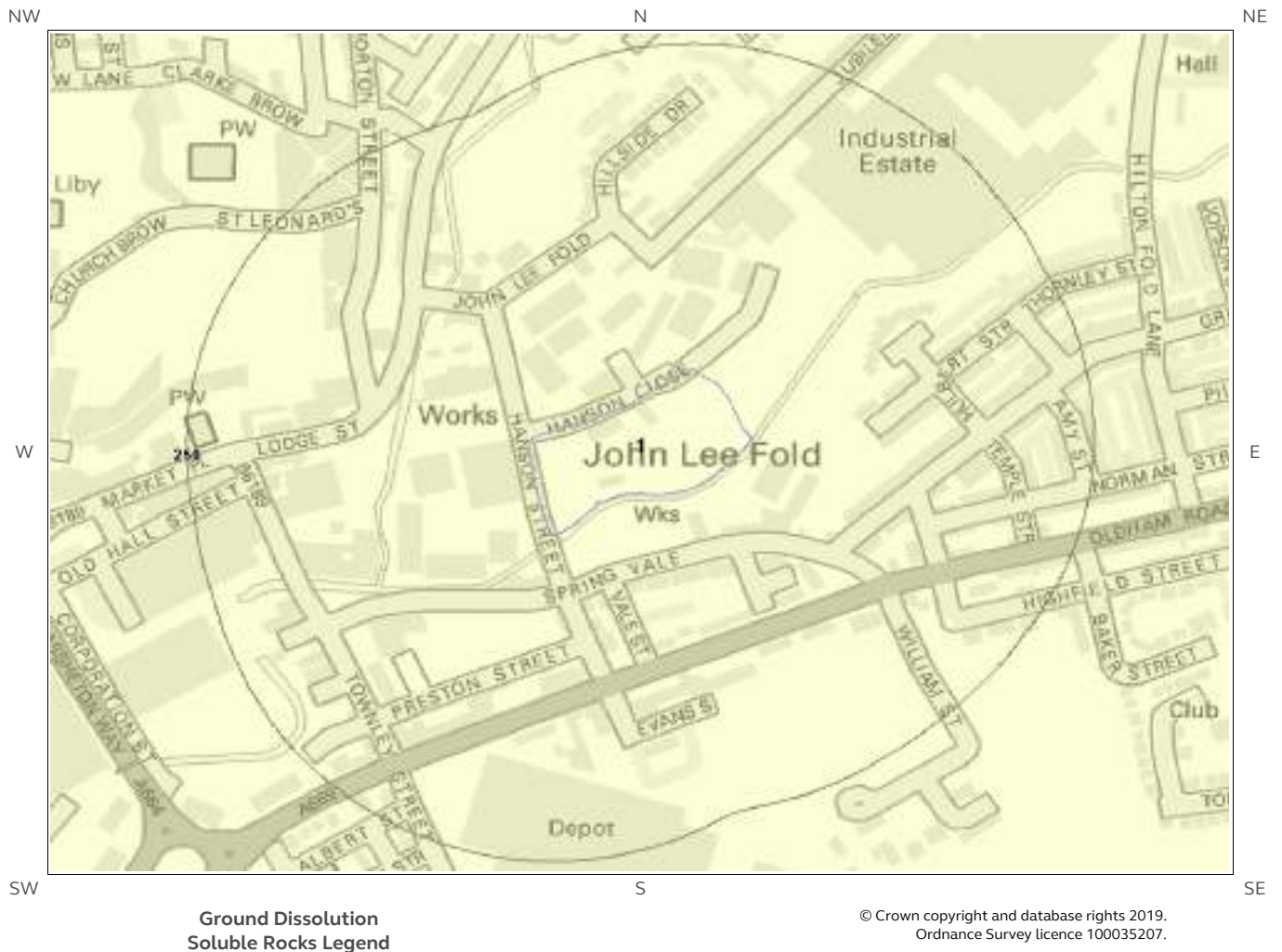


Landslides Legend

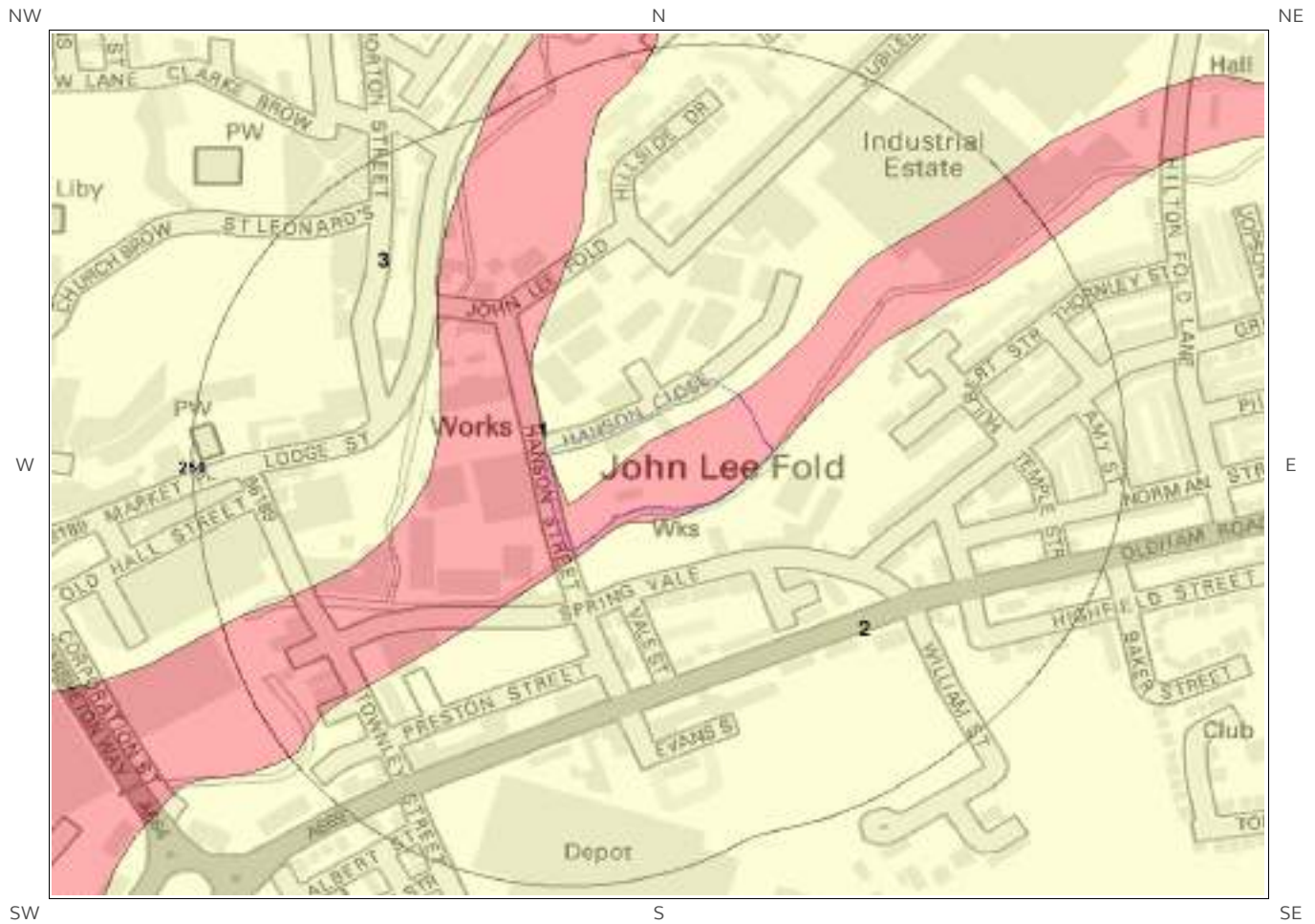
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6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map

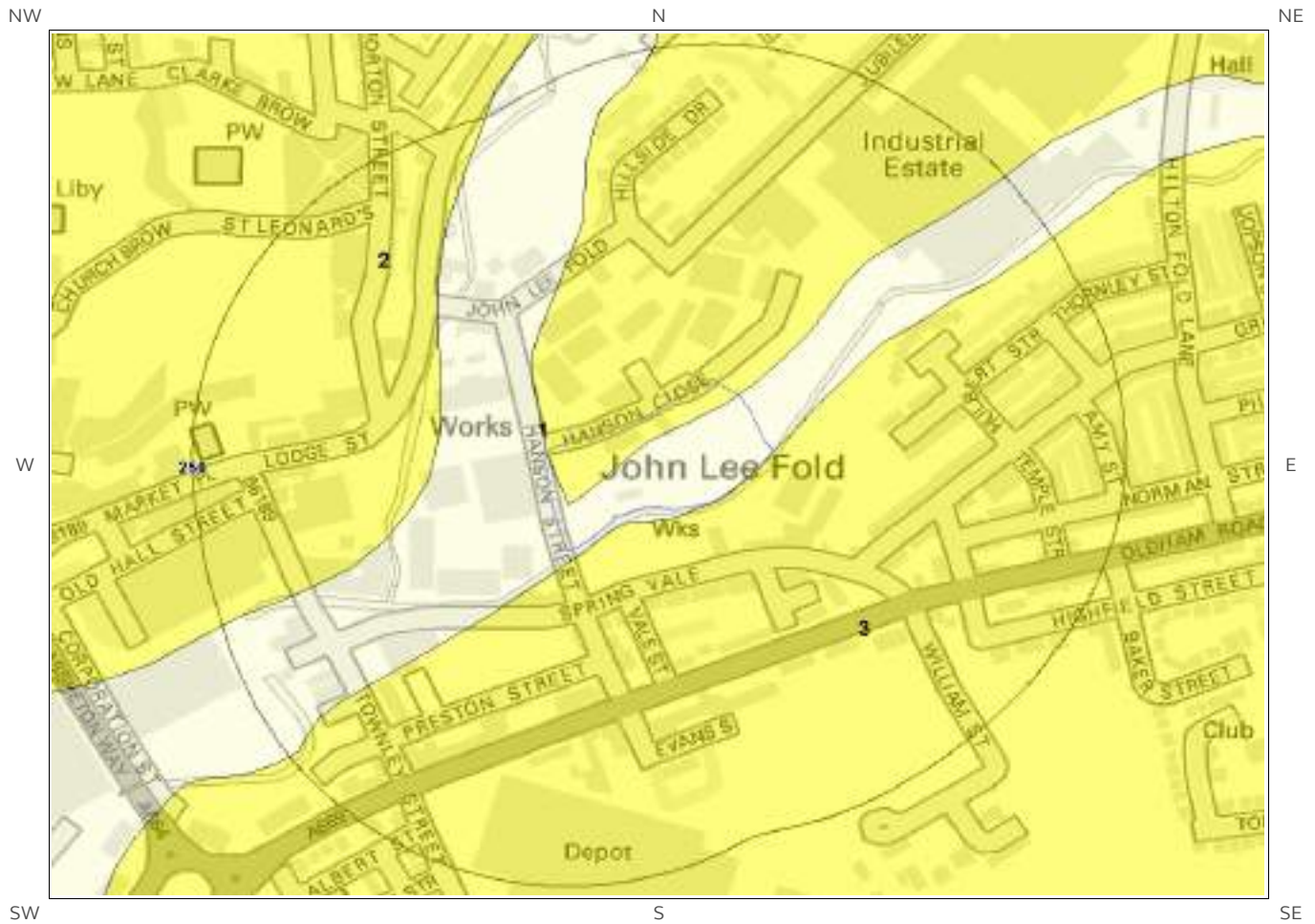


Compressible Deposits Legend

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6.5 Collapsible Deposits map

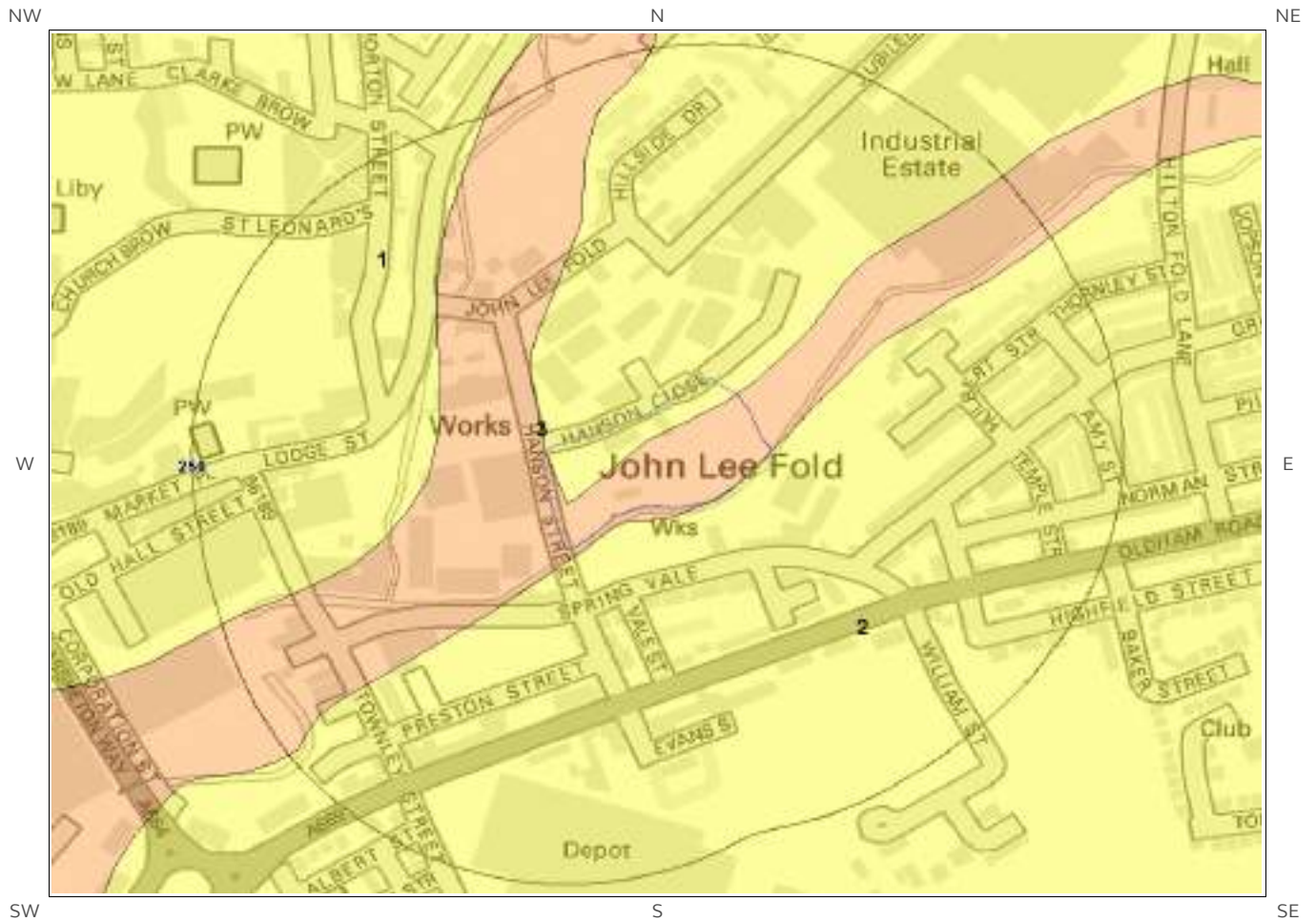


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? Moderate

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
3	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.
2	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
3	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

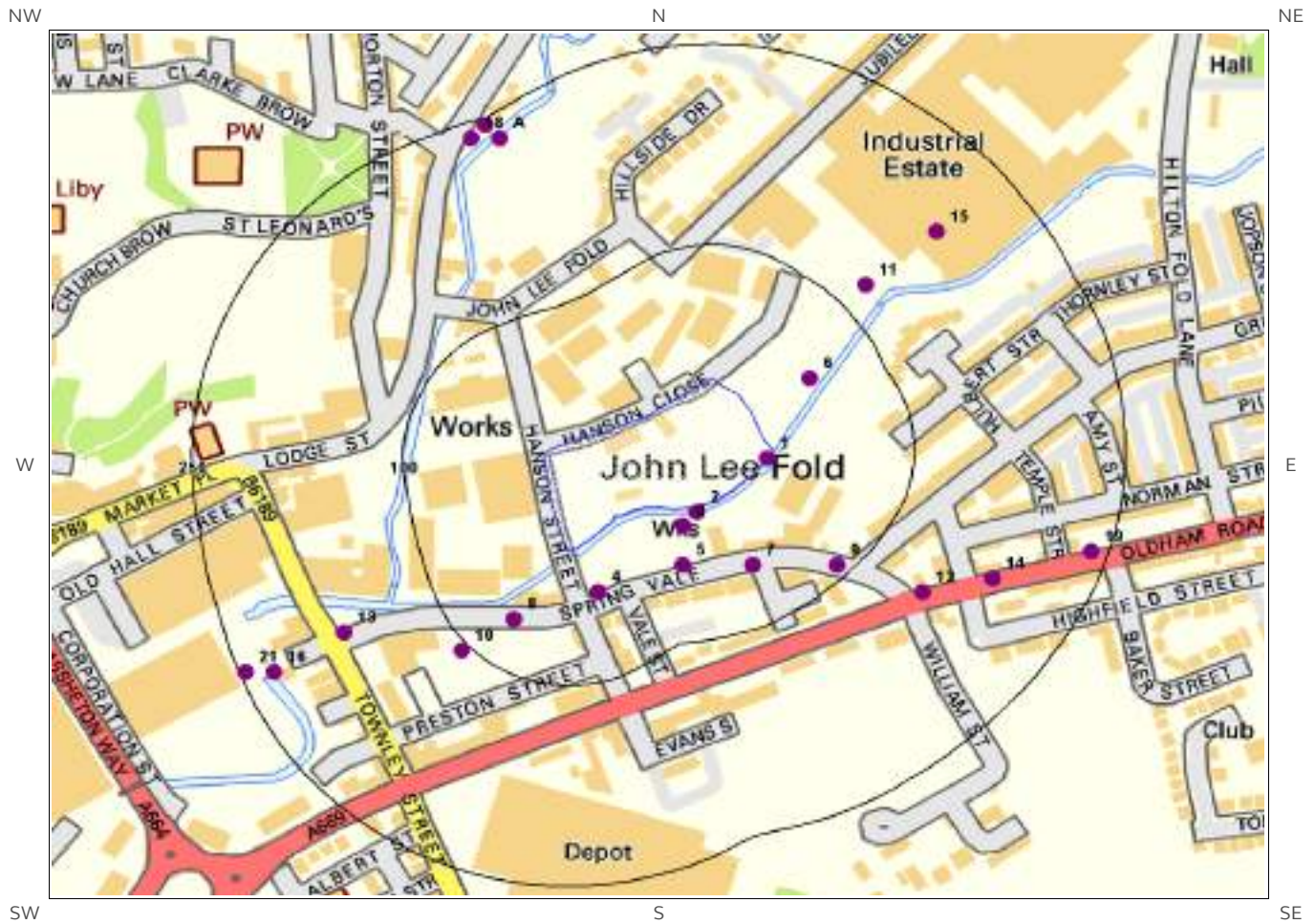
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
3	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

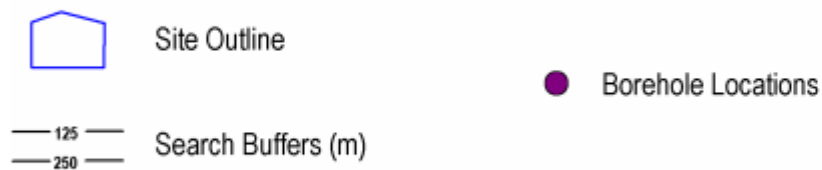
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

21

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	0.0	SE	387600 406090	SD80NE78	3	IRK VALLEY, MIDDLETON 11
2	5.0	S	387550 406050	SD80NE77	3	IRK VALLEY, MIDDLETON 10
3	13.0	S	387540 406040	SD80NE76	7	IRK VALLEY, MIDDLETON 9
4	37.0	SE	387480 405990	SD80NE74	7	IRK VALLEY, MIDDLETON 7
5	42.0	S	387540 406010	SD80NE75	6	IRK VALLEY, MIDDLETON 8
6	47.0	NE	387630 406150	SD80NE79	6	IRK VALLEY, MIDDLETON 12
7	56.0	SE	387590 406010	SD80NE61	6	SEWER LINE MIDDLETON P
8	64.0	SW	387420 405970	SD80NE73	6	IRK VALLEY, MIDDLETON 6
9	91.0	SE	387650 406010	SD80NE60	7	SEWER LINE MIDDLETON N
10	107.0	SW	387383 405946	SD80NE11	303	YORKSHIRE DYEING & PROOFING CO SPRING VALE
11	122.0	NE	387670 406220	SD80NE80	7	IRK VALLEY, MIDDLETON 13
12	148.0	SE	387710 405990	SD80NE59	9	SEWER LINE MIDDLETON M
13	170.0	SW	387300 405960	SD80NE72	6	IRK VALLEY, MIDDLETON 5
14	183.0	SE	387760 406000	SD80NE58	9	SEWER LINE MIDDLETON L
15	186.0	NE	387720 406260	SD80NE81	7	IRK VALLEY, MIDDLETON 14
16	228.0	SW	387250 405930	SD80NE71	7	IRK VALLEY, MIDDLETON 4
17A	232.0	NW	387410 406330	SD80NE189	Not available	QUEEN ELIZABETH GRAMMER SCHOOL TP 3
18	238.0	N	387390 406330	SD80NE190	Not available	QUEEN ELIZABETH GRAMMER SCHOOL 1
19	238.0	E	387830 406020	SD80NE57	7	SEWER LINE MIDDLETON K
20A	245.0	N	387400 406340	SD80NE191	Not available	QUEEN ELIZABETH GRAMMER SCHOOL 2
21	246.0	SW	387230 405930	SD80NE70	7	IRK VALLEY, MIDDLETON 3

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/27033
#2: scans.bgs.ac.uk/sobi_scans/boreholes/27032
#3: scans.bgs.ac.uk/sobi_scans/boreholes/27031
#4: scans.bgs.ac.uk/sobi_scans/boreholes/27029
#5: scans.bgs.ac.uk/sobi_scans/boreholes/27030
#6: scans.bgs.ac.uk/sobi_scans/boreholes/27034
#7: scans.bgs.ac.uk/sobi_scans/boreholes/27016
#8: scans.bgs.ac.uk/sobi_scans/boreholes/27028
#9: scans.bgs.ac.uk/sobi_scans/boreholes/27015
#10: scans.bgs.ac.uk/sobi_scans/boreholes/26966
#11: scans.bgs.ac.uk/sobi_scans/boreholes/27035
#12: scans.bgs.ac.uk/sobi_scans/boreholes/27014
#13: scans.bgs.ac.uk/sobi_scans/boreholes/27027
#14: scans.bgs.ac.uk/sobi_scans/boreholes/27013
#15: scans.bgs.ac.uk/sobi_scans/boreholes/27036
#16: scans.bgs.ac.uk/sobi_scans/boreholes/27026
#19: scans.bgs.ac.uk/sobi_scans/boreholes/27012
#21: scans.bgs.ac.uk/sobi_scans/boreholes/27025

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

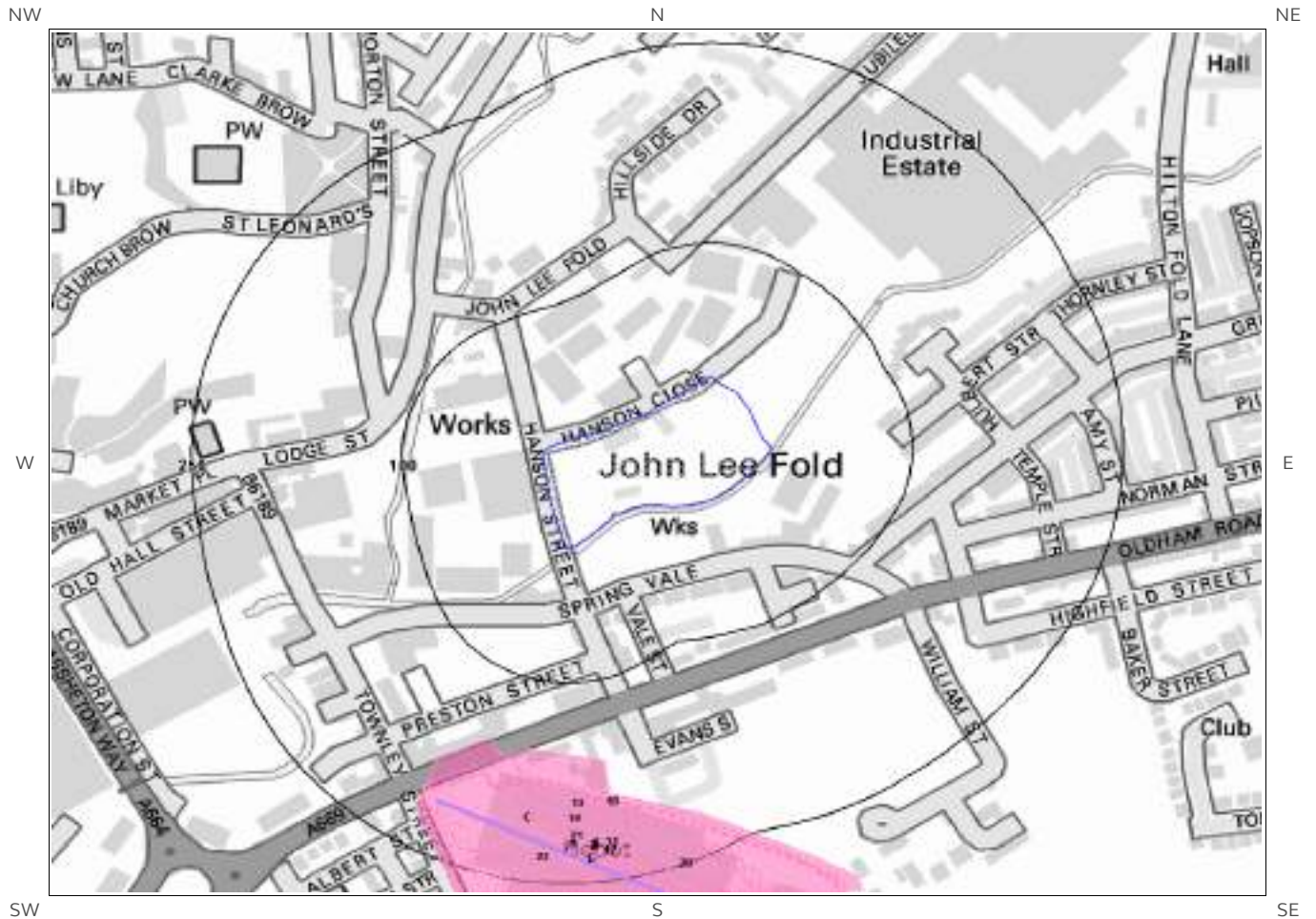
9

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuSoilExAs	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	RuSoilExAs	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
20.0	S	RuSoilExAs	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
30.0	SE	RuSoilExAs	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
30.0	SE	RuSoilExAs	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
39.0	SE	RuSoilExAs	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
42.0	E	RuSoilExAs	25 - 35 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
9C	150	S	n/a	Railway	1909
10C	151	S	n/a	Railway	1891
1A	158	S	387560 405757	Railway Sidings	1965
2A	158	S	387560 405757	Railway Sidings	1955
11	169	S	n/a	Railway	1890
3	174	S	387565 405733	Railway Sidings	1891
12	175	S	387726 405673	Railway Sidings	1954

ID	Distance (m)	Direction	NGR	Details	Date
4B	176	S	387561 405748	Railway Sidings	1915
5B	176	S	387561 405748	Railway Sidings	1907
6B	176	S	387561 405748	Railway Sidings	1932
7B	176	S	387561 405748	Railway Sidings	1923
8D	176	S	387565 405730	Railway Sidings	1938
13	177	S	387465 405827	Railway Sidings	1965
14E	182	S	387555 405736	Railway Sidings	1893
15D	182	S	387555 405736	Railway Sidings	1922
16E	183	S	387555 405736	Railway Sidings	1909
17D	184	S	387555 405736	Railway Sidings	1932
18	186	S	387489 405829	Railway Sidings	1965
19	187	S	387462 405816	Railway Sidings	1965
20	195	S	387632 405743	Railway Sidings	1954
21	202	S	387466 405803	Railway Sidings	1965
22	204	SW	387395 405795	Railway Sidings	1965

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Status
210	SW	Razed
210	SW	Abandoned

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

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Telephone: 08444 159 000
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NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS Geological Hazards Reports and general geological enquiries

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Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk



The Coal
Authority

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
<https://www.gov.uk/government/organisations/public-health-england>
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Appendix C

Historical Maps

Site Details:

UNIT 1, HANSON CLOSE
INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1893

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1893
Edition N/A
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Surveyed 1893
Revised 1893
Edition N/A
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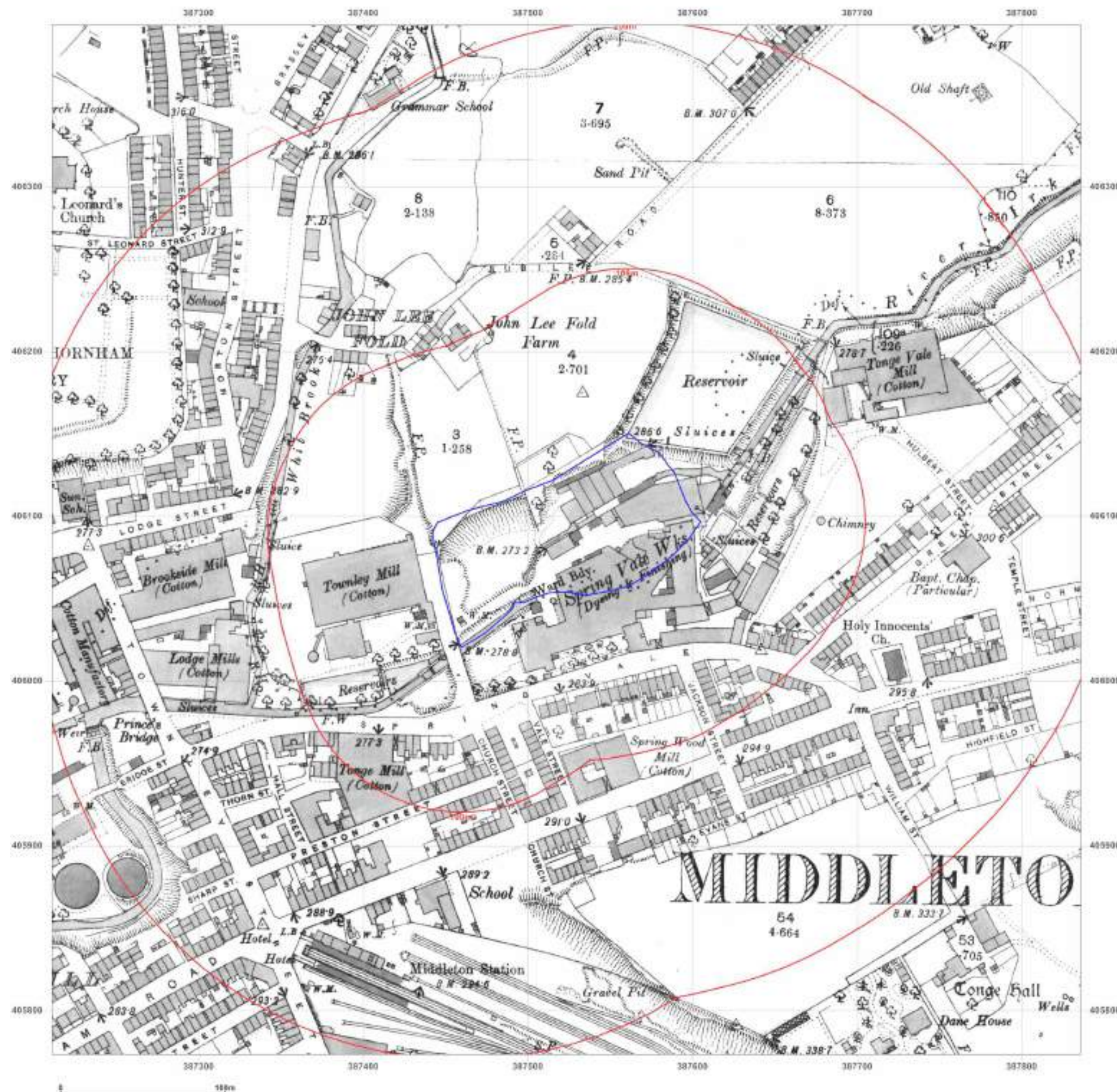


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Site Details:

UNIT 1, HANSON CLOSE
INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1909

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Edition N/A
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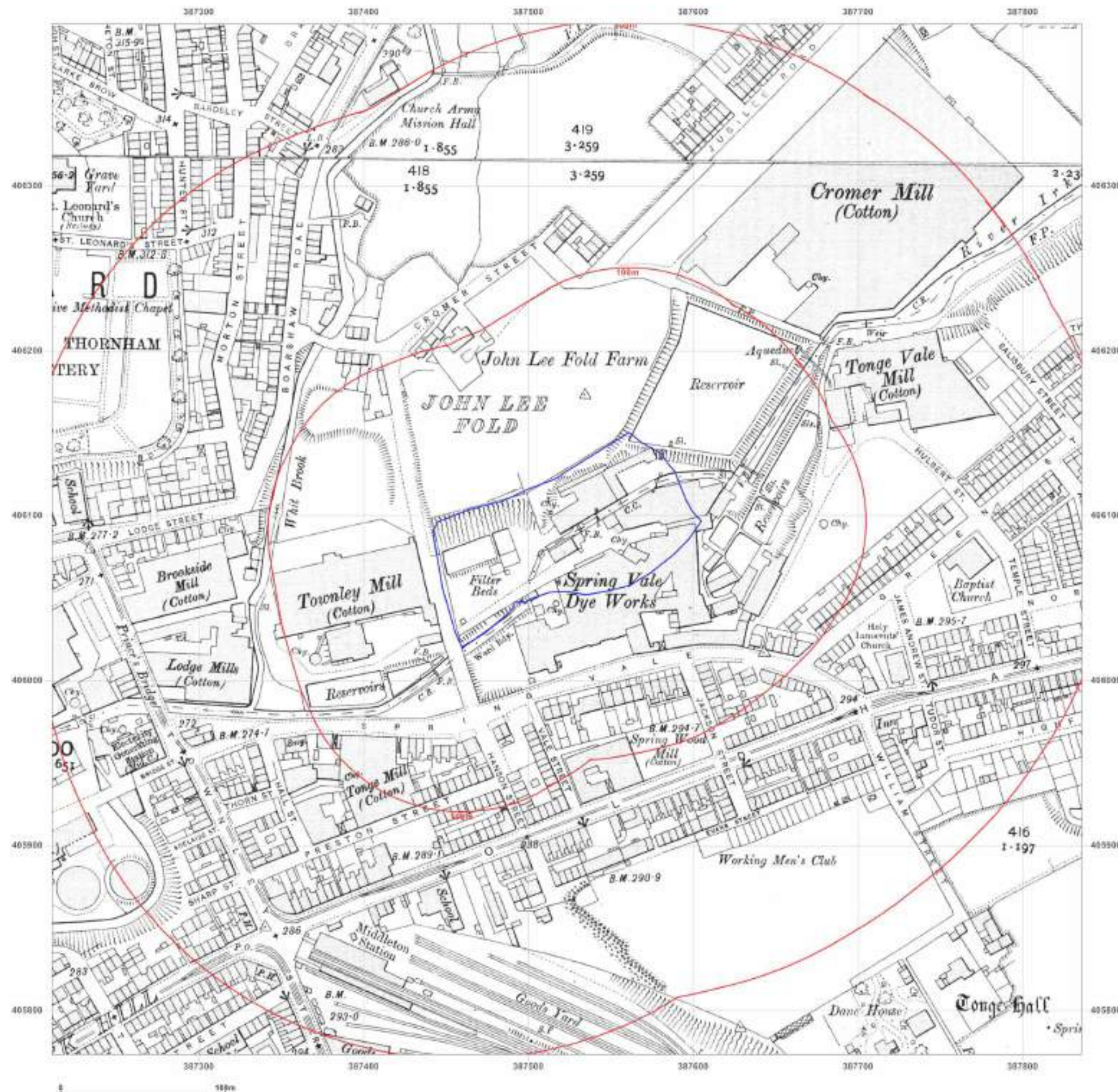


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Site Details:

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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1954

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1954
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Edition N/A
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Surveyed 1954
Revised 1954
Edition N/A
Copyright N/A
Levelled 1929

Surveyed 1954
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Edition N/A
Copyright 1954
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Surveyed 1954
Revised 1954
Edition N/A
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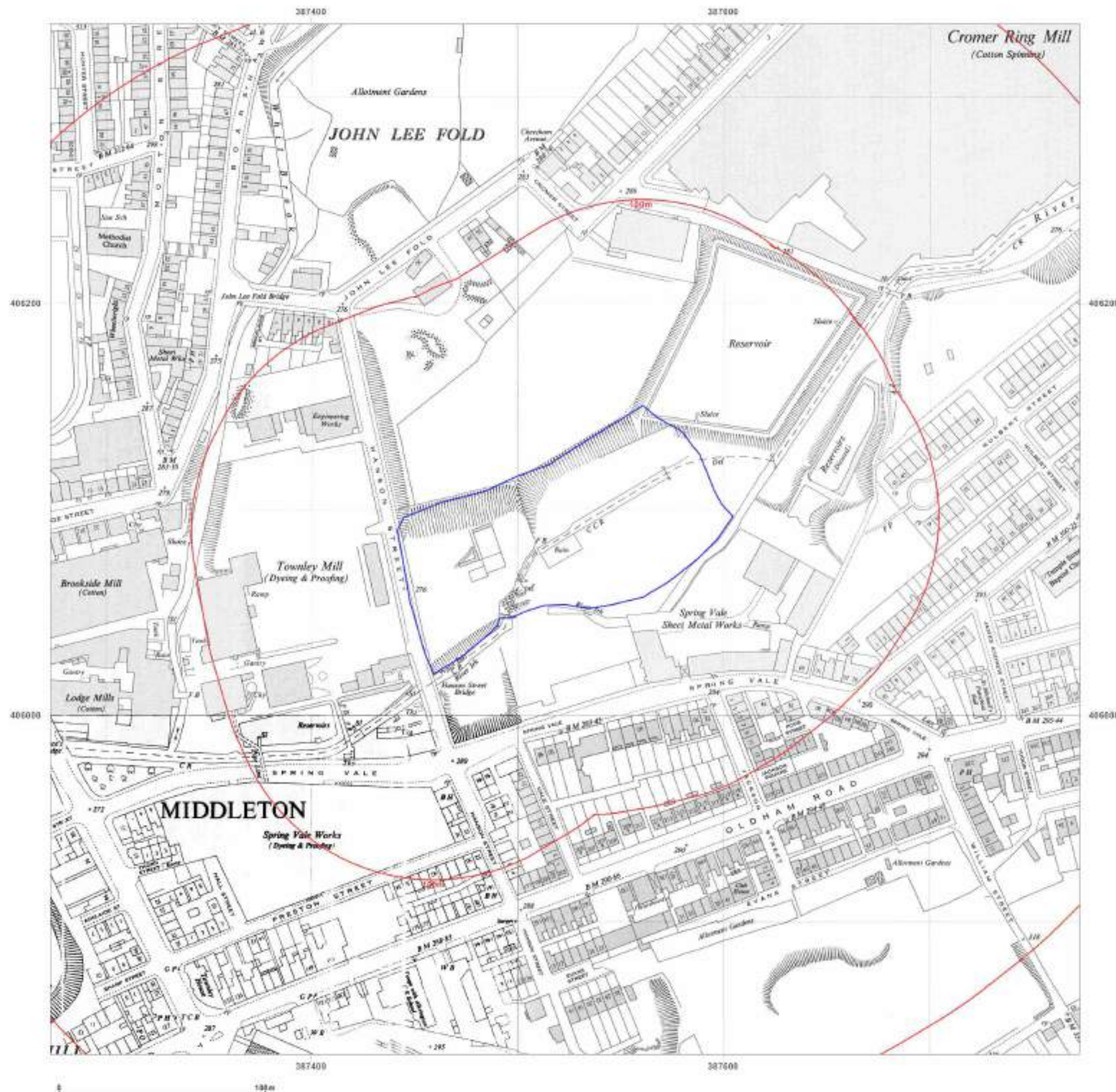


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1954-1955

Scale: 1:2,500

Printed at: 1:2,500



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Edition 1955
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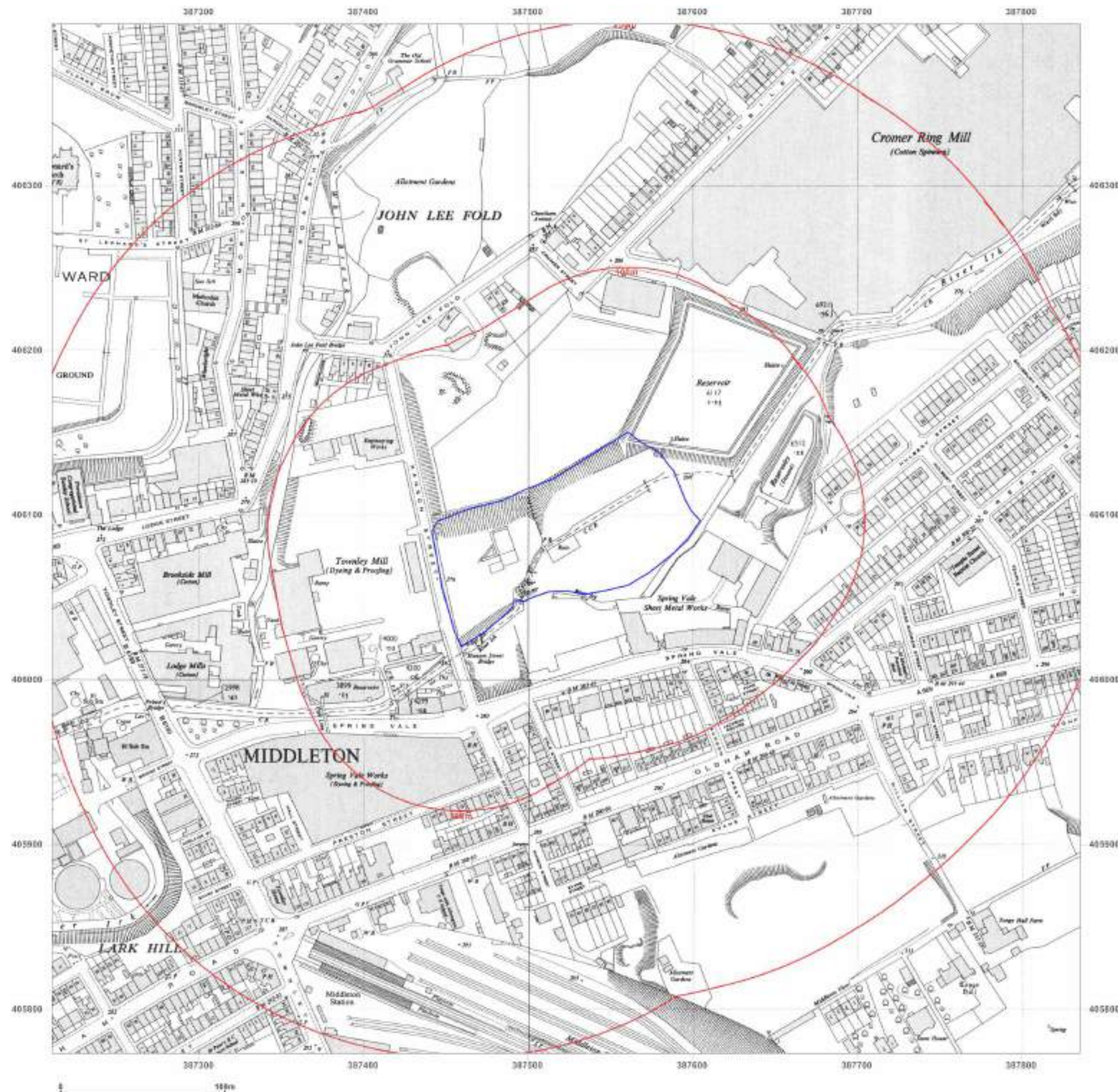


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1967
Revised 1967
Edition N/A
Copyright 1968
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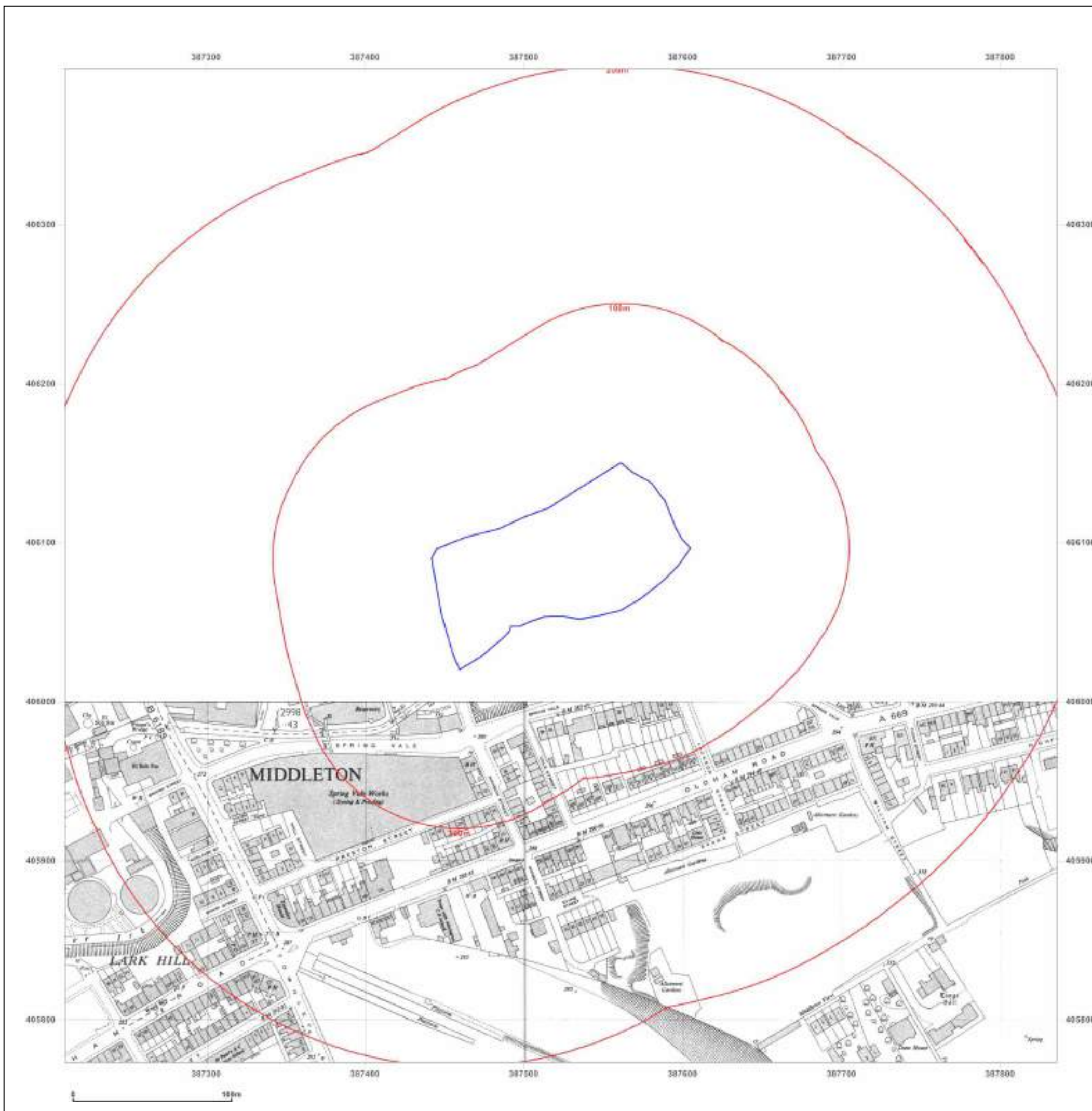


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1965-1970

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed 1954
Revised 1967
Edition N/A
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Surveyed 1985
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Edition N/A
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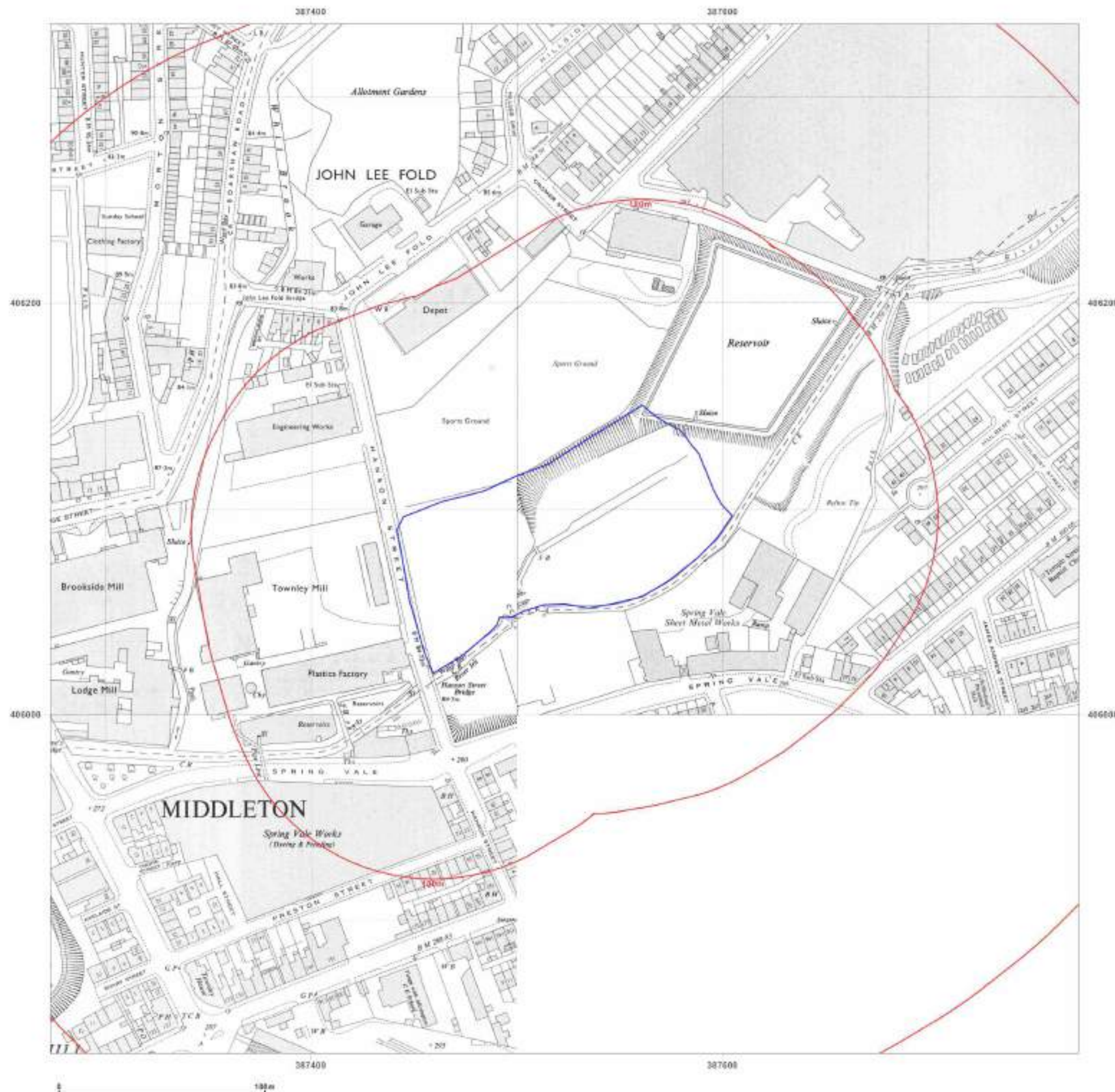


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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1973-1975

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
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Surveyed 1954
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Edition N/A
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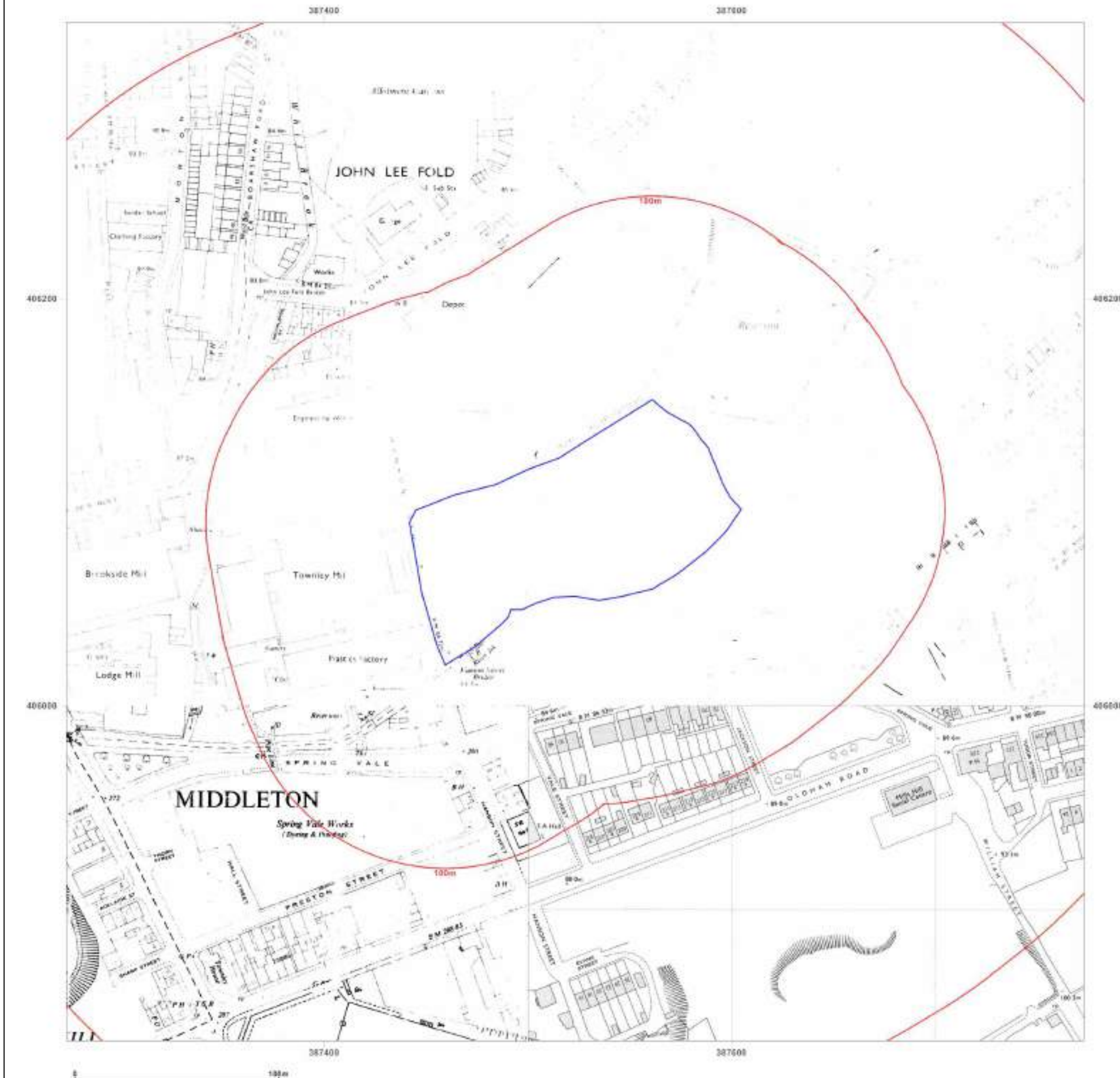


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1975-1976

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A		Surveyed N/A	
Revised N/A		Revised N/A	
Edition N/A		Edition N/A	
Copyright N/A		Copyright N/A	
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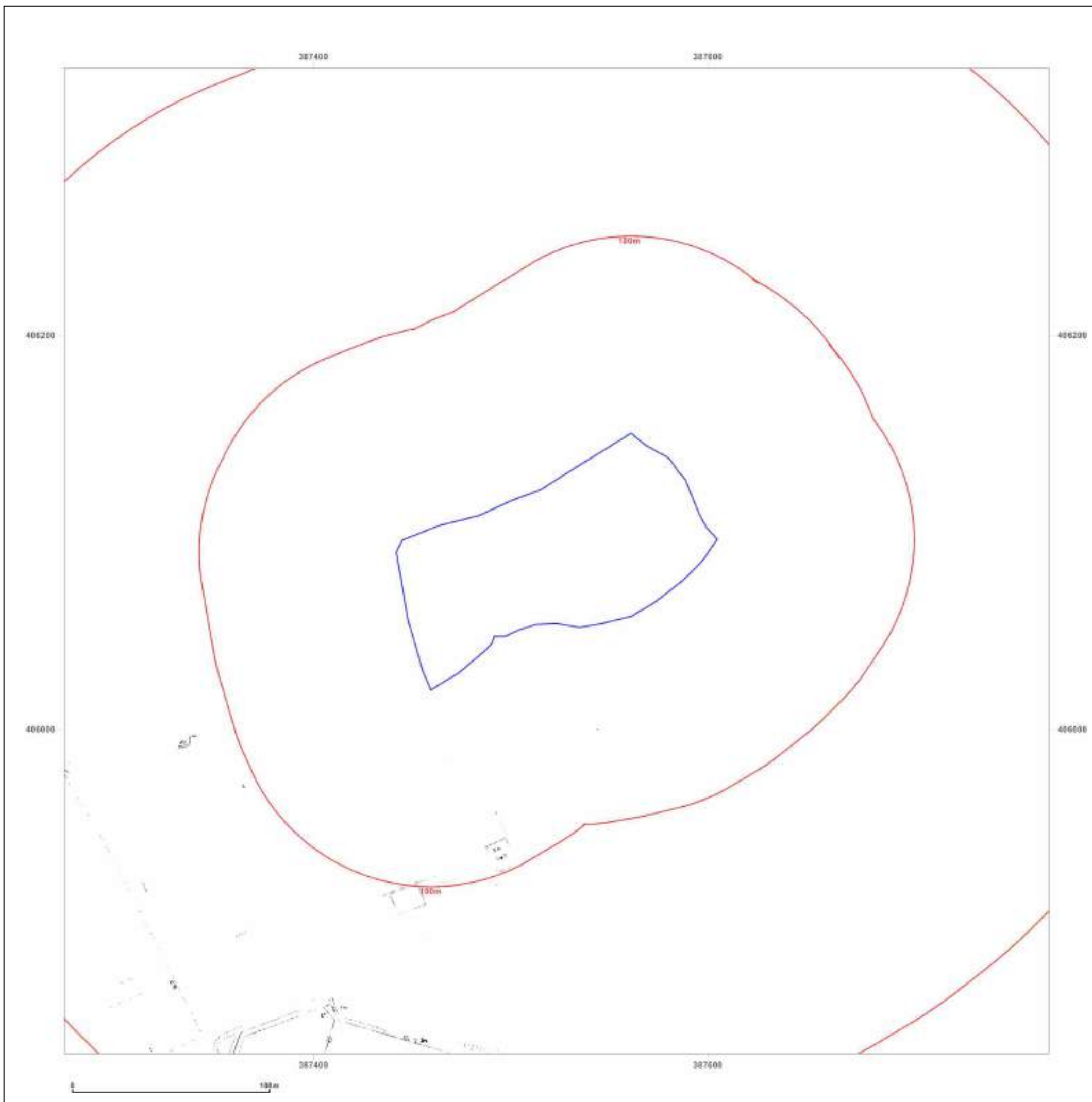


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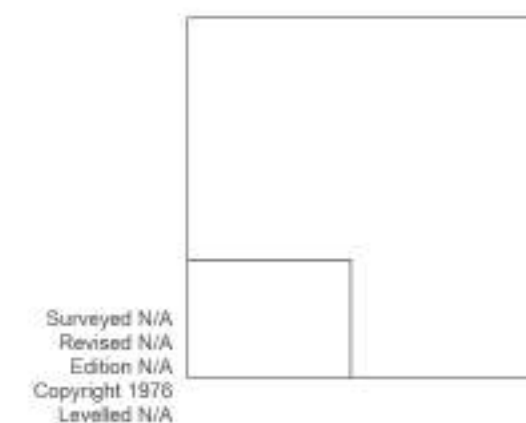
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Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1976

Scale: 1:1,250

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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1975-1978

Scale: 1:1,250

Printed at: 1:2,000



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Revised N/A
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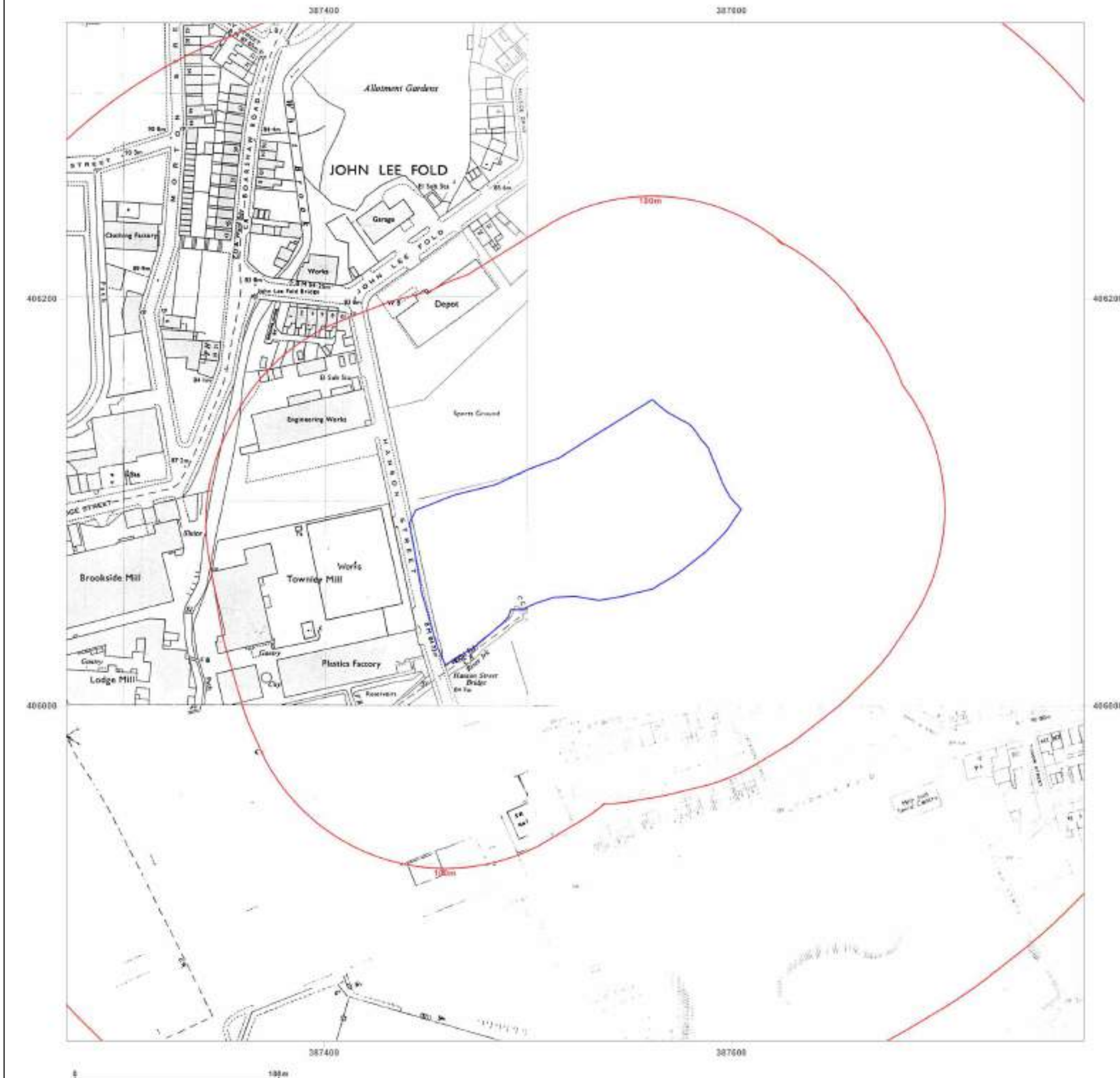


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1978-1983

Scale: 1:1,250

Printed at: 1:2,000



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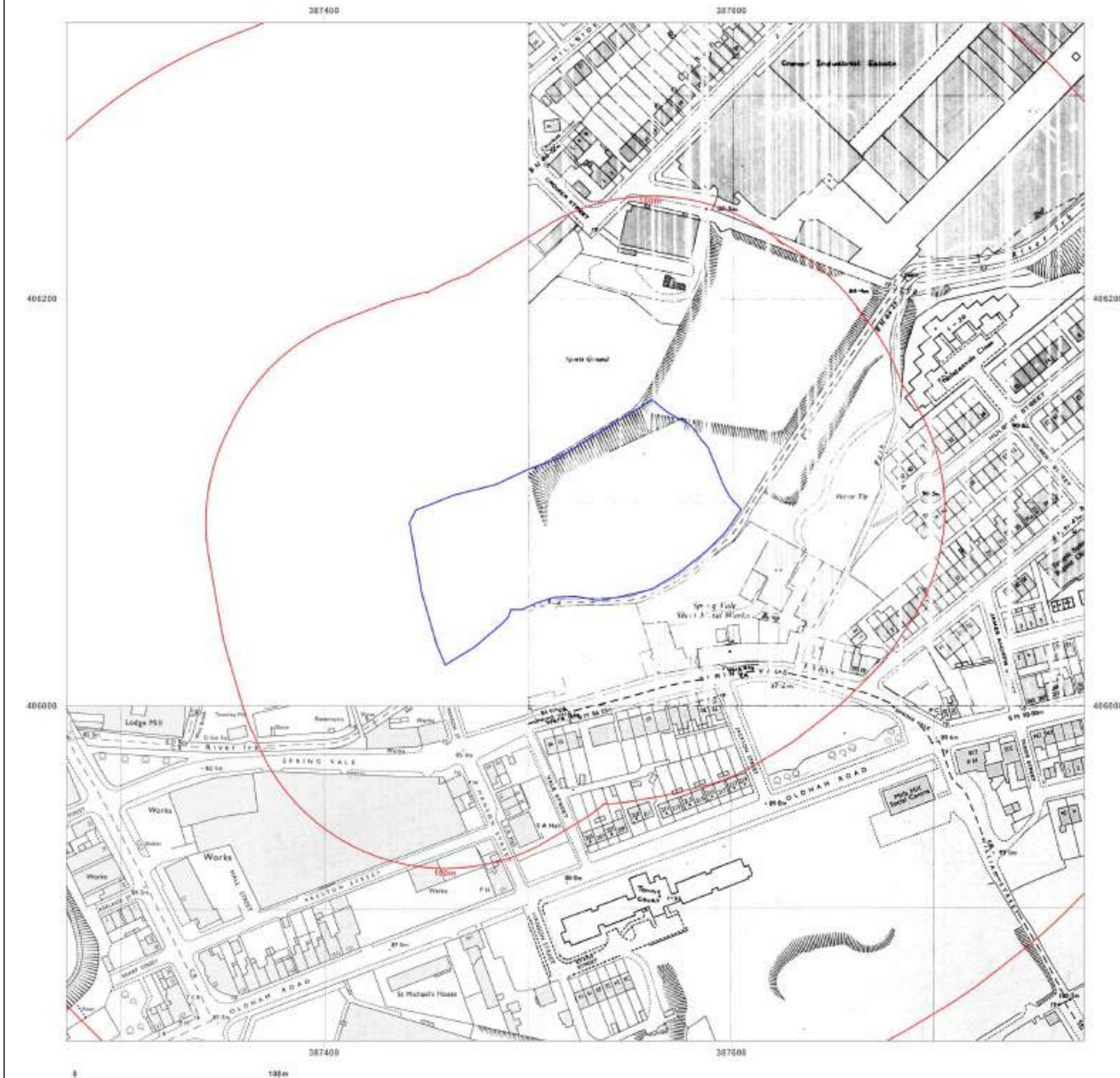


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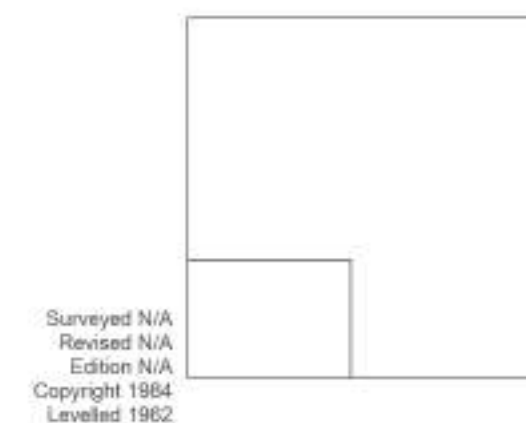
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Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1984

Scale: 1:1,250

Printed at: 1:2,000



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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1991-1992

Scale: 1:1,250

Printed at: 1:2,000



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Revised 1992
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Surveyed 1992
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Revised 1991
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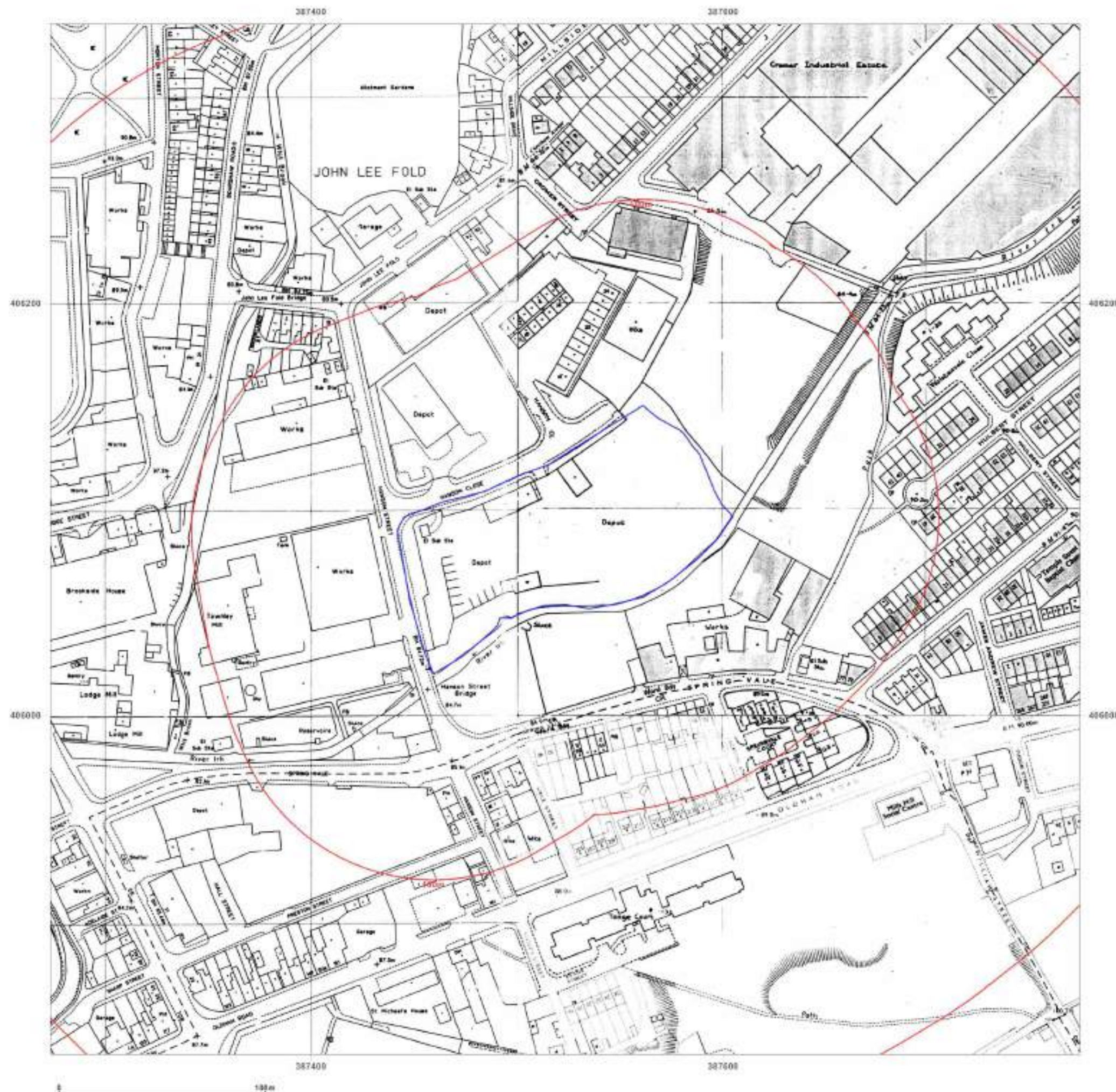


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1991-1992

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Revised 1991
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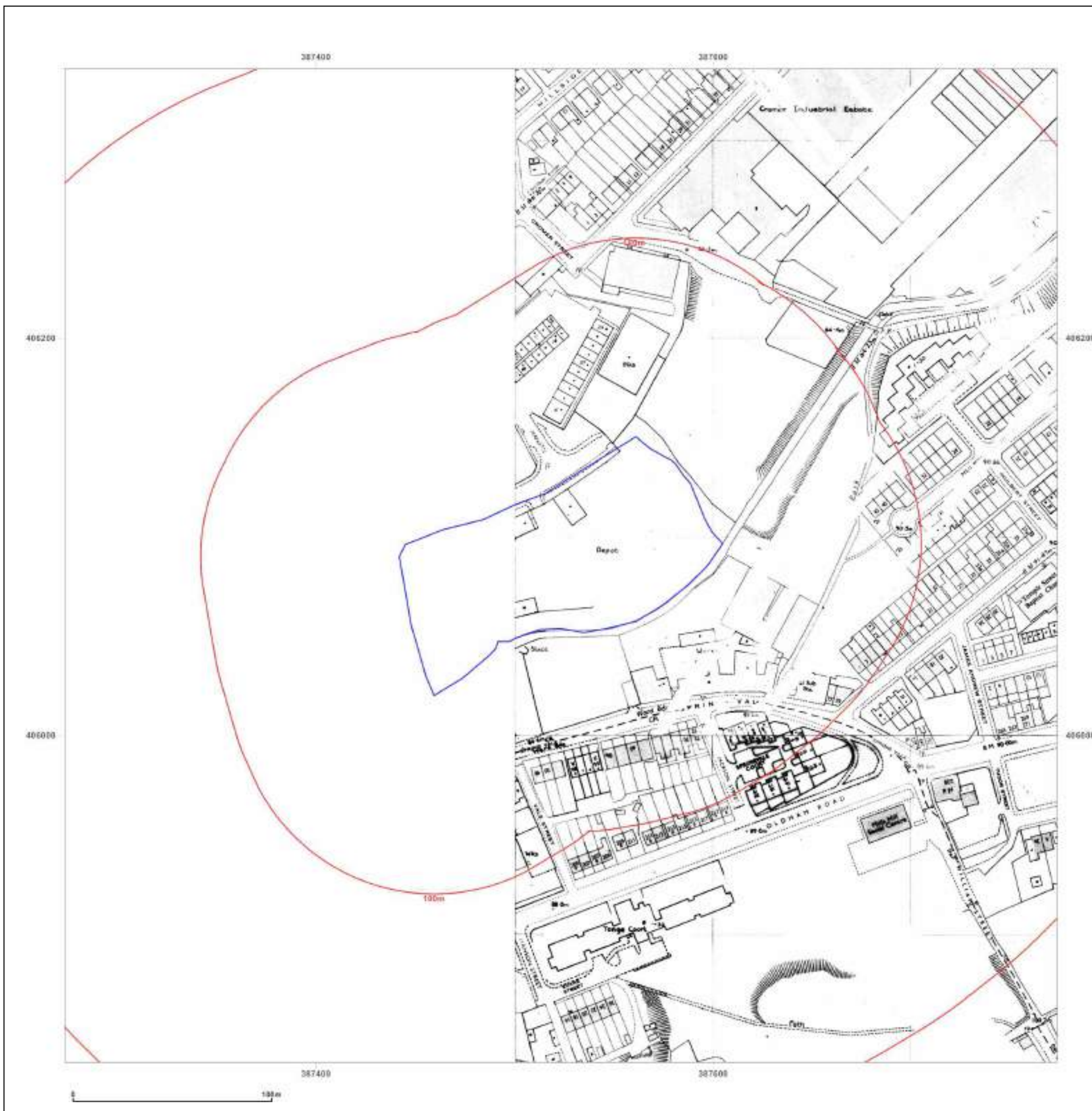


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1992-1993

Scale: 1:1,250

Printed at: 1:2,000



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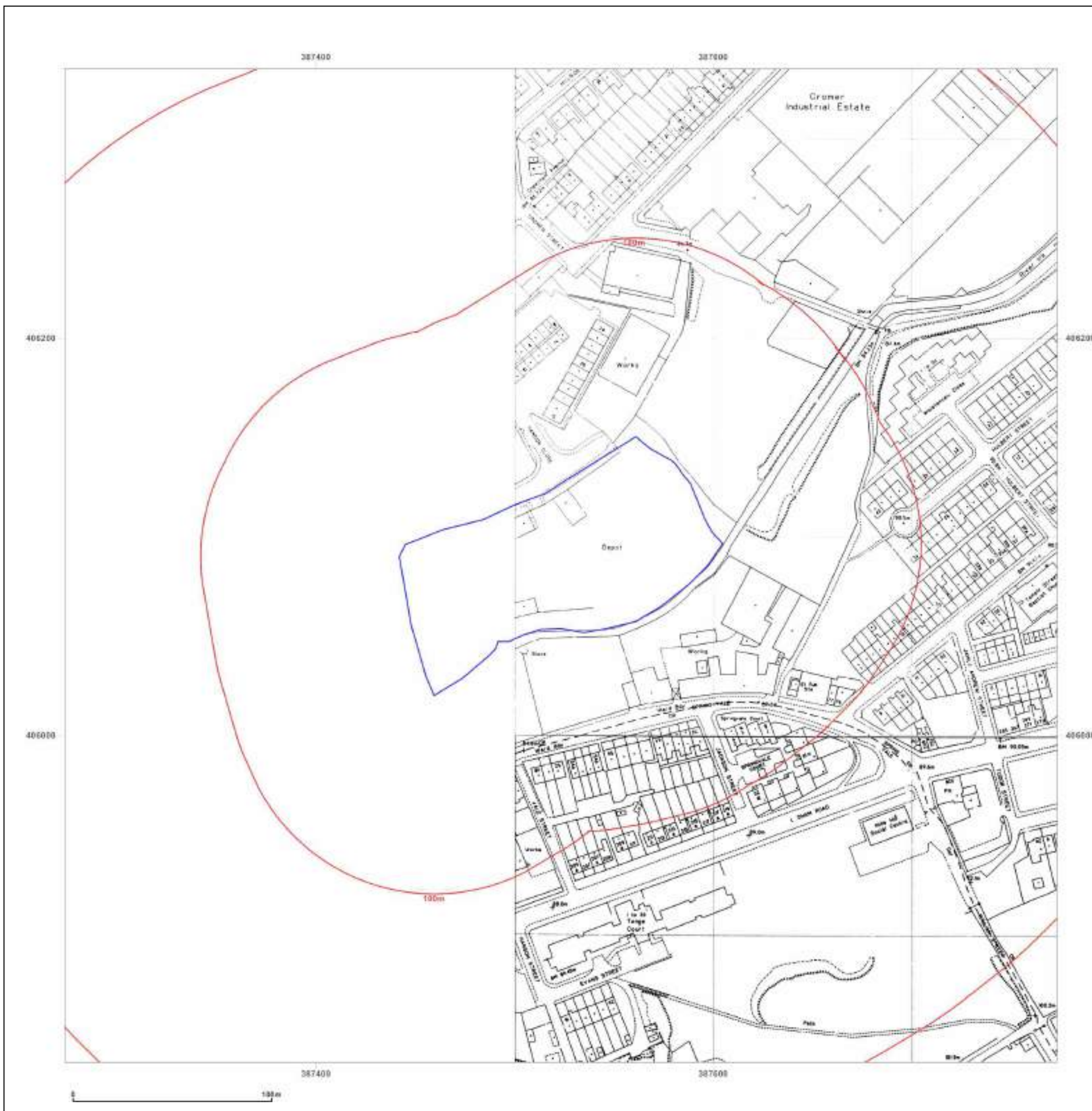


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1993

Scale: 1:1,250

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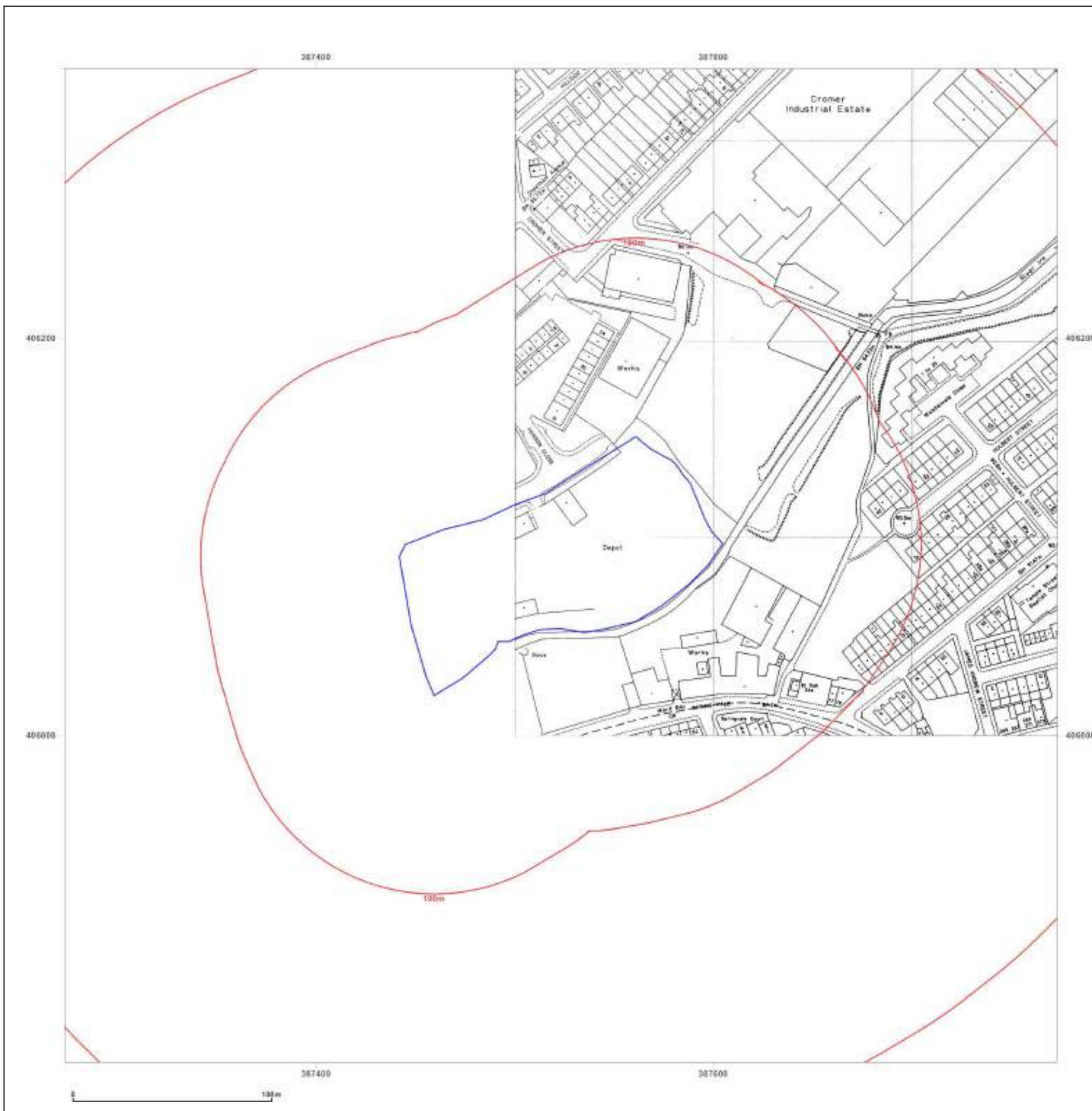


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1994

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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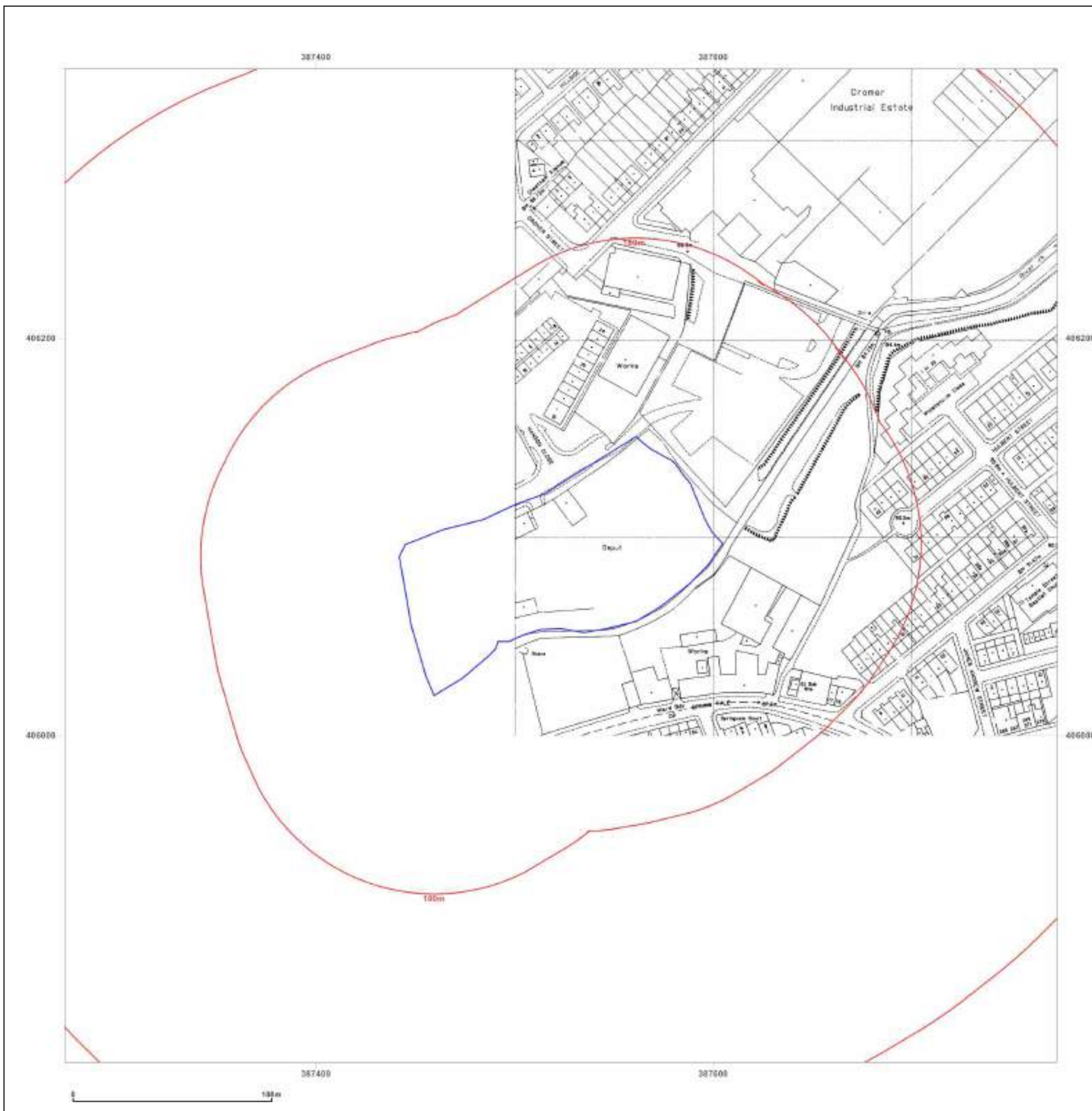


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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1994

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1994
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

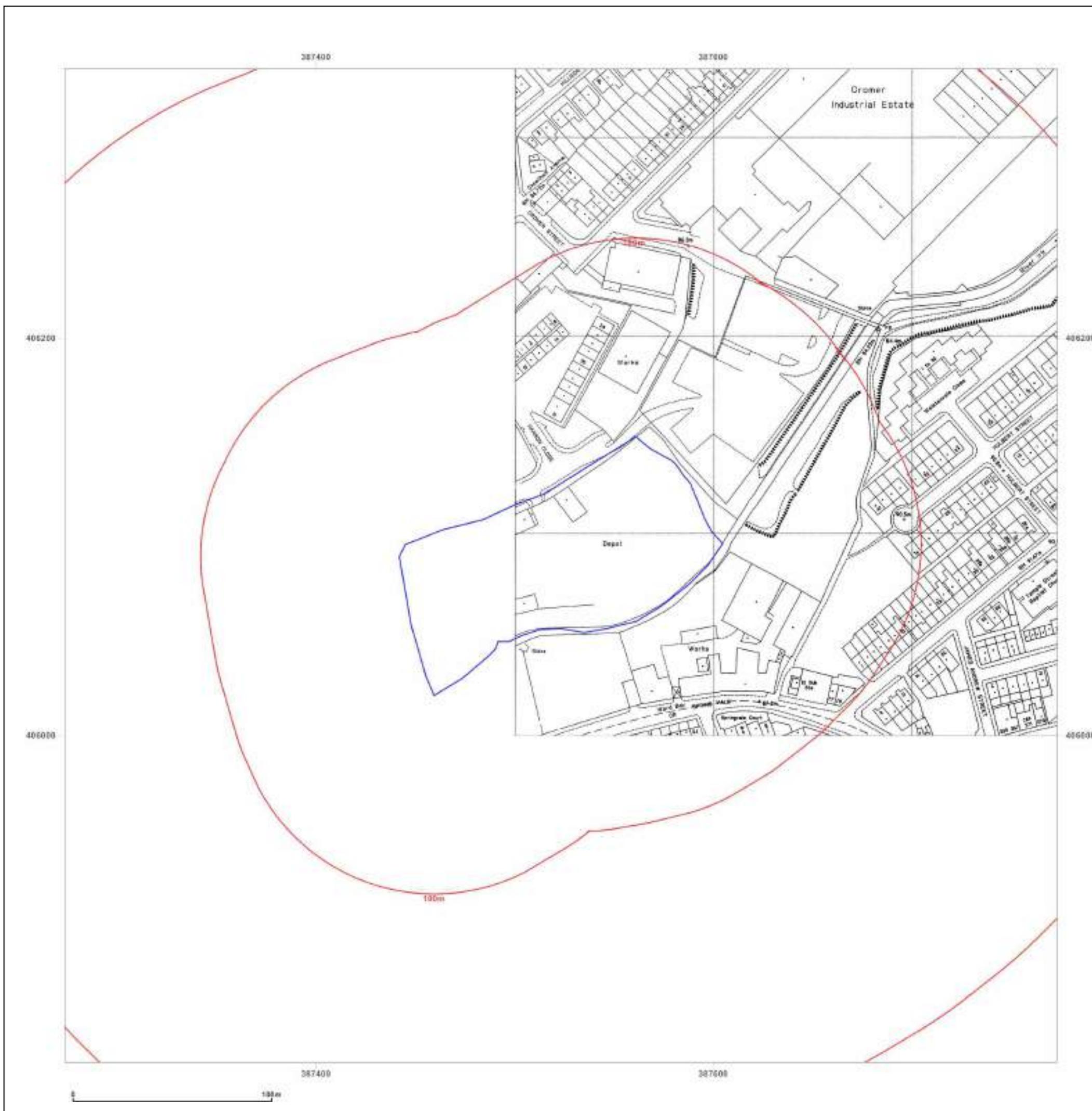


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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1995

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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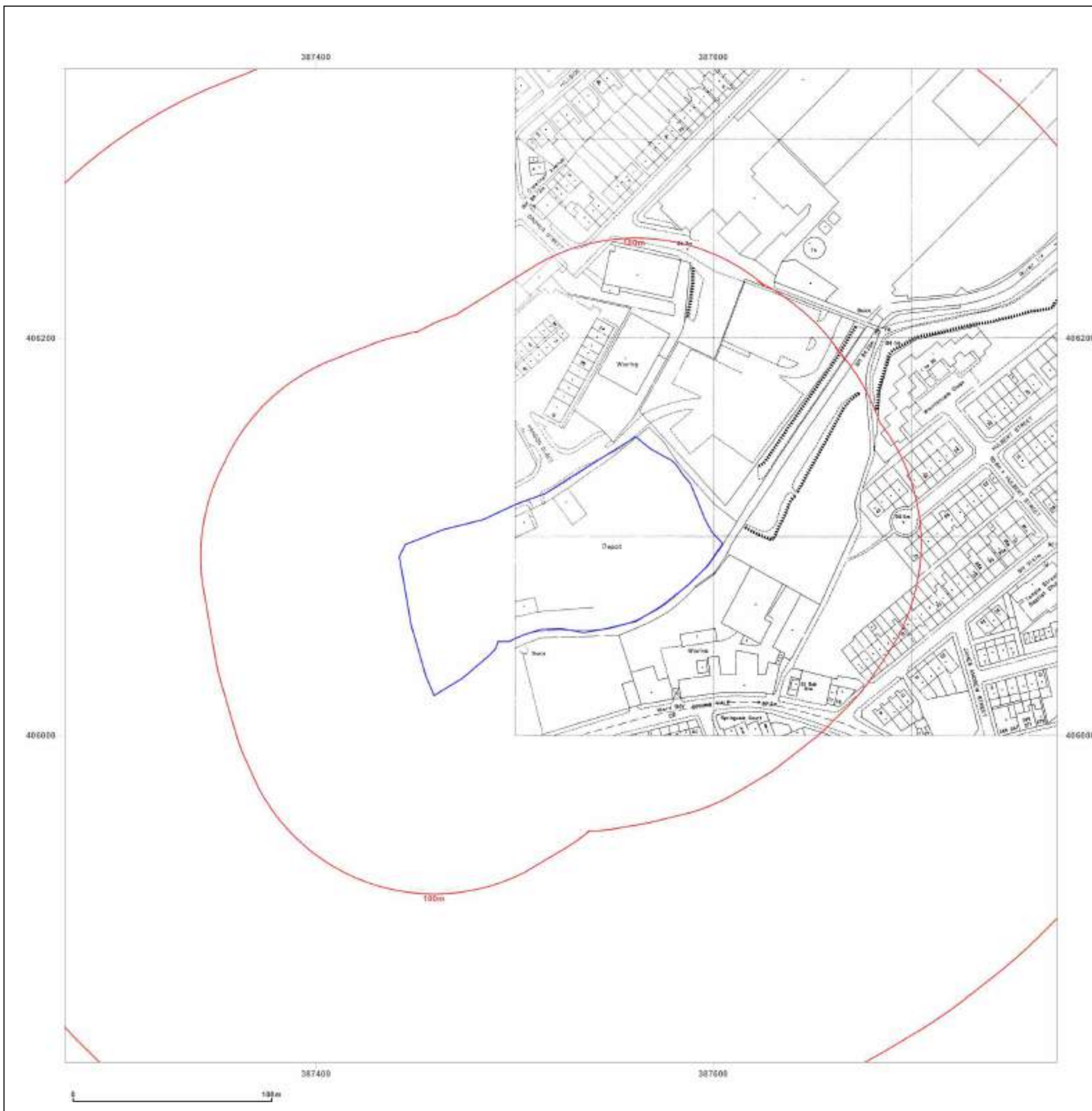


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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

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Scale: 1:1,250

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Edition N/A
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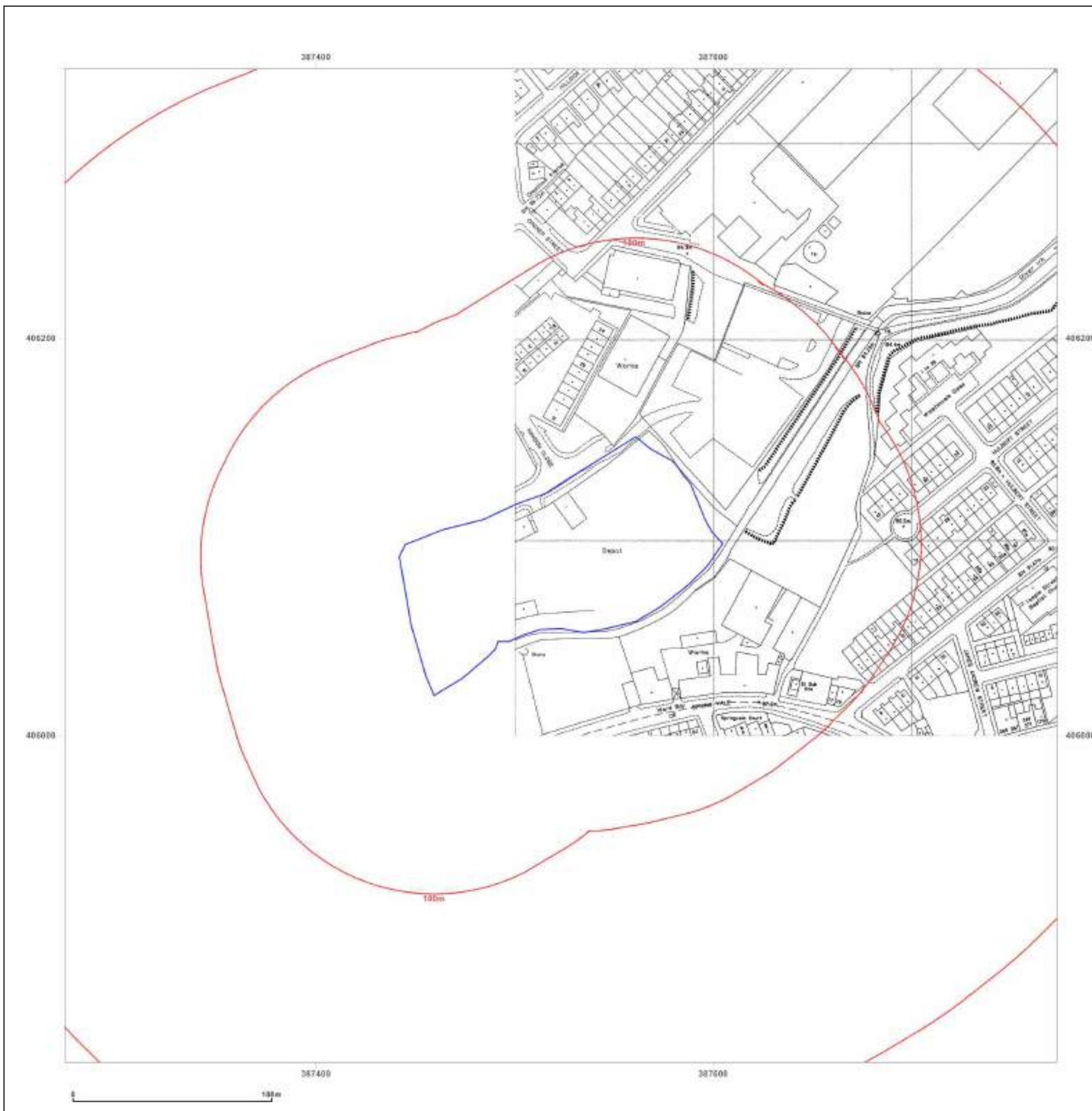


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Site Details:

UNIT 1, HANSON CLOSE
INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1848

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1845
Revised N/A
Edition 1848
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Levelled N/A

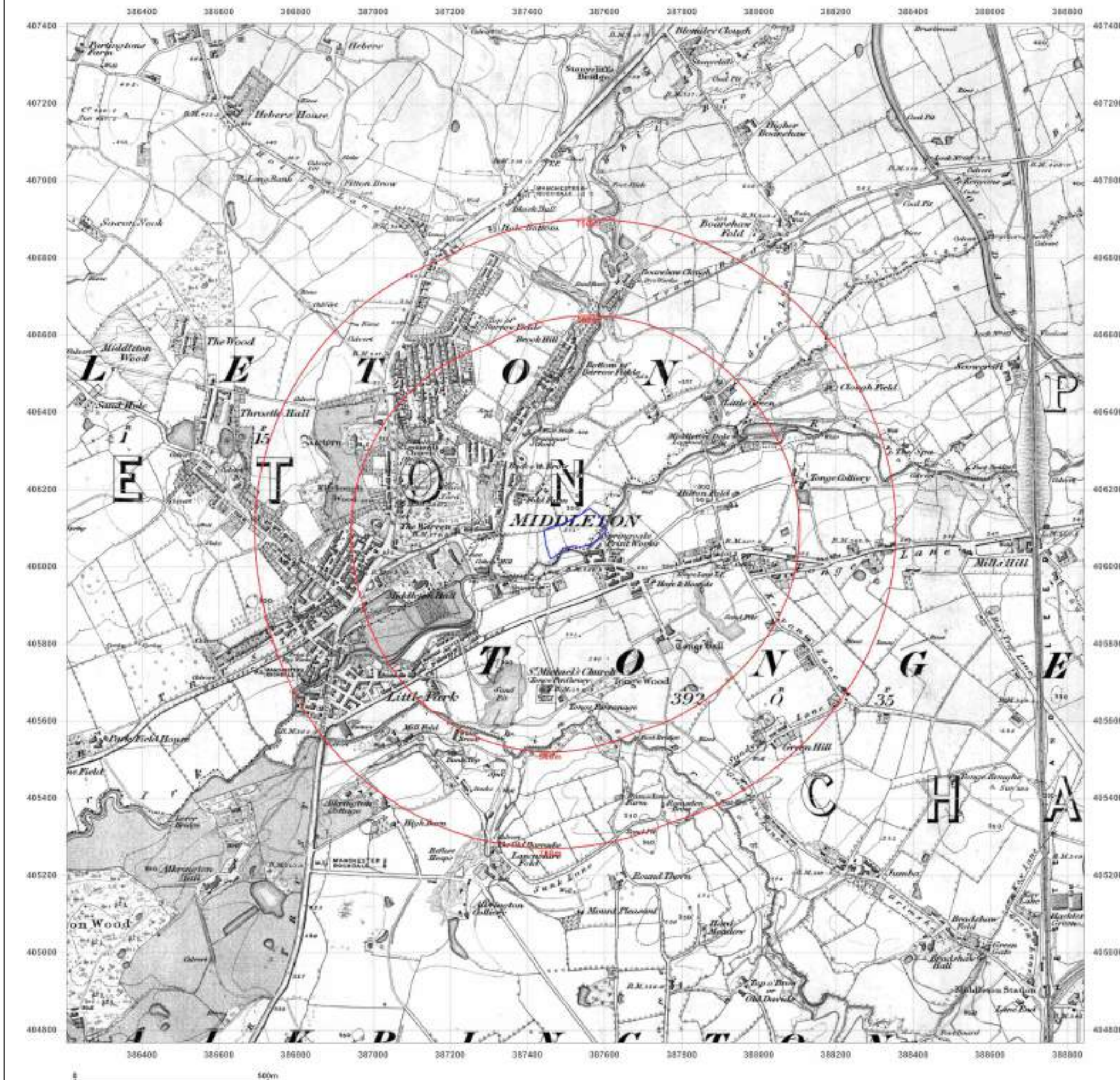


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Site Details:

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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1891

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

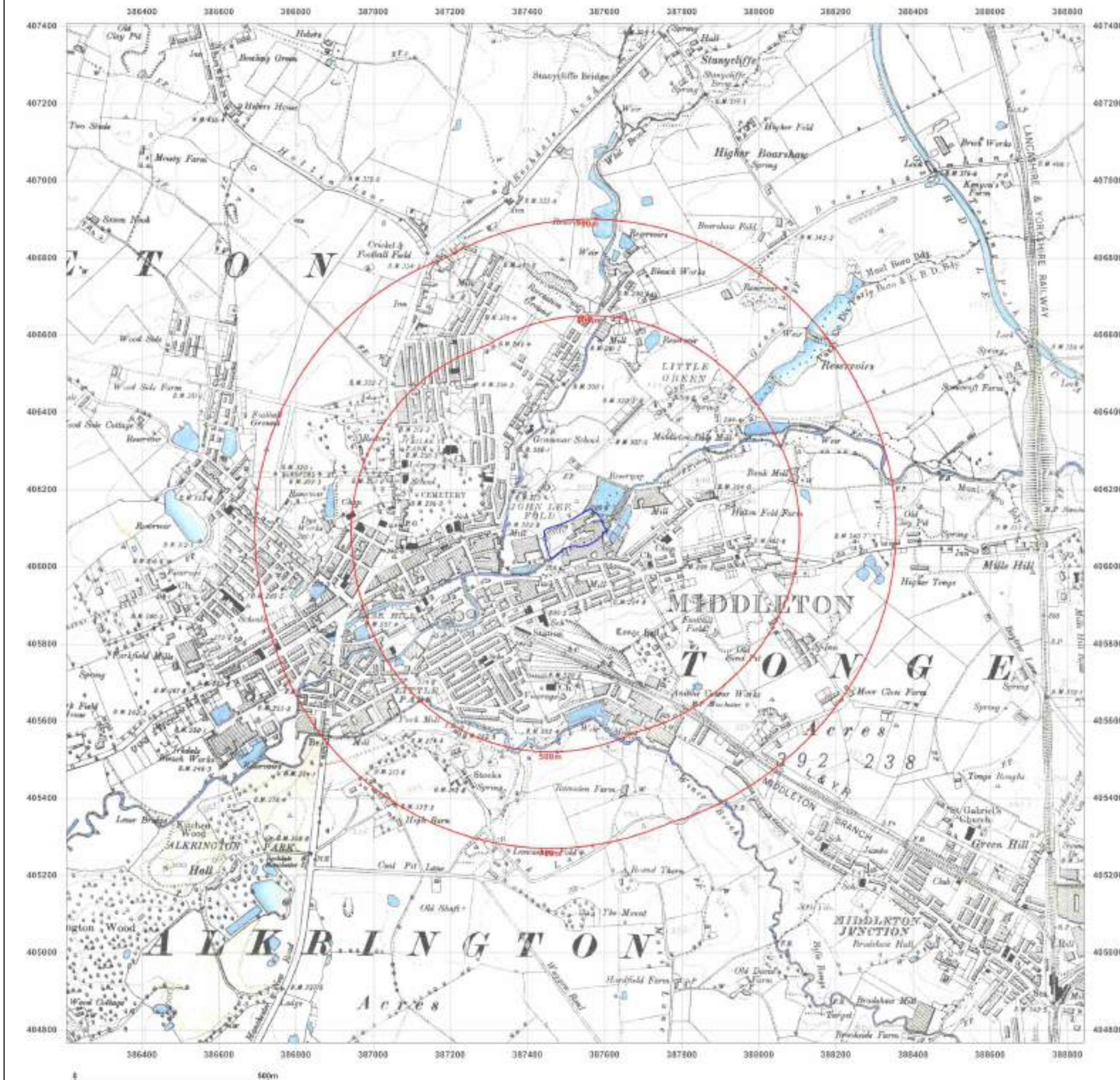


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Site Details:

UNIT 1, HANSON CLOSE
INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1907

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1907
Edition N/A
Copyright N/A
Levelled N/A

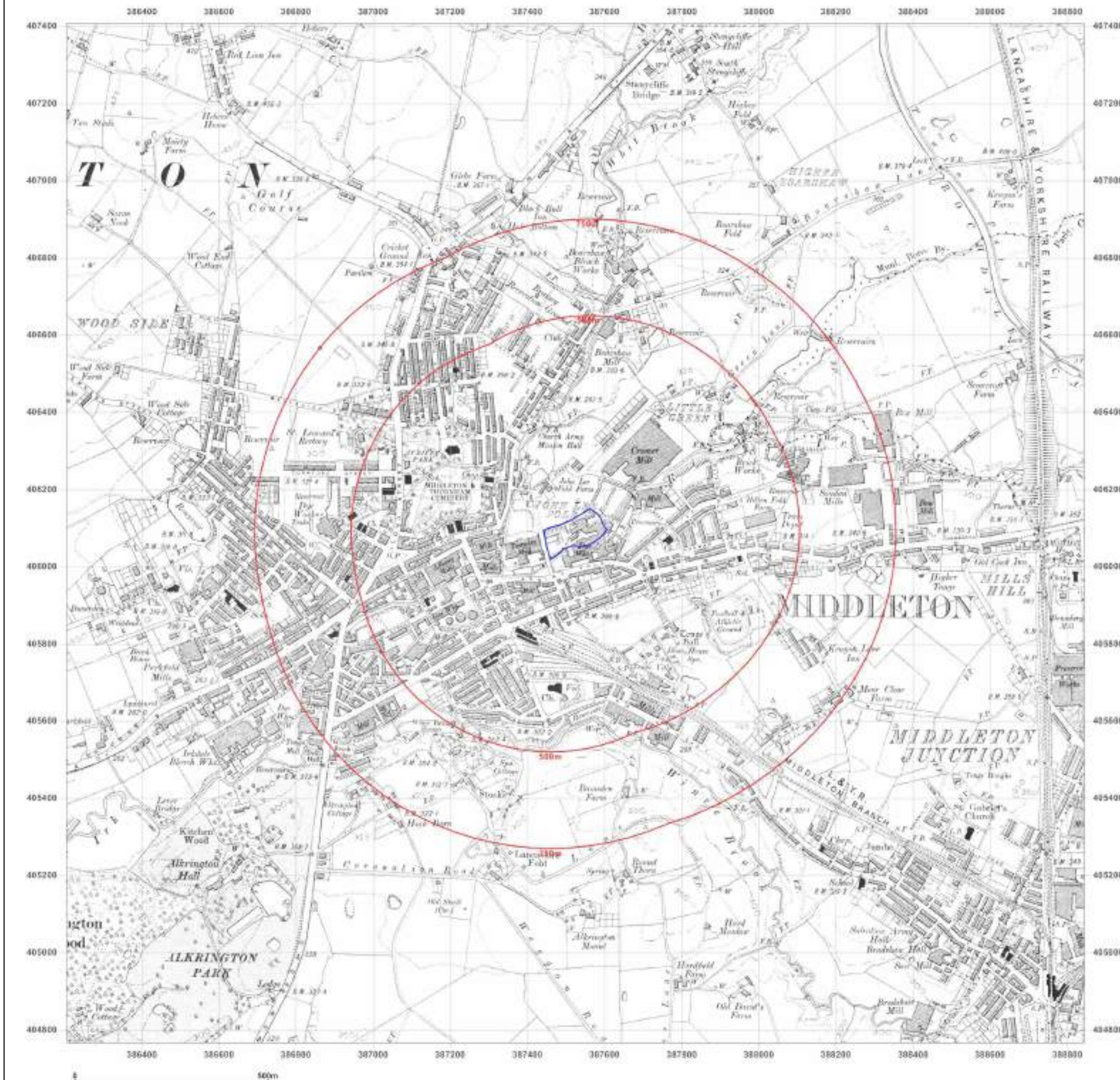


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Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1915

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1915
Edition N/A
Copyright N/A
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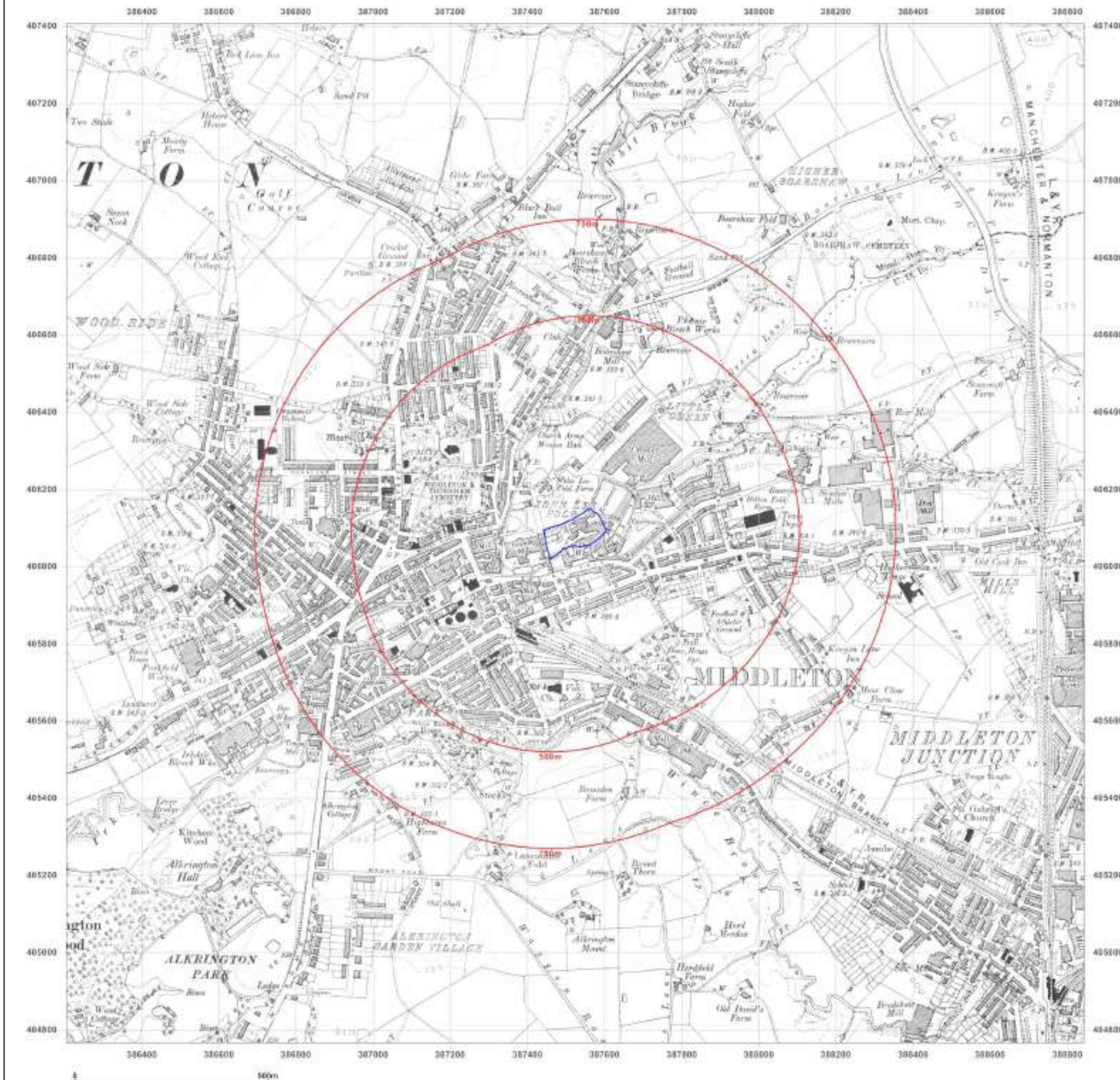


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Site Details:

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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1923

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Printed at: 1:10,560



Surveyed 1844
Revised 1923
Edition N/A
Copyright N/A
Levelled N/A

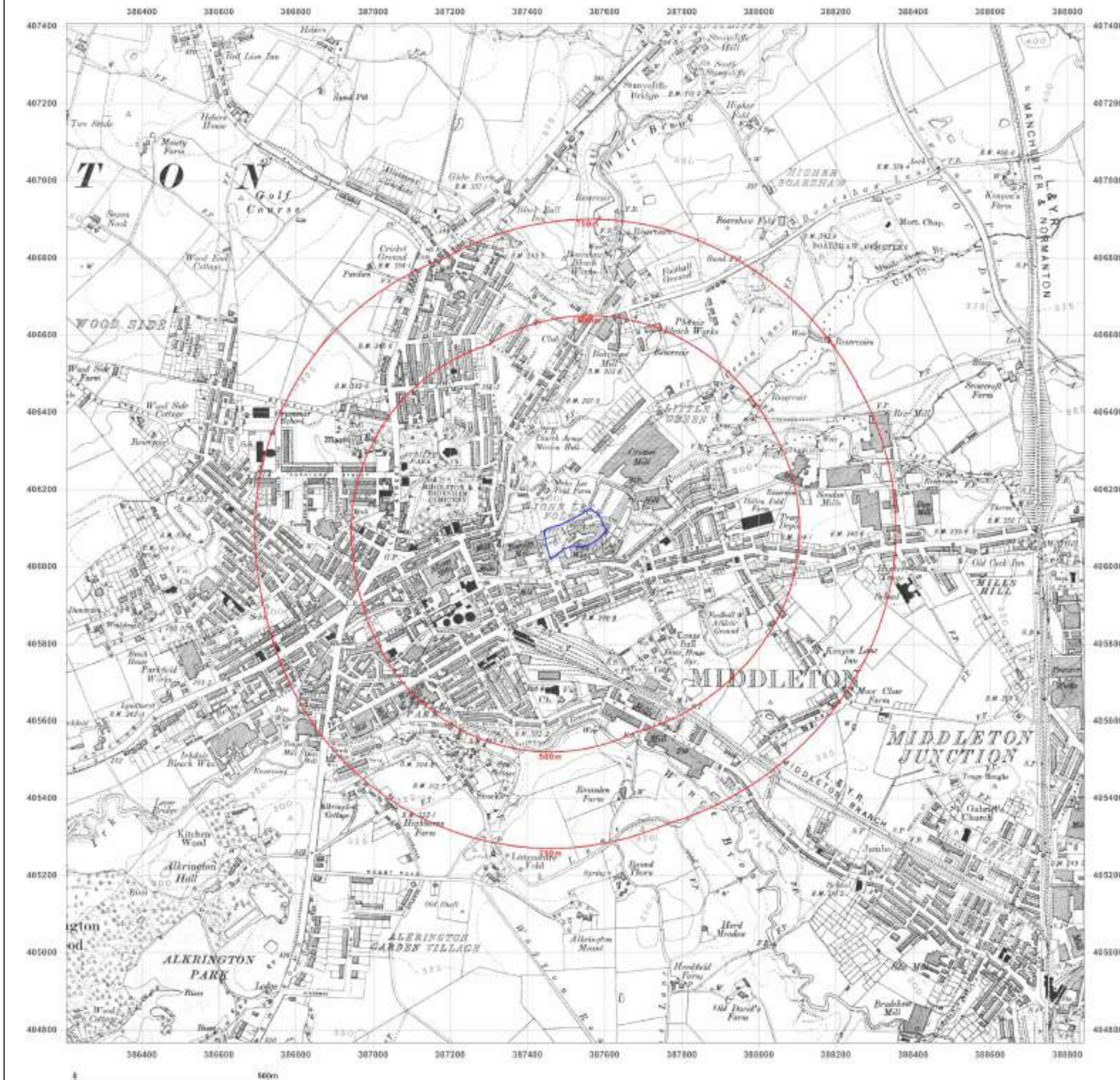


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Site Details:

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INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1932

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1932
Edition N/A
Copyright N/A
Levelled N/A

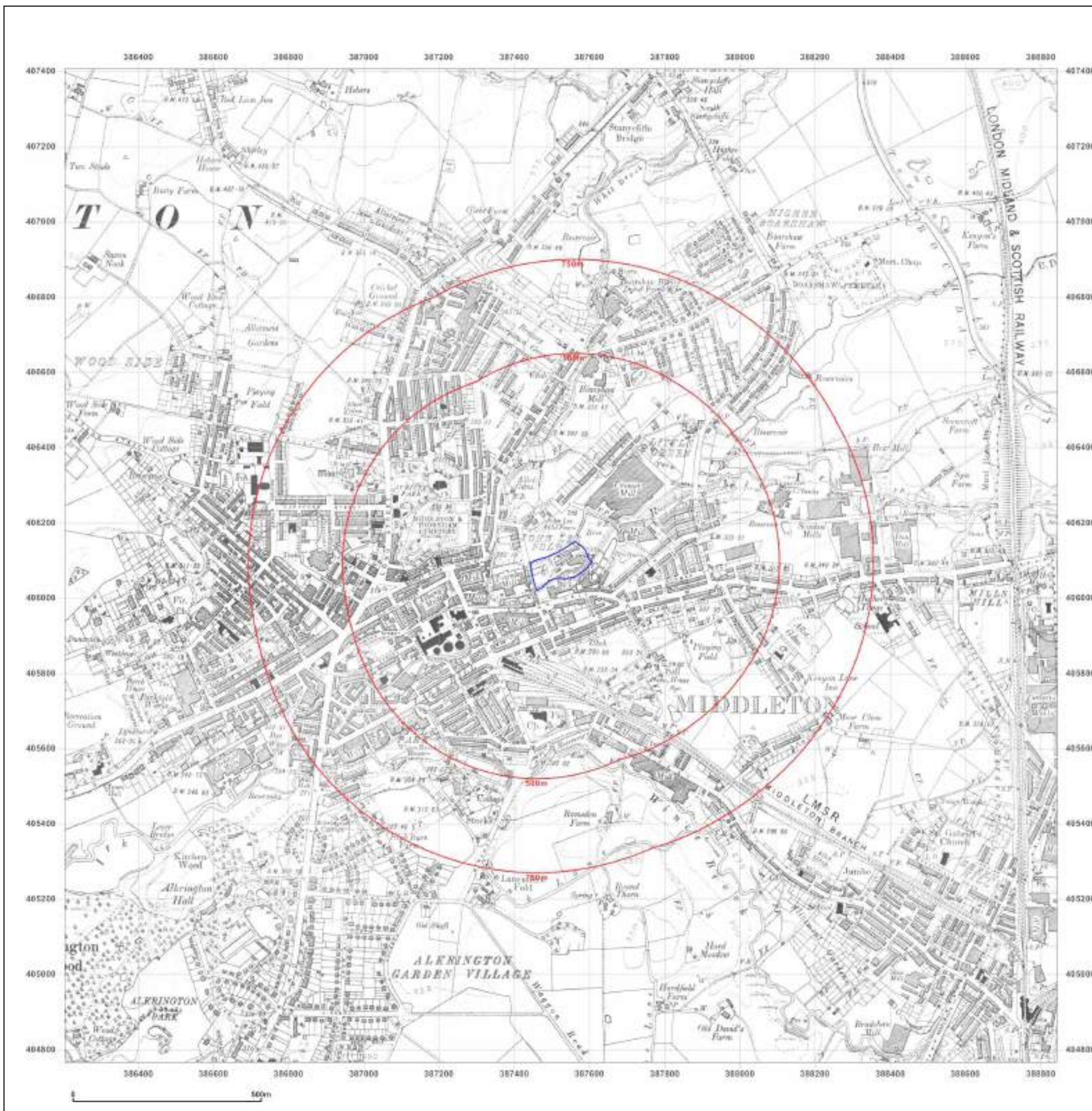


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Site Details:

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INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1844
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

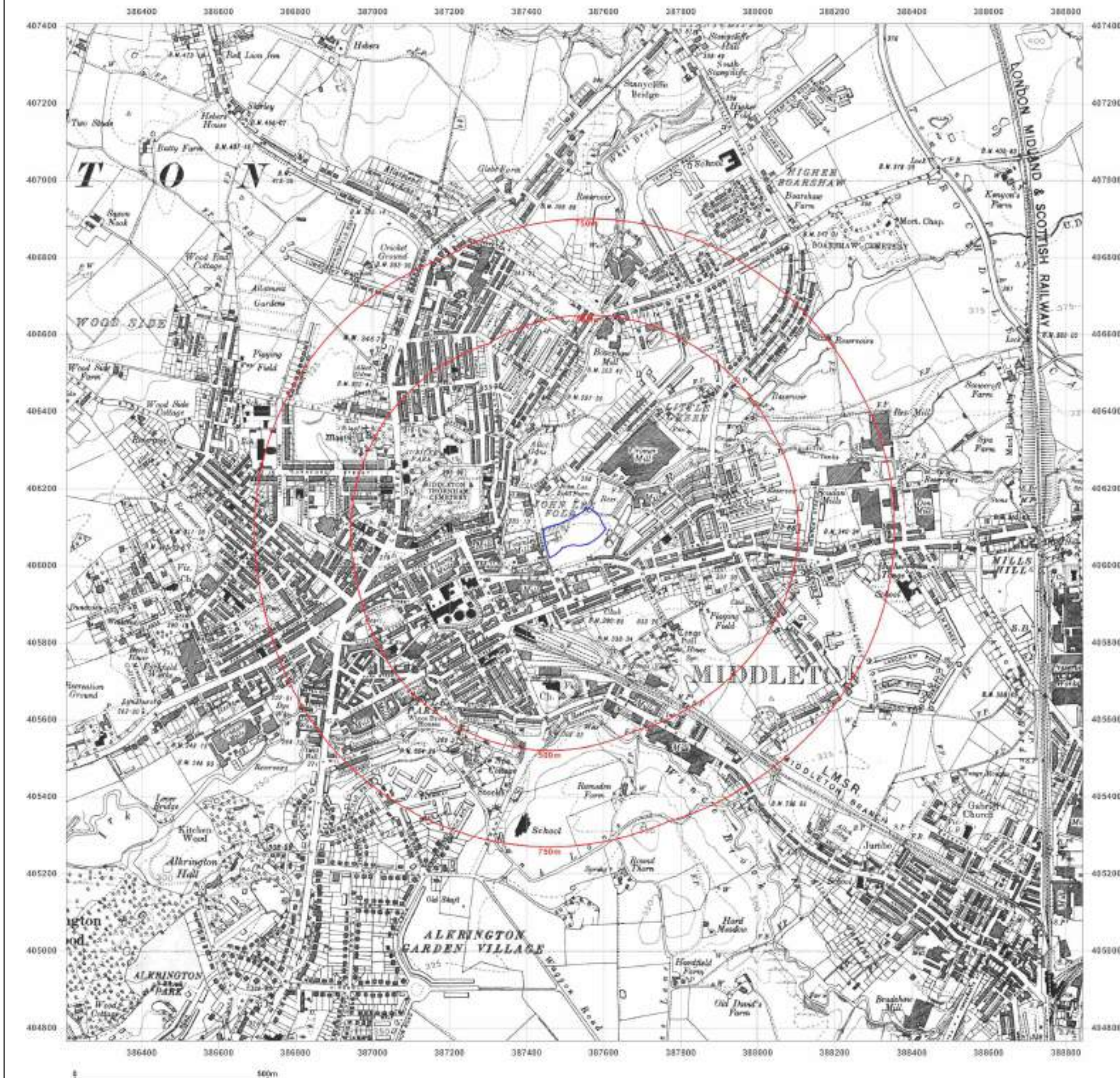


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Site Details:

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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: Provisional

Map date: 1955-1956

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1958
Revised 1956
Edition N/A
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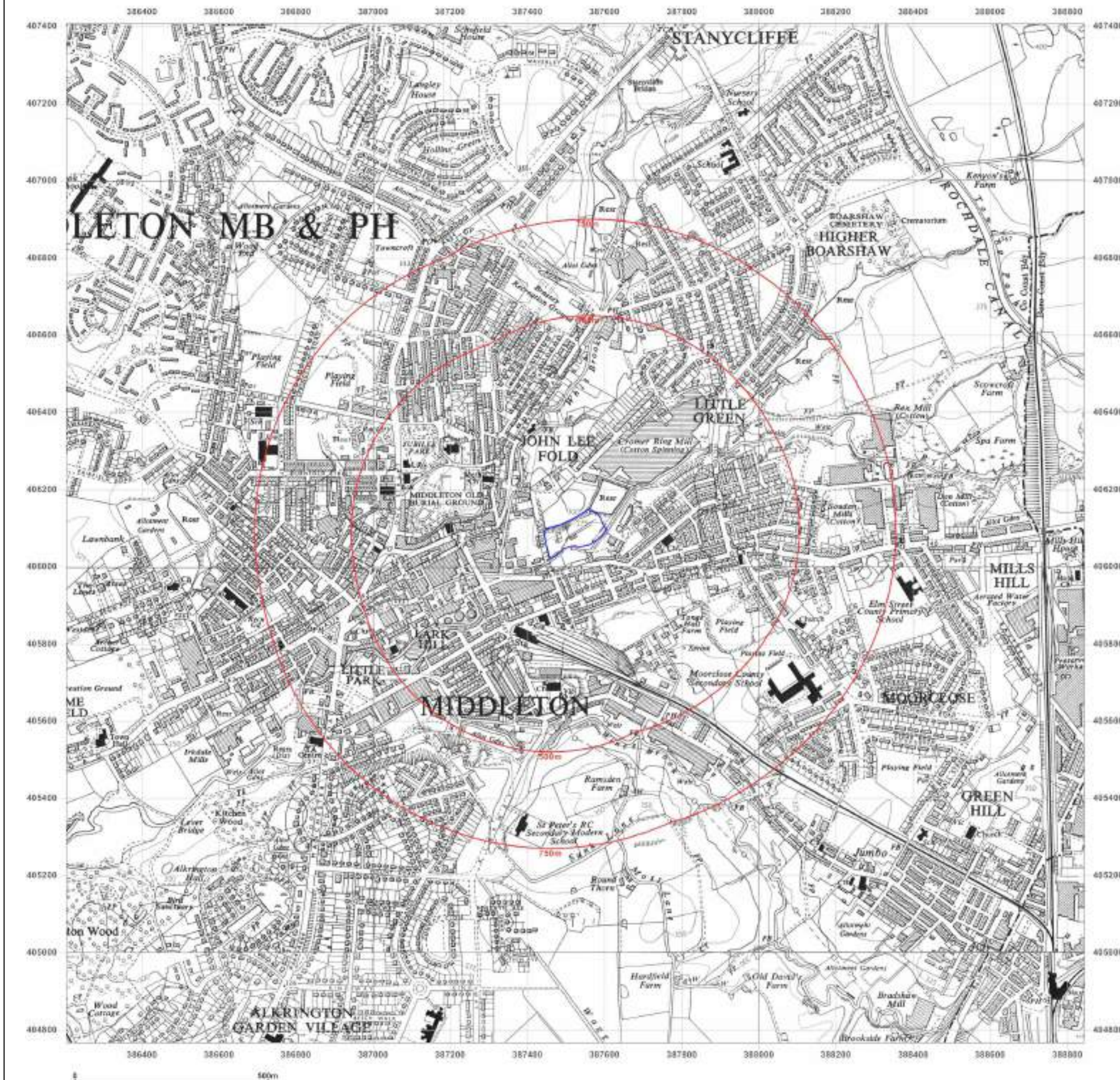


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Site Details:

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CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: Provisional

Map date: 1965-1966

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1965
Revised 1965
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1966
Revised 1966
Edition N/A
Copyright N/A
Levelled N/A

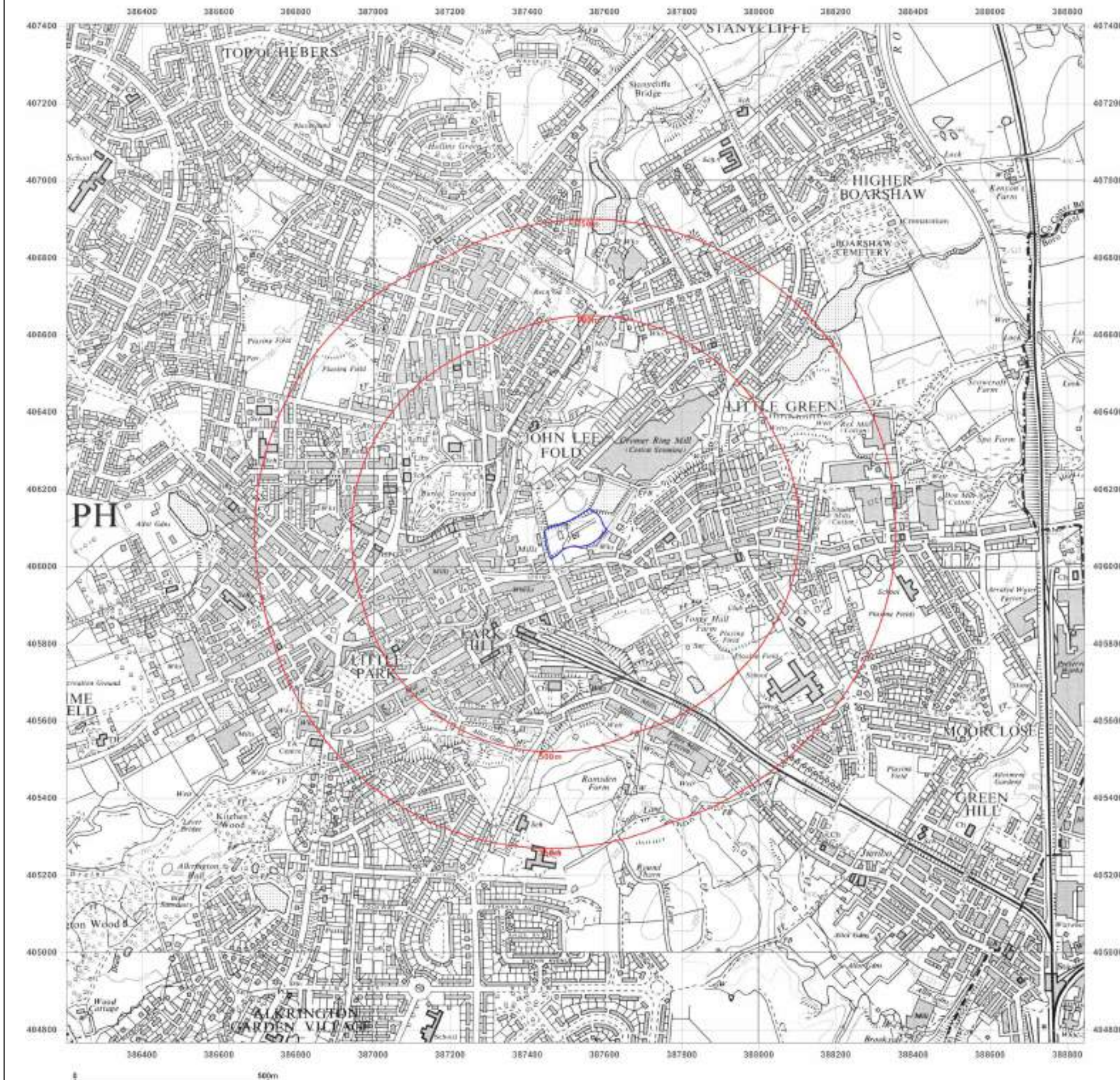


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Site Details:

UNIT 1, HANSON CLOSE
INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1975

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1974
Revised 1975
Edition N/A
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Levelled N/A

Surveyed 1975
Revised 1975
Edition N/A
Copyright N/A
Levelled N/A

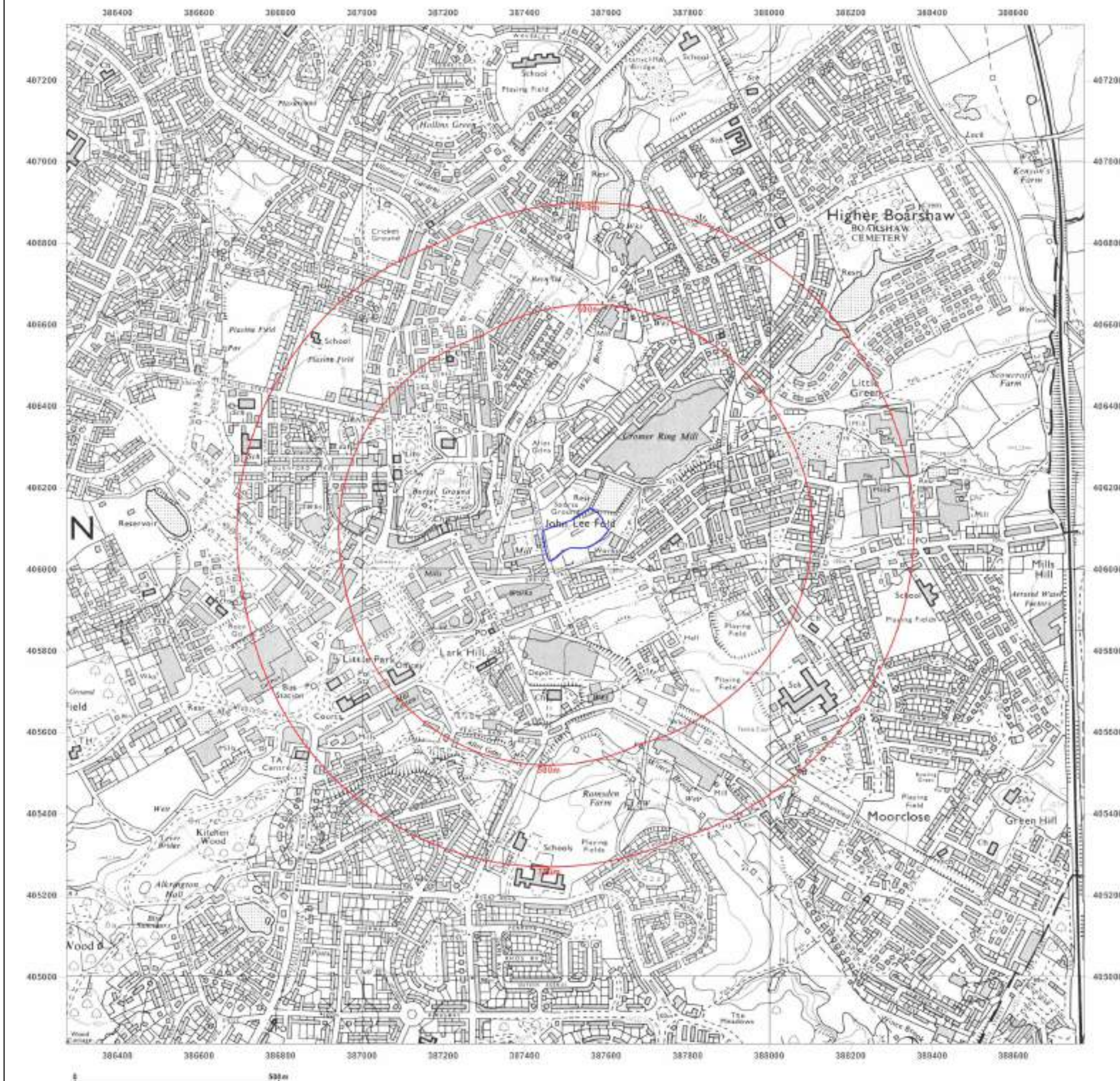


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Site Details:

UNIT 1, HANSON CLOSE
INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 1980-1982

Scale: 1:10,000

Printed at: 1:10,000



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Surveyed 1980
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A

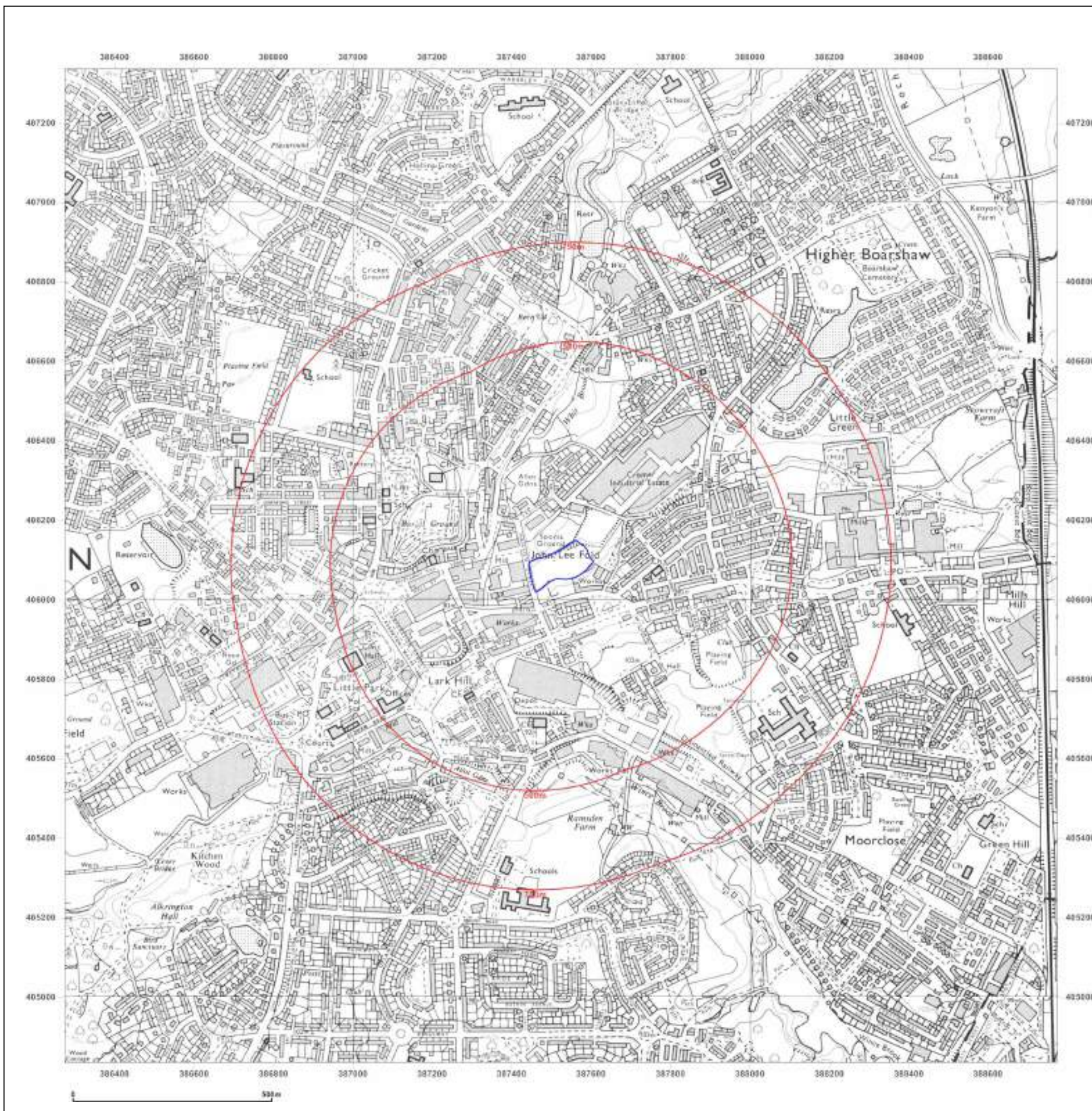


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Production date: 10 May 2019

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Site Details:

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INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

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INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

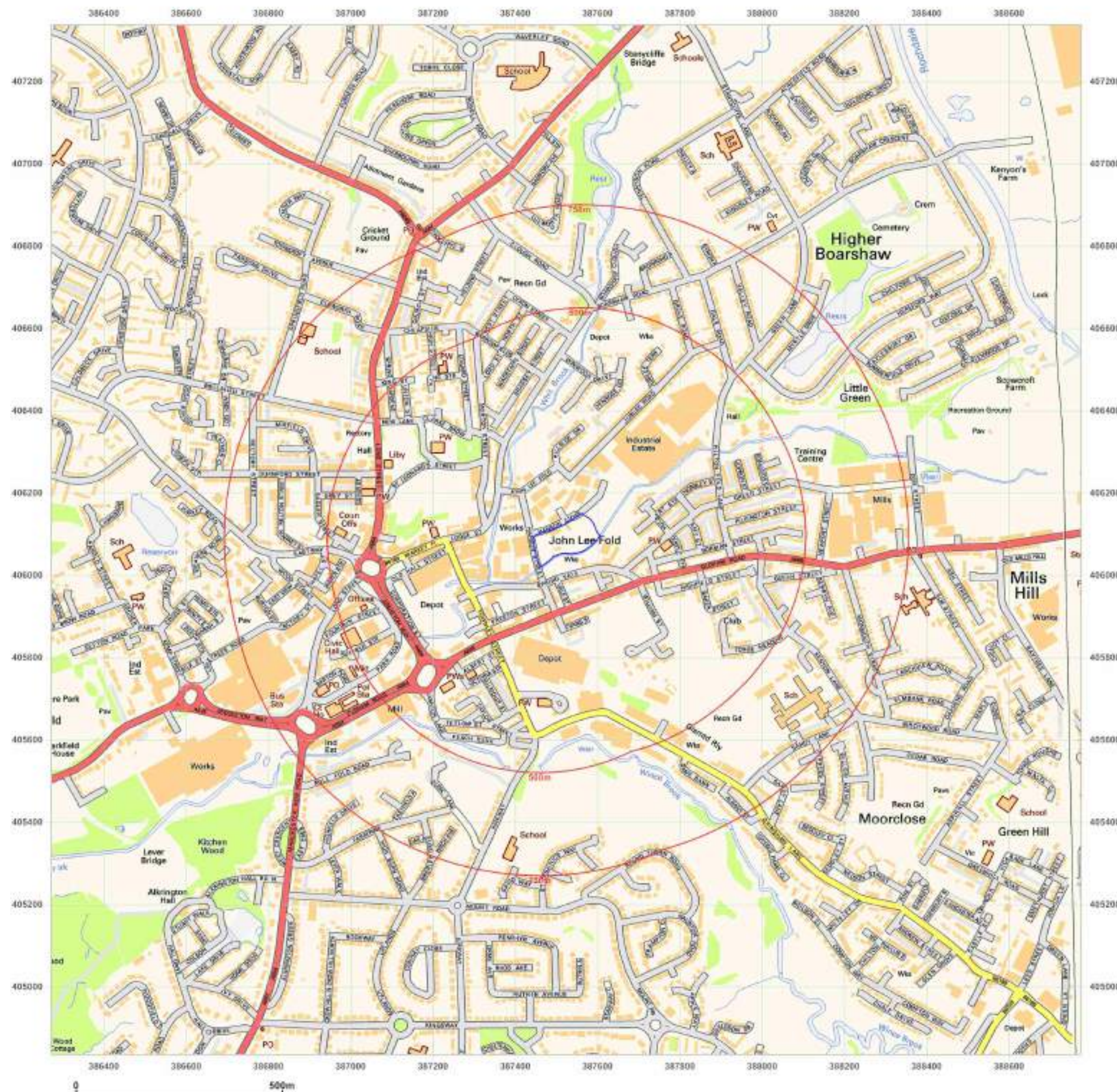


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Site Details:

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INDUSTRIAL ESTATE, HANSON
CLOSE, MIDDLETON, M24 2HD

Client Ref: 19060-107-19
Report Ref: GS-6017602
Grid Ref: 387523, 406086

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000

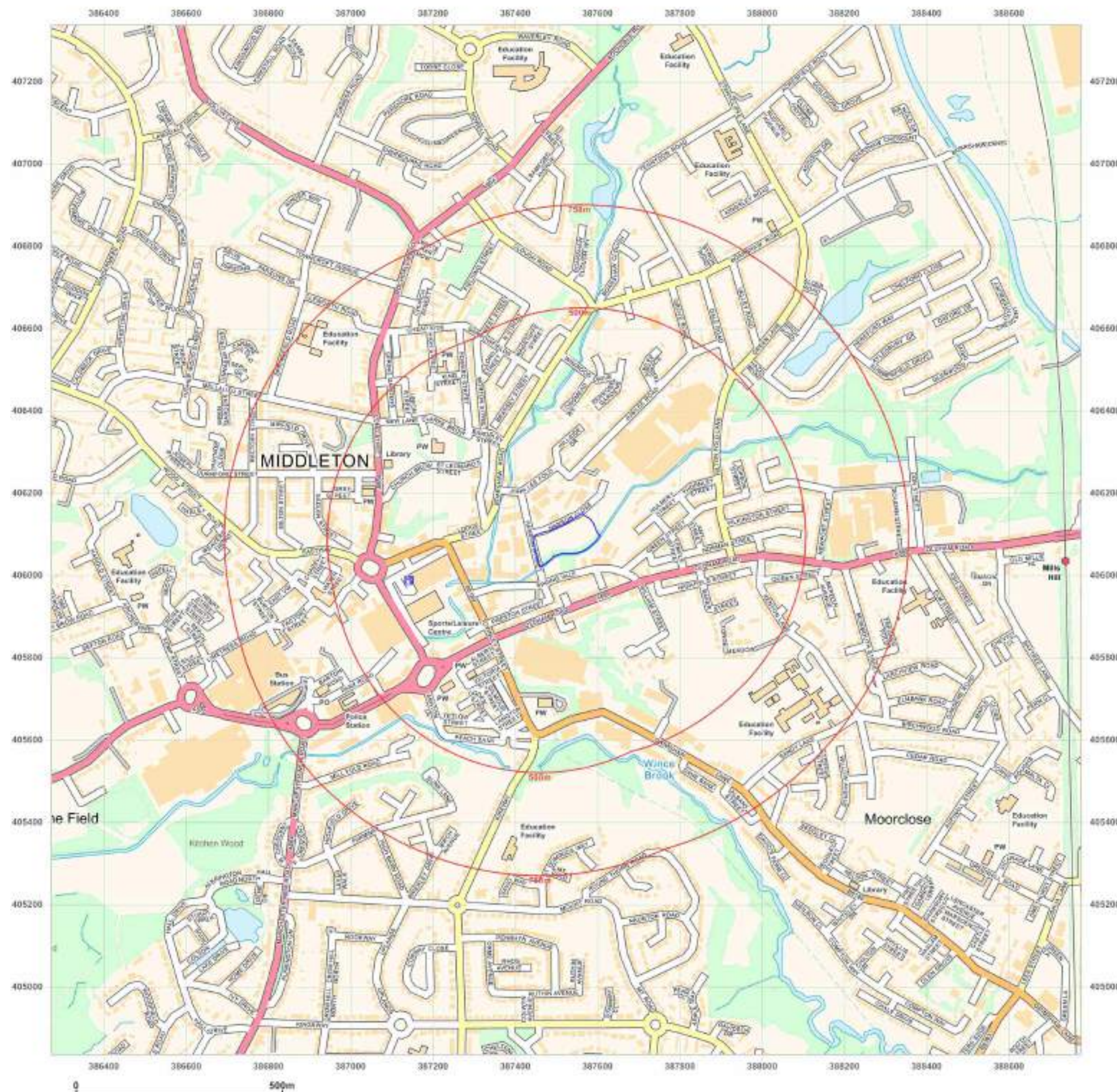


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Production date: 10 May 2019

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Appendix D

Coal Authority Mining Report



The Coal
Authority

CON29M

coal mining report

UNIT 1, HANSON CLOSE INDUSTRIAL ESTATE, HANSON CLOSE, MIDDLETON,
ROCHDALE, M24 2HD



Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5



Further action

No further reports from the Coal Authority are required. Further information on any next steps can be found in our Professional opinion.

For more information on our reports please visit
www2.groundstability.com



Professional opinion

According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see **page 3** for further details on **Future development**.

Your reference: **19060-108-19**
Our reference: **51002107863001**
Date: **10 May 2019**

Client name:
PAUL WAITE ASSOCIATES

If you require any further assistance please
contact our experts on:
0345 762 6848
groundstability@coal.gov.uk



The Law
Society

Enquiry boundary

Key

Approximate position of enquiry boundary shown



We can confirm that the location is
on the coalfield



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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.



Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion



Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on **0345 762 6848** or email **cmra@coal.gov.uk**.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

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1 Past underground coal mining

The property is not within a surface area that could be affected by any past recorded underground coal mining.

However the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered, particularly prior to any site works or future development activity, as ground movement could still be a risk. Your attention is drawn to the Professional opinion sections of the report.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4 Mine entries

There are no recorded coal mine entries known to the Coal Authority within, or within 20 metres, of the boundary of the property.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

The owner therefore shouldn't incur cost or liability from repairs caused by the withdrawal of support from land and/or property in connection with lawful coal mining operations. Usually these actions will not need to involve your insurance company or mortgage lender.



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call **01623 646 333**. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary



Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings



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